



CITY OF BURTON
BURTON CITY COUNCIL MEETING
OCTOBER 6, 2014
AGENDA

Council Chambers

Regular Meeting

7:00 PM

4303 S. CENTER ROAD
BURTON, MI 48519

A. INVOCATION LED BY STEVEN HATFIELD

B. THE PLEDGE OF ALLEGIANCE IS LED BY STEVEN HATFIELD

C. ROLL CALL

D. STAFF PRESENT

E. APPROVAL OF MINUTES

1. City Council - Regular Meeting - Sep 15, 2014 7:00 PM

F. ADMINISTRATIVE REPORT

G. COMMITTEE REPORTS

H. AUDIENCE PARTICIPATION

I. COUNCIL DISCUSSION

J. COUNCIL ACTION

1. Approve and authorize the Attorney bill (Rick Austin) from 09/10/14 to 10/01/14 in the amount of \$9,751.25.
2. Approve and authorize the acceptance of the revised bid from Case Construction Company, Inc., G-6235 Corunna Road, Flint, MI 48532, of \$330,531.00 for the Kelly Lake boardwalk construction project.
3. Approve and authorize the acceptance of the bid of \$105,400.00 from Industrial Painting Contractors, 25163 Darin, Taylor, MI 48180, to perform DPW project No. 14-001-W "Water Tower": 400,000 Gallon Spheroid - Exterior Repaint, Dry Interior Spot Repainting, Miscellaneous Repairs, and Cathodic Protection System Installation.
4. Approve and authorize the Mayor and Clerk to enter into a contract with Dixon Engineering, 1104 Third Avenue, Lake Odessa, MI 48849, for the amount not to exceed amount of \$8,575.00 to provide contract administration and inspection services for DPW project No. 14-001-W "Water Tower", Water Tower updates, repairs, and painting.
5. Approve and authorize the Controller to transfer \$131,071.25 from Water Unappropriated Surplus to DPW project 14-001-W "Water Tower": 400,000 Gallon Spheroid - Exterior Repaint, Dry Interior Spot Repainting, Miscellaneous Repairs, and Cathodic Protection System Installation.

6. Approve and authorize the Mayor and the Clerk to execute a contract with Industrial Painting Contractors to perform DPW project No. 14-001-W "Water Tower": 400,000 Gallon Spheroid - Exterior Repaint, Dry Interior Spot Repainting, Miscellaneous Repairs, and Cathodic Protection System Installation.
7. Approve and authorize the Mayor's appointment of Sherry Adams, 4229 Hillary Circle, Burton, MI 48519, to the Park and Recreation Commission, with a term ending October 2017.
8. Approve and authorize the Mayor's appointment of Robert E. Wilson, 4059 Grand Oaks Court, Burton, MI 48519, to the Park and Recreation Commission, with a term ending October 2017.
9. Approve and authorize the acceptance of the bid from Ahern Contracting, Inc., 25875 New Forest Court, Chesterfield, MI 48051 in the amount of \$33,745.00 to reconstruct the City Hall North (Admin) Parking Lot.
10. Approve and authorize the Mayor and Clerk to enter into a contract with Ahern Contracting, Inc., 25875 New Forest Court, Chesterfield, MI 48051, in the amount Of \$33,745.00 to reconstruct the City Hall North (Admin) Parking Lot.

K. SECOND READING OF AN ORDINANCE

1. Approve and authorize Second Reading of an Ordinance 2014-9-144.08 amending Chapter 144 of The City of Burton Code of Ordinances to define and prohibit the act being a Disorderly Person and to provide penalties for the violation thereof.



CITY OF BURTON

BURTON CITY COUNCIL MEETING

SEPTEMBER 15, 2014

MINUTES

Council Chambers**Regular Meeting****7:00 PM**

**4303 S. CENTER ROAD
BURTON, MI 48519**

This meeting was opened by President Tom Martinbianco at 7:00 PM.

A. INVOCATION LED BY TOM MARTINBIANCO**B. THE PLEDGE OF ALLEGIANCE IS LED BY TOM MARTINBIANCO****C. ROLL CALL**

Attendee Name	Title	Status	Arrived
Tom Martinbianco	President	Present	
Duane Haskins	Vice-President	Present	
Dennis O'Keefe	Councilman	Present	
Steve Heffner	Councilman	Present	
Ellen Ellenburg	Councilwoman	Excused	
Vaughn Smith	Councilman	Present	
Steven Hatfield	Councilman	Present	

D. STAFF PRESENT

Paula Zelenko, Mayor	Rik Hayman, Chief of Staff
Richard Austin, Attorney	Amanda Doyle, Attorney
Doug Bingaman, Treasurer	Sue Warren, HR Director
Liz Moss, Deputy DPW Director	Teresa Karsney, Clerk

E. APPROVAL OF MINUTES

1. City Council - Regular Meeting - Sep 2, 2014 7:00 PM

RESULT:	ACCEPTED [UNANIMOUS]
MOVER:	Duane Haskins, Vice-President
SECONDER:	Dennis O'Keefe, Councilman
AYES:	Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield
EXCUSED:	Ellenburg

2. City Council - Special Meeting - Sep 10, 2014 6:30 PM

Minutes Acceptance: Minutes of Sep 15, 2014 7:00 PM (Approval of Minutes)

RESULT:	ACCEPTED [UNANIMOUS]
MOVER:	Duane Haskins, Vice-President
SECONDER:	Dennis O'Keefe, Councilman
AYES:	Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield
EXCUSED:	Ellenburg

F. ADMINISTRATIVE REPORT

Mayor Zelenko started by welcoming Councilman Hatfield. In recognition of your appointment, there is cake and punch just outside the Chambers.

Fire station #2 on Belsay Road has new swings and more mulch is on order.

Settlement Park parking lot is scheduled to start in the next month.

The new Low/Mod Income maps regarding CDBG eligible areas are finally available from the 2010 Census.

In the next few weeks, City Hall parking lots will be going through resurfacing and marking as well as drainage repairs to the north parking.

Items 1 and 2 are Attorney billings.

Item 3 is appointment of the City Assessor. Mr. William Fowler is a Level IV Assessor, Certified Personal Property Examiner and Certified Instructor Michigan State Tax Commission. He currently is the Assessor of record for Flint Township, City of Flint and City of Lansing. From 1998 to 2004 he was the Assistant Administrator of the Property Tax Division in the Michigan Department of Treasury. From 1992 to 1997 he was the Equalization Director for Genesee County. Mr. Fowler is present tonight should you have any further questions.

Item 4 is the agreement with Stantec for Segment 2 of the DWRF Water Main Replacement. Ms. Moss is here for any further questions.

And lastly, there is a second reading of the Disorderly Person Ordinance.

G. AUDIENCE PARTICIPATION

Mr. Heckman the Commander of the VFW Post in Burton didn't like the Disorderly Ordinance because he thought it pertained to them collecting money on the side of the road.

Deb Walton of Burton was upset by the way the vacant council seat was filled. Felt people had their mind made up before they ever started the interviews. Would like to see the process changed for the future. Also wanted to know if any General Fund dollars from the 2014-2015 Budget went for the 3 new police officers that were hired.

James Bowie of Burton said he had heard a rumor that the City was going to ask for another tax millage. Second question was are we addressing the pension problem in the police department?

Mr. Martinbianco stated it is only a rumor.

Tracy Kedovary of Burton stated there is a lack of communication in the City and it needs to be addressed. Mrs. Kedovary also concurred with Ms. Walton about the process to fill the council seat.

John Stapish of Burton asked which union was the Keller Thoma bill for? Sick of the City nickel and dime the residents to death.

H. COMMITTEE REPORTS

Mr. Heffner asked if we need to waive residency on the new assessor?

Mr. Martinbianco stated that we would change the Committee assignments as follows:

Finance Committee: Mr. Smith - Chairman, Mr. O'Keefe, and that he would stay on the Finance Committee in Mr. Wells place.

Public Access Committee: Mr. Heffner will now be the Chairman, Mr. Smith and Mr. Hatfield.

1. Motion to add Item #5 to waive residency on the new Assessor.

RESULT:	CARRIED [UNANIMOUS]
MOVER:	Steven Heffner, Councilman
SECONDER:	Duane Haskins, Vice-President
AYES:	Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield
EXCUSED:	Ellenburg

I. COUNCIL DISCUSSION

Mr Heffner would like to call a Public Access meeting on Tuesday, September 23, 2014 at 6:00 p.m. for a update on the City's new website.

Mr. Heffner called a Park and Recreation meeting for Wednesday, September 17, 2014 for Trick or Treat Trail to discuss this event.

Mr. Smith asked about the Race committee if they need minutes because they only use the City's liability insurance and staff for this event.

Mr. Austin stated that there needs to be an agenda and minutes for these meetings per the Open Meeting Act.

Mr. Austin will get a legal opinion over to us on this matter.

J. COUNCIL ACTION

1. Approve and authorize the Attorney bill (Rick Austin) from 08/27/14 to 09/10/14 in the amount of \$3,879.25.

RESULT: CARRIED [UNANIMOUS]
MOVER: Duane Haskins, Vice-President
SECONDER: Dennis O'Keefe, Councilman
AYES: Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield
EXCUSED: Ellenburg

2. Approve and authorize the attorney bill (Keller Thoma) in the amount of \$1,585.78

RESULT: CARRIED [UNANIMOUS]
MOVER: Duane Haskins, Vice-President
SECONDER: Vaughn Smith, Councilman
AYES: Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield
EXCUSED: Ellenburg

3. Approve and authorize the Mayor's appointment of William Fowler as the City Assessor, per acceptance of the employment agreement, effective date September 15, 2014 through June 30, 2015.

Mr O'Keefe asked if he is a contract employee.

Mayor Zelenko and Attorney Austin stated yes.

Mr. O'Keefe asked if Mr. Fowler is not in who would answer the public questions.

Mayor Zelenko stated that Mrs. Abbey has been and would continue to answer the public's questions.

RESULT: CARRIED [5 TO 1]
MOVER: Steven Heffner, Councilman
SECONDER: Vaughn Smith, Councilman
AYES: Martinbianco, O'Keefe, Heffner, Smith, Hatfield
NAYS: Haskins
EXCUSED: Ellenburg

4. Approve and authorize the Mayor and Clerk to enter into an agreement with Stantec Consulting Michigan Inc., 3754 Ranchero Drive, Ann Arbor, MI 48108-2771. Task 1 Preliminary Engineering (70%) \$120,000.00, Task 2 Detailed Design, Plan Preparation and Contract Documents \$52,000.00 and Task 3 Bidding Assistance \$8,000.00. Total not to exceed fee \$180,000.00.

RESULT: CARRIED [UNANIMOUS]
MOVER: Duane Haskins, Vice-President
SECONDER: Steven Heffner, Councilman
AYES: Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield
EXCUSED: Ellenburg

5. Approve and authroize to waive residency for Mr. Fowler the new City Assessor per Section 3.3 of the City Charter.

RESULT:	CARRIED [5 TO 1]
MOVER:	Steven Heffner, Councilman
SECONDER:	Vaughn Smith, Councilman
AYES:	Martinbianco, O'Keefe, Heffner, Smith, Hatfield
NAYS:	Haskins
EXCUSED:	Ellenburg

K. SECOND READING OF AN ORDINANCE

1. Approve and authorize Second Reading of an Ordinance 2014-9-144.08 amending Chapter 144 of The City of Burton Code of Ordinances to define and prohibit the act being a Disorderly Person and to provide penalties for the violation thereof.

RESULT:	TABLED [UNANIMOUS]	Next: 10/6/2014 7:00 PM
MOVER:	Steven Heffner, Councilman	
SECONDER:	Duane Haskins, Vice-President	
AYES:	Martinbianco, Haskins, O'Keefe, Heffner, Smith, Hatfield	
EXCUSED:	Ellenburg	

Meeting was adjourned at 8:25 PM.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Clerk's Office
Category: Attorney Billing
Prepared By: Teresa M. Karsney
Department Head: Teresa M. Karsney

J.1

SCHEDULED

AGENDA ITEM (ID # 1243)

DOC ID: 1243

**Approve and authorize the Attorney bill (Rick Austin) from
09/10/14 to 10/01/14 in the amount of \$9,751.25.**



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Mayor's Office
Category: Bid
Prepared By: Rik Hayman
Department Head: Rik Hayman

J.2

SCHEDULED

AGENDA ITEM (ID # 1242)

DOC ID: 1242

Approve and authorize the acceptance of the revised bid from Case Construction Company, Inc., G-6235 Corunna Road, Flint, MI 48532, of \$330,531.00 for the Kelly Lake boardwalk construction project.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Department of Public Works
Category: Bid
Prepared By: Greg Kray
Department Head: Greg Kray

J.3

SCHEDULED

AGENDA ITEM (ID # 1229)

DOC ID: 1229 B

**Approve and authorize the acceptance of the bid of
\$105,400.00 from Industrial Painting Contractors, 25163
Darin, Taylor, MI 48180, to perform DPW project No. 14-001-
W "Water Tower": 400,000 Gallon Spheroid - Exterior Repaint,
Dry Interior Spot Repainting, Miscellaneous Repairs, and
Cathodic Protection System Installation.**

ATTACHMENTS:

- Water Tower Bid Specs (PDF)

**CITY OF BURTON, MICHIGAN
400,000 GALLON SPHEROID
EXTERIOR REPAINT
DRY INTERIOR SPOT REPAINTING
MISCELLANEOUS REPAIRS
AND CATHODIC PROTECTION
SYSTEM INSTALLATION**

BID DATE: SEPTEMBER 11, 2014

BID TIME: 2:00 P.M.

CONTRACT NO. 22-25-09-02-14

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SECTION 00 00 30
NOTICE to BIDDERS

City of Burton
4303 S. Center Rd.
Burton, MI 48519

Separate sealed Bids are solicited for the following project:

Project Name: **400,000 Gallon Spheroid**
 Exterior Repaint
 Dry Interior Spot Repainting
 Miscellaneous Repairs
 and Cathodic Protection System Installation

Note: This project name shall be understood to include the entire scope of project as defined and detailed by these specifications.

Scope of Work:

The structure is a 400,000 gallon spheroid water storage tank with a low water line of 93.17 ft. and located at 2040 Connell St. in Burton, Michigan

Exterior: High pressure water clean (5,000 to 10,000 psi) (except for the basebell), water dampen abrasive blast clean the basebell to a SSPC-SP6 commercial standard, spot power tool clean the rest of the exterior to a SSPC-SP11 standard, and apply a four (4) coat epoxy urethane repaint system to the basebell and apply a three (3) coat epoxy urethane system to the rest of the exterior.

Dry Interior: Spot power tool clean to a SSPC-SP11 standard, and apply a spot two (2) coat epoxy system.

Foundation: Water clean and apply a two (2) coat epoxy system.

Cathodic Protection System: Install an impressed current cathodic protection system.

Mixing Unit: Install a mechanical mixing unit with control panel, wiring, etc.

Repairs: 1) Install access tube gap cover.
 2) Install safety railing with painter's rail.
 3) Replace light bulbs in dry interior.

Separate sealed bids will be received by the Owner and then publicly opened and read aloud at:

Bid Opening Site: **City of Burton, 4303 S. Center Rd., Burton, MI 48519**

BURTON – NOTICE to BIDDERS - 1

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

Bid Opening Date: **September 11, 2014**

Bid Opening Time: **2:00 P.M.** (local time)

The SPECIFICATIONS/PLANS may be examined at the following locations:

Construction Association
43636 Woodward Ave.
Bloomfield Hills, MI 48302

Central Michigan Plan Room
2026 Independence Dr.
Mt. Pleasant, MI 48858

Builders Exchange
334 E. Kilore
Saginaw, MI 48607

At the OFFICE of the ENGINEER and at the OFFICE of Gregory Kray DPW Director.

Copies of the SPECIFICATIONS/PLANS and PROPOSAL FORMS may be obtained at the office of DIXON ENGINEERING, INC., 1104 Third Avenue, Lake Odessa, Michigan, 48849 upon payment of **\$60.00** (handling charge for each set). Payment for SPECIFICATIONS should be made to Dixon Engineering, Incorporated. **There will be no refund of handling charge for return of specification packages.** Each BIDDER must deposit with his BID, Security in the amount, form, and subject to the conditions provided in the INFORMATION FOR BIDDERS. The OWNER reserves the right to accept any PROPOSAL, to reject any or all PROPOSALS, and to waive any irregularities in any PROPOSAL. No BIDDER may withdraw his BID within sixty (60) days after the actual date of the opening thereof.

Note 1: The Engineer assumes no responsibility to supply Builders Exchanges and similar plan review rooms with all addenda issued. An attempt will be made to do so; however, only registered plan holders will be notified by fax of expected addendum with short preparation times.

Note 2: Prequalification of BIDDERS - Dixon Engineering will review qualifications of all Contractors and determine their status. Contractors will be prequalified for different sized tanks and towers based on experience, workmanship, and financial data. Any Contractor who has any projects in dispute or unfinished because of Contract problems will be considered NOT prequalified. CONTRACTORS wishing to be prequalified must submit their latest financial statement and a list of ten (10) similar sized projects using similar coating systems. Failure to submit may result in rejection of bid. A prequalification status may be upgraded or downgraded during the course of the season as a result of new data submitted, resolution or origination of project conflicts.

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

SECTION 00 00 40

PROJECT SUMMARY

PART 1 – GENERAL

Nothing stated in this Project Summary shall influence or override any of the conditions in the Instruction to Bidders, General Conditions, or Technical Specifications. It is included as a service to Bidders for explanation only.

1.01 SCHEDULE and LIQUIDATED DAMAGES

The Contractor shall abide by the following schedule:

Fall 2014 Schedule

Commence work on or after September 22, 2014.

Substantial Completion by October 31, 2014 including cure and disinfection time.

Spring 2015 Schedule

Commence work on or after April 13, 2015.

Substantial Completion by May 29, 2015 including cure and disinfection time.

The tank may be out-of-service a maximum of 21 days.

Ready for Final Payment 30 days from date of Substantial Completion.

For liquidated damages, the date 21 days out-of-service establishes Substantial Completion date. Liquidated damages at \$750/calendar day shall apply after this date. Ready for Final Payment Date shall be thirty (30) days after date Substantial Completion was scheduled or adjusted by Change Order, or earlier if actual date. Liquidated damages after Ready for Final Payment Date of \$250/day shall apply. Liquidated damages are cumulative if damages from Substantial Completion and Ready for Final Payment overlap.

1.02 SCOPE of WORK

The work includes:

The structure is a 400,000 gallon spheroid water storage tank with a low water line of 93.17 ft. and located at 2040 Connell St. in Burton, Michigan

Exterior: High pressure water clean (5,000 to 10,000 psi) (except for the basebell), water dampen abrasive blast clean the basebell to a SSPC-SP6 commercial standard, spot power tool

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

clean the rest of the exterior to a SSPC-SP11 standard, and apply a four (4) coat epoxy urethane repaint system to the basebell and apply a three (3) coat epoxy urethane system to the rest of the exterior.

Dry Interior: Spot power tool clean to a SSPC-SP11 standard, and apply a spot two (2) coat epoxy system.

Foundation: Water clean and apply a two (2) coat epoxy system.

Cathodic Protection System: Install an impressed current cathodic protection system.

Mixing Unit: Install a mechanical mixing unit with control panel, wiring, etc.

- Repairs:
- 1) Install access tube gap cover.
 - 2) Install safety railing with painter's rail.
 - 3) Replace light bulbs in dry interior.

1.03 HOLD POINTS

- A. Stop work and schedule inspections (see SC/GC 6.04.B) for the following hold points as a minimum.
- B. Schedule of Hold Points – Preliminary:
 1. Preconstruction Meeting: Until five (5) days after all required submittals are received and reviewed by the engineer and no exceptions are taken to the shop drawings.
 2. Prior to draining tank:
 - a. To ensure all Sections of 01 50 00 and 01 53 43 environmental requirements are met.
 - b. To ensure all blasting equipment are on-site and in working order.
- C. Scheduling of Hold Points – Section 05 00 00 – Metal Repairs:
 1. Repairs:
 - a. To locate or quantify repairs as necessary.
 - b. To review surface preparation prior to welding, and review all products prior to installation.
 - c. After welding is complete for quality assurance.
 - d. As may be specifically required in Section 05 00 00 of the specifications.
- D. Scheduling of Hold Points – Sections 09 97 13 – Steel Coating and 09 97 13.10 Steel Coating Surface Preparation:
 1. Section 09 97 13 – Dry Interior and Exterior:
 - a. Prior to surface preparation to set the standard.
 - b. Prior to primer application to verify cleanliness, profile, thoroughness, and ambient conditions for coating application.

- c. Prior to application of each successive coat for quality assurance and ambient conditions for the next coat.
- d. Prior to final coat to verify all non-conformance issues have been resolved.
- e. Scheduled pre-final inspection: Allow engineer access to all locations so a complete punch list can be prepared. Final coat on ladders or other access points can be delayed until after this inspection and included as a punch list item.
- f. Scheduled final inspection: After ALL punch list items have been completed (including painting ladders), provide access to all items on the punch list.
- 2. Additional hold points scheduled at the preconstruction meeting or defined elsewhere in the specifications.
- E. Failure to Schedule:
 - 1. If the contractor fails to schedule hold point inspections, all work not inspected will be considered in non-conformance.
- F. Non-Conformance Work:
 - 1. Before applying a cover coat, remove failed work. Correct all non-conformance work and request an additional inspection before painting.
 - 2. Insure that all work meets contract specifications and does not fail the initial inspection. Contractor shall reimburse the owner for all additional engineering expenses resulting from extra inspection visits from failure to cancel inspections, delays from inspections scheduled before work completion, or additional time necessary to inspect failed work or work performed in non-compliance with the specifications, which causes an increase in the contract price between the engineer and owner.
 - 3. Each hold point requires an inspection. If the contractor coats over or otherwise makes the work inaccessible for inspection, paragraph GC/SC 13.04.E shall apply.

1.04 MISCELLANEOUS

- A. Coordinate with antenna owner any work to be done.
- B. Contractor to protect all sensitive equipment during all water cleaning, blasting, and painting.
- C. Contractor has the option to select either the Fall 2014 or Spring 2015 completion schedule.

SECTION 00 02 00
INSTRUCTION to BIDDERS

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ARTICLE 1 - DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

- A. *Issuing Office*--The office from which the Bidding Documents are to be issued.
- B. *Owner Office*—The office where the bidding procedures are to be administered.
- C. *Field Inspection Report*—(FIR) Report prepared in field as part of Prebid Inspection. The report is provided as a courtesy to the Bidder. The data provided in the report is prepared from a Contractor's viewpoint, but its accuracy is not guaranteed. Do not rely on data in preparing bid.
- D. *Prebid Inspection Report*—Written report, including FIR prepared for Owner for budgeting purposes. Report generally includes photos. Do not rely on data in preparing bids.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Notice to Bidders may be obtained from the Issuing Office.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. Review Bid documents for completeness; no future claims for damages will be considered based on missing pages, or incomplete documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

2.04.1 Owner and Engineer, in making copies of Bidding Documents available to Plan Services, do so for the purpose of advertising. Engineer and Owner make no assertions and take no responsibility that copies made by Plan Services or provided to Plan Services are complete. Plans electronically downloaded by Bidder also are responsibility of Bidder to verify accuracy and completeness.

ARTICLE 3 - QUALIFICATIONS

3.01 *Prequalification of Bidders:*

- A. Coating projects require competent, financially solvent Contractors who complete projects on time. These projects deal with the health and safety of the public, have a short availability time, and is dangerous work; therefore, the Owner will only consider prequalified Contractors. Bidders not prequalified may be considered non-responsive and bids may be returned unopened. Bidders who are not prequalified may not be awarded the project if there is insufficient time (30 days) to complete a thorough review.
- B. Requirements for prequalification are:
 - 1. On tanks of 1,000,000 gallons or smaller, successful completion of at least ten projects of like or larger size in the last five years. On tanks larger than 1,000,000 gallons, five projects of like size shall have been successfully completed in the last five years.
 - 2. Bidders shall furnish proof that they are bondable for the size of the project they are bidding, and furnish proof of their bonding company's rating.

3. All projects listed by a Bidder shall have been completed by that bidder under the company name in which he will be bidding this project. If the Bidder has completed the project(s) under a different company name, then the name under which the project(s) was completed shall be noted.
- C. Engineer will review submitted data to determine if Bidder meets prequalification requirements. QP1 or QP2 certification by Society of Protective Coatings (SSPC) is an alternate method of prequalification, except for the experience list. Any information found to be false or incorrect may be ample reason for disqualification.
- D. New Bidders can apply for prequalification; however, they must be able to prove that they are bondable, provide a certified financial statement (most recent fiscal quarter), provide a complete equipment list; and a list of manpower, including work experience and the contractor(s) for whom they have worked. From this information, an evaluation and recommendation will be made by Engineer using economic ratios and comparisons regarding project size, equipment, manpower available, and foreman's experience. A determination will then be made by the Owner as to whether or not the Bidder is qualified to perform the Project. Submit "Bidder's Sworn Work History Statement" found in the Notice to Bidders.
- E. Any prequalified Contractor (by Engineer or SSPC) who has pending litigation against him for work not completed on a project or for failed work on a project may be subject to disqualification.
- F. In addition, the Owner may make further investigations into the Bidder's prequalification, including compliance with human resource programs, as well as OSHA and environmental histories. The Owner also may review elements of the prequalification and determine if experience is generic to and specific to the project. Furnish the Owner information, data, or certifications requested.

3.02 *Disqualification:*

- A. Prequalification status may be nullified if a Bidder is disqualified or by other means rejected from bidding in a state or subdivision of a state, or by the federal government.
- B. By submitting his bid, the Bidder certifies that he is not currently disqualified or rejected from submitting bids in the state or political subdivision of the state where the project is located.

ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 *Subsurface and Physical Conditions*

- A. The Supplementary Conditions (SC) identify:
 1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.
 2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in Paragraph 4.01.A, if any, will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.
 1. Copies of Prebid Inspection Report, including photos, may be reviewed at issuing office at no charge, or a copy sent (UPS Ground) for the non-refundable fee of \$30. This Prebid Report and the FIR were prepared for the Owner. Do NOT rely on any technical data presented in these reports.

4.02 *Underground Facilities (N/A unless identified further in S.C.)*

4.03 *Hazardous Environmental Condition (N/A unless identified further in S.C.)*

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

- A. The Owner will allow exterior inspection of the facility. Access to raised ladders, etc. is the responsibility of the Bidder. Availability and time restrictions will be detailed in the Project Explanation. If not detailed, inspection is by appointment only. For security concerns, do not access the site without notice to the Owner. Do not climb the structure without authorization.
- B. If the interior is available for inspection, availability and time restrictions will be detailed in the Project Explanation.
- C. If the Bidder wishes to inspect the structure with anymore than ground observation, then Bidder shall provide Owner with Certificate of Insurance meeting requirements of G.C.5.03, G.C.5.04, S.C..5.03 and S.C.5.04.

4.06 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
- B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. where existing, obtain and carefully study (or accept consequences of not doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
- E. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- F. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- G. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

- A. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has reviewed S.C. 4.03 Differing Physical Conditions, and acknowledges that provision.

ARTICLE 5 - PRE-BID CONFERENCE

5.01 If a Pre-Bid conference is scheduled and whether the meeting is mandatory or non-mandatory will be identified in the Project Summary – Section 00040. Representatives of Owner and Engineer will be present to discuss the Project. If Pre-Bid conference is non-mandatory, Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 6 - SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

7.03 Addenda may be electronically issued within five days of opening of Bids if Addenda is considered clarification only.

7.04 The only Addenda issued after three days will be a notice to reschedule opening of Bids, or to cancel opening of Bids. Bids already in transit will be returned unopened, or held unopened if requested by Bidder until new date for opening of Bids.

7.05 If a Bidder does not or claims he has not received any Addenda, the Bid may be withdrawn per Paragraph 16.02.

ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 10 percent of Bidder's maximum Bid price and in the form of a certified check or bank money order or a Bid bond (on the form attached) , or if no form is attached, on AIA Document A310 issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

- A. Bid security will be held on three lowest Bidders.
- B. Bid Bonds will not be returned, but allowed to expire sixty-one days after Bid opening, unless notified by Owner.

8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

- A. Bid Bonds of responsive Bidders beyond the third lowest Bids will not be returned, but will be considered expired after fourteen days, unless notified by Owner.
- B. Bid Bonds of non-responsive Bidders will be considered expired upon determination by Engineer that Bid was non-responsive.

ARTICLE 9 - CONTRACT TIMES

9.01 The number of days within which, or the dates by which, [Milestones are to be achieved and] the Work is to be substantially completed and ready for final payment are set forth in the Bid/Agreement and Project Summary 00040.

ARTICLE 10 - LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Bid/Agreement and Project Summary 00040.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier,

individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 - PREPARATION OF BID

13.01 The Bid/Agreement Form is included with the Bidding Documents. Additional copies may be obtained from Issuing Office.

13.02 All blanks on the Bid Form shall be completed by printing in ink or by typewriter and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternative, adjustment unit price item, and unit price item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown below the signature.

13.08 All names shall be typed or printed in ink below the signatures.

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.10 The address and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

13.12 All Bid preparation expenses, including site visits, prebid meetings, etc. are the responsibility of the Bidder, whether successful or not.

ARTICLE 14 - BASIS OF BID; COMPARISON OF BIDS

14.01

- A. Bidders shall submit a Bid on a unit price basis for each line item of Work listed in the Bid schedule.
- B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions. Where a quantity is not specified (i.e. exterior paint), consider the quantity as one, or a lump sum line item.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in Paragraph 11.02 of the General Conditions.

ARTICLE 15 - SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid/Agreement Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security:

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed as directed in the Invitation to Bid.

15.03 If additional material is required to be submitted with the Bid, that material will be defined in the Project Summary – Section 00040, or elsewhere in these Bid Documents.

15.04 Required Submittals with Bid Form: The bid may be rejected if the Bidder fails to submit the following submittals with the Bid/Agreement Form in the sealed, identified envelope.

- A. A signed Bond for ten percent (10%) of the bid amount total, meeting requirements of the State of Michigan codes, or a certified check payable to Owner for ten percent (10%) of the full amount of the bid.
- B. Power of Attorney for agent signing the Surety.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 - OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, non-responsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance, payment, and maintenance bonds and insurance. When the Successful Bidder delivers the executed Notice of Award to Engineer, it shall be accompanied by such bonds.

ARTICLE 21 - SIGNING OF AGREEMENT/TIMEFRAME

21.01 When Owner gives a Notice of Award to the Successful Bidder, within ten days thereafter, Successful Bidder shall sign and deliver the required number of Notice of Award attached documents to Engineer. Within twenty days after receipt of bonds, etc. from the Engineer, Owner will deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

21.02 The executed copy will be accompanied by three copies of signed Notice to Proceed. Within five days of the date on the Notice to Proceed, the Bidder will sign the Notice to Proceed and return a copy to the Engineer. If the

Engineer does not receive the accepted Notice to Proceed in five days, then the Notice to Proceed will be considered accepted by default. The Notice to Proceed will be dated on or around the contract date. The actual contract start date, completion date, etc. will be the same as the Effective Agreement Date.

21.03 Notice of Award; Effective Date of Award (Effective Date of Agreement): If the Contract is awarded by Owner, such award shall be effective when the Notice of Award has been delivered to the successful Bidder ("Effective Date of Award"). Owner will prepare three (3) copies of the Contract after return of Conditions Precedent. The Effective Date of Agreement is the date the Agreement is signed by the Owner.

- 21.04 A. Closing Date: Unless otherwise stated in the Notice of Award, the successful Bidder shall satisfactorily complete all Conditions Precedent to Closing before, and the Contract and all related documents shall be executed, submitted and exchanged by Owner and Bidder ("Closing") on, the tenth day following the Effective Date of Award or within such extended period as Owner may, in the exercise of its sole discretion, authorize in writing after issuance of the Notice of Award ("Closing Date").
- B. The execution of Agreement, Notice of Award, the submittal of additional requested materials, the Contractor's Certifications, and acceptable certificate(s) of insurance and Performance and Payment Bonds shall be considered Conditions Precedent to closing of the Contract.
- C. Failure to timely execute or submit any of the aforesaid documents shall be grounds for the imposition of liquidated damages as more specifically set forth in 21.04.B above. If the submitted documents or any of them fail to comply with these General Instructions to Bidders or the Contract or are not timely executed and submitted, Owner may, in its sole discretion, annul the award or allow the successful Bidder an opportunity to correct the deficiencies.
- D. In no event will Owner execute the Contract until any and all such deficiencies have been cured or Owner has received adequate assurances, as determined by Owner, of complete and prompt performance.
- E. Closing: At the Closing, and provided that all documents required to be submitted prior to or at the Closing have been reviewed and determined by Owner to be in compliance with these General Instructions to Bidders and the Agreement, or assurances of complete and prompt performance satisfactory to Owner have been received, Owner shall execute all copies of the Contract, retain one (1) copy of the completed Contract, and tender one (1) copy to the successful Bidder at the Closing.
- 21.05 A. Annulment of Award; Liquidated Damages: The failure or refusal of a successful Bidder to comply with the Conditions Precedent to Closing or to Close shall be just cause for the annulment of the award and the imposition of liquidated damages.
- B. Subsequent Awards: Upon annulment of an award, Owner may accept, and award a Contract based on, any other Bidder's Proposal as Owner, in its sole judgment, deems to be the best or may invite new Proposals or may abandon the bidding process or the Work.
- C. If the Owner does not annul the Contract, he shall be entitled to liquidated damages of \$100/day after Contract close Date for Conditions Precedent met late. Liquidated damages are to offset assumed economic losses for delay.

ARTICLE 22 – NON-DISCRIMINATION

22.01 Non-Discrimination: Do not discriminate in employment practices.

22.02 Bidders shall, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of the contract.

22.03 Successful Bidders shall, if requested, submit a list of all subcontractors who will perform work on the project and written signed statements from authorized agents of the labor pools with which they will or may deal for employees on the work, together with supporting information to the effect that said labor pools' practices and policies are in conformity with Equal Employment Opportunity, including latest federal and local policies. Labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment, and equal treatment of employees seeking employment and performing work under the contract, or a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish same prior to award of the project.

22.04 Successful Bidders shall comply in all respects with the Labor Standards Contract Provisions regarding non-discrimination on this Project.

22.05 Bidder agrees that in the hiring of employees for the performance of work under this Agreement or any subagreement, neither the Contractor, nor any Subcontractor, nor any person acting on behalf of either, shall by reason of race, creed, or color, discriminate against any citizen in the employment of labor or workers who are qualified and available to perform the work to which the employment relates; nor shall the Contractor, or any Subcontractor, or any person acting on behalf of either, in any manner discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, or color.

ARTICLE 23 – NON-COLLUSION

23.01 Collusion between Bidders will be cause for rejection of affected bids and may be cause for rejection of all bids. Multiple bids submitted by one bidder under the same or different names, whether as individual, firm, partnership, corporation, profit or non-profit, affiliate, or association will be cause for rejection of bids. A subcontractor is not a Bidder and he may submit prices to multiple Bidders.

ARTICLE 24 – ALTERNATE BIDS OR RESTRICTIONS ON BIDS

- A. Items that affect the scope of the project and not addressed by addenda will not be accepted as an alternate bid.
- B. Alternate bids will automatically be considered non-responsive.
- C. Such bids may be examined prior to project award and may result in bid cancellation, followed by new bids, including the alternate.
- D. Discounts to the Owner for payment within a stipulated period of time will not be considered conditional or qualified bids. Discounts will be accepted, but not considered in bid price evaluation for bid award.
- E. Interest clauses will be considered a qualified bid.

SECTION 00 04 10

BID/AGREEMENT FORM

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Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to:

City of Burton

4303 S. Center Rd.

Burton, MI 48519

(hereinafter called Owner)

- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner using this combined Bid/Agreement form to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 2.02 Bidder accepts all the terms and conditions of the combined Bid/Agreement form. (The Bid/Agreement form is an attempt to shorten the time period between submittal and award.) Bidder’s signature is an acceptance of all terms of the Agreement section and this Bid, if successful, will become an Agreement after it has been signed by an authorized representative of the Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all: (1) reports, if available.
- E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- K. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.
- L. All references to Bidder in this affirmation will change to the term Contractor if this Bid becomes an Agreement.

ARTICLE 4 – FURTHER REPRESENTATIONS

4.01 Bidder further represents that:

- A. this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
- E. Contractor hereby represents that the only persons, firms, or corporations interested in this Contract as principals are those disclosed to Owner prior to the execution of this Contract, and that this Contract is made without collusion with any other person, firm, or corporation. If at any time it shall be found that Contractor has, in procuring this Contract, colluded with any other person, firm, or corporation, then Contractor shall be liable to Owner for all loss or damage that Owner may suffer thereby, and this Contract shall, at Owner's option, be null and void.

4.02 Bidder further represents that:

- A. Bidder has been prequalified for projects of this design, size, and complexity.

ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents, including all labor and material, for the following price(s):

\$ _____

Lump Sum Prices are based on the Schedule of Values – Section 00 43 73.

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Bidder acknowledges that Lump Sum bids are actually itemized bids based on the Schedule of Values, and further agrees and acknowledges the alternatives and conditions set forth in the Schedule of Values.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement, or in the Project Summary.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the Contract Times, or within Milestone dates.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are to be attached to and made a condition of this Bid:
- A. Required 10% Bid security in the form of a bond or cash surety. Include AM Best rating of bond company.
 - B. List of Proposed Subcontractors

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and/or the Supplementary Conditions.
- 8.02 *Time Framework for Award Execution:* The Owner will open bids on the bid date. After opening, no bid may be withdrawn or altered for sixty days, unless specifically stated elsewhere. The Owner may negotiate with the low Bidder and mutually both parties may alter bid (i.e. partial award of project).

The Bidder will be notified of award within sixty days of bid date, unless stated elsewhere or mutually extended. Notice of Award form will be sent by fax or mail. Within ten business days of Notice of Award, supply the Engineer with three original sets of separate Payment, Performance, and Maintenance Bonds. Supply three original sets of Certificates of Insurance meeting requirements of General Conditions and Supplementary Conditions 5.01 and 5.02. Insurance companies and insurance forms must be standard to the industry and acceptable to the Owner. Failure to submit bonds and/or insurance within the time frame will be considered a default, a failure to perform as required by the Bid Bond. The Owner, at his option, may waive default, delay default, or proceed with capture of the Bid Bond which will become the Owner's property.

Bonds and insurances are to be submitted to the Engineer for review. The Owner will within twenty days of receipt of approved bonds and insurances from the Engineer execute the Agreement and send a signed copy to the Contractor.

The executed copy will be accompanied by three copies of the Notice to Proceed. Within five days of the date on the Notice to Proceed, the Bidder will sign the Notice to Proceed and return a copy to the Engineer. If the Engineer does not receive the accepted Notice to Proceed in five days, then the Notice to Proceed will be considered accepted by default.

The Notice to Proceed will be dated on or around the Effective Date of Agreement.

ARTICLE 9 – BID SUBMITTAL

- 9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____ (SEAL)
(Individual's signature)

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

Doing business as: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest: _____
(Signature of Corporate Secretary)

All Business Entities

Date of Qualification to do business in _____ [State Where Project is Located] is ____ \ ____ \ ____.

Agent for service or process: _____

Address for giving Notices: _____

ARTICLE 10 – BID ACCEPTANCE

10.01 Bid Acceptance:

- A. The above Bid is accepted by the Owner, and shall become a Contract Agreement binding on all parties after signing by an authorized representative of the owner.
- B. All references in the second portion of this form are Agreement terminology. Bidder is now referred to as Contractor. Where appropriate, the term Bidder in the Bid form is changed to Contractor.

ARTICLE 11 - CONTRACT TIMES

11.01 Time is of the Essence

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

11.02 Dates for, or Days to Achieve (see paragraph 6.01) Substantial Completion and Final Payment

- A. If Milestones are used in this project, they are as defined in the Project Summary – Section 00040.

11.03 Liquidated Damages

A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in

a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$750 for each day that expires after the time specified in Paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$250 for each day that expires after the time specified in Paragraph 11.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 12 - CONTRACT PRICE

12.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Article 5 Bid above.

12.02 As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

ARTICLE 13 - PAYMENT PROCEDURES

13.01 Submittal and Processing of Payments

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

13.02 Progress Payments; Retainage

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment once each month during performance of the Work as provided in Paragraphs 13.02.A.1 through 13.02.A.7 below. All such payments will be measured by the schedule of values (or Article 5 above) established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. On the exterior, surface preparation by high pressure cleaning or jetting and power tool cleaning will be considered equal to 40 percent of the line item work and cost and each full coat of paint 15 percent. The remainder will be for lettering, demobilization and cleanup.
2. Dry interior, and repairs will not be broken down. 100 percent completion is required before they will be considered for payment.
3. Mobilization is included in the surface preparation allotment for items 1 and 2 above.
4. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:

90 percent of Work completed (with the balance being retainage). 0 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

7. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 90 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

13.03 Final Payment

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer.

ARTICLE 14 - CONTRACT DOCUMENTS**14.01 Contents****A. The Contract Documents consist of the following:**

1. This Bid/Agreement.
2. Performance bond.
3. Payment bond.
4. Maintenance bond.
5. General Conditions, Supplementary Conditions, Specifications and Drawings as listed in the table of contents of the Project Manual.
6. Addenda (numbers ____ to ____, inclusive).
7. Exhibits to this Agreement (enumerated as follows):
 - a. Documentation submitted by Contractor prior to Notice of Award (pages ____ to ____, inclusive).
 - b. ____.
8. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed (pages ____ to ____, inclusive).
 - b. Work Change Directives.
 - c. Change Order(s).

B. The documents listed in Paragraph 14.01.A are attached to this Agreement (except as expressly noted otherwise above).**C. There are no Contract Documents other than those listed above in this Article 14.**

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 15 - MISCELLANEOUS**15.01 Assignment of Contract**

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

15.02 Successors and Assigns

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

15.03 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

15.04 Other Provisions

IN WITNESS WHEREOF, Contractor has signed this Agreement as Bidder. Owner has signed Agreement in duplicate and one counterpart each has been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or identified by Owner and Contractor or on their behalf.

This Agreement will be effective on, _____, _____ (which is the Effective Date of the Agreement).

OWNER:

By: _____

Title: _____

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

SECTION 00 43 73
SCHEDULE of VALUES

1.01 PART 1

A. Bidder agrees to perform all work in the following sections as described in the Contract Documents, including all labor and material for the following Schedule of Values – Section 05 00 00:

1. SAFETY RAIL
 _____ \$ _____

B. Bidder agrees to perform all work in the following sections as described in the Contract Documents, including all labor and material for the following Schedule of Values – Section 09 97 13:

1. EXTERIOR PAINTING
 _____ \$ _____

2. DRY INTERIOR SPOT PAINTING
 _____ \$ _____

TOTAL PRICE SECTION 09 97 13 INCLUDING #1 THROUGH #2:

_____ \$ _____

C. Bidder agrees to perform all work in the following sections as described in the Contract Documents, including all labor and material for the following Schedule of Values – Section 13 32 12:

1. MIXING UNIT
 _____ \$ _____

TOTAL PRICE SECTION ,05 00 00, 09 97 13, AND 13 32 12:

SECTION 05 00 00:	\$ _____
SECTION 09 97 13:	\$ _____
SECTION 09 97 13:	\$ _____
PROJECT TOTAL:	\$ _____

D. ESTIMATED COST ALREADY INCLUDED IN EXTERIOR AND DRY INTERIOR PAINTING TO PROTECT AND WORK AROUND ANTENNAS AND CABLES. OWNER RESERVES THE RIGHT TO DELETE THIS AMOUNT IF THE ANTENNAS AND CABLES ARE REMOVED.

_____ \$ _____

1.02 TOTALS

A. Total Base Bid is to match total Base Bid price supplied in Bid/Agreement form.

1.03 BID BOND

A. Bid Bond shall be based on 10% of the total.

1.04 WEIGHTED BIDS

A. Bidder/contractor is advised that, if in the opinion of the owner or engineer, if the Schedule of Values is not an accurate reflection of cost of items, the owner will adjust individual costs to more balance costs. Total will not be changed.

1.05 MISTAKES

- A. Total of Schedule of Values should equal lump sum bid. If addition of individual items does not match total, then each individual items will be proportionately changed to reflect total of values to match lump sum bid.
- B. A mistake in addition for schedule items cannot be used to increase lump sum bid. Individual items will be proportionately changed downward to reflect lump sum price.
- C. A mistake in Schedule of Values may be used as evidence of error in any request to withdraw bids because of error. Approval of request to withdraw bids is covered in the prebid information. This section is not intended to conflict any portion of the bid package. This section is only to reflect one of the reasons to withdraw bids. Approval of bid withdrawal will be based solely on the owner's interpretation of the severity of the mistake.

1.06 CHANGES in SCHEDULE of VALUES by OWNER

- A. The owner reserves the right to delete any line item at their sole discretion for any reason, budgetary or other. All contract general costs should be evenly distributed over these items (mobilization, demobilization, bonds, etc.)
- B. The bidder/contractor is advised not to overload any specific deletable line item. It could result in loss of profit if the overload item is deleted.
- C. This deletion of items or not including additives is an expressly stated reservation (a contractually agreed automatic negotiation). This reservation applies to the three lowest responsible and responsive bidders. Any deletion of specific line item will be completed before selection of the lowest acceptable contractor. Change will be reflected in the Notice of Award.

1.07 NON-DELETABLE WORK

- A. Any adjustment to the items described above will require negotiation and acceptance by both the contractor and owner.

- B. Any deletion of line items, or increase or decrease in unit cost items deemed necessary after the Notice of Award will be completed through the Change Order procedure. Prices used in the Schedule of Values will be used in the Change Order adjustment. If work has begun on an item before being deleted by Change Order, the contractor is entitled to costs incurred.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



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a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

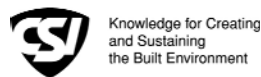
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The Associated General Contractors of America



Construction Specifications Institute

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These General Conditions have been supplemented by Dixon Engineering Inc.

06/01/2005

~~These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).~~

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

Lead, chrome, and other by-products of paint removal, as well as strippers, new coatings, and thinners, are to be included in this definition.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil,

petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof. On tank projects, date of substantial completion is the date the tank is or would have been returned to service, except for voluntary delay by Owner. Date of substantial completion is after complete cure, disinfection, and testing.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

53. *Performance Specifications* --Specifications that require the manufacturer or supplier of equipment, materials, or systems to design, manufacture, deliver, and install products to achieve specific results under stipulated conditions of operation and in environments described in applicable Specification Sections.

54. *Hold Point*--A point in the construction sequence when the Contractor is required to stop work on that portion of the project until an inspection has been completed.

55. *Non-Conformance Report*--A report written by the Engineer to document the Contractor's procedure or work that does not meet requirements of the specifications or contract.

56. *Bulletin*--If time permits, a Bulletin is issued prior to a Change Order. A Bulletin is an inquiry of the Contractor of the cost to complete the work described in the Bulletin. It is intended as the basis of a Change Order if all parties reach agreement.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be

effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer’s - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

d. All work completed with an unresolved non-conformance report.

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are

used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

~~A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.~~

A. Within ten (10) business days of Notice of Award, supply the Owner with three (3) original sets of separate Payment, Performance, and Maintenance Bonds. Supply three (3) original sets of Certificates of Insurance meeting requirements found in the Supplemental General Conditions. Insurance companies and insurance forms must be standard to the industry and acceptable to the Owner. Failure to submit bonds and/or insurance within time frame will be considered a default, a failure to perform as required by the Bid Bond. The Owner, at his option, may waive default, delay default, or proceed with capture of the Bid Bond which will become the Owner’s property.

Bonds and insurances are to be submitted to the Engineer for review. The Owner will within twenty (20) days of receipt of approved bonds and insurances from the Engineer execute the agreement and send a signed copy to the Contractor.

See Insurance Information for required limits.

~~B. Evidence of Insurance: Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.~~

B. The Owner will not provide Certificate of Insurance to the Contractor. The Owner will not name Contractor additional insured.

2.02 Copies of Documents

~~A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Owner shall furnish the Contractor one signed copy of the Contract Documents.~~ Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

~~A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.~~

A. The contract times are defined in the Project Summary in Section 00040. A Notice to Proceed will be issued thirty (30) days prior to the start date if time permits. A fax or verbal notice may be used to give thirty (30) days notice until all parties can sign the Notice to Proceed.

B. The effective start date will be indicated in the Notice to Proceed. The start date may exceed sixty (60) days after bid opening. The controlling dates will be maximum out-of-service time and/or the project completion date. The start date may float to give the Contractor more flexibility with scheduling.

2.04 Starting the Work

~~A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run. Contract time is governed by out-of-service time. The Contractor is encouraged to deliver equipment to the site prior to Contract Start. The site will be available up to two (2) weeks prior to agreed drainage date.~~

B. Contractor is also encouraged to rig the structure, complete containment installation, and complete weld repairs that do not affect the wet interior prior to draining of the tank. The amount of work completed shall have been approved at the preconstruction conference.

2.05 Before Starting Construction

A. Preliminary Schedules: Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during

performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference

~~A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.~~

A. The Engineer may schedule a preconstruction conference to be attended by Owner, Engineer, and Contractor(s). When no organization meeting is scheduled, the Contractor, prior to beginning any work, shall meet with the Engineer and arrange a work schedule for the project. Once the project has started, the Contractor shall carry it to completion without delay.

B. Attend a preconstruction meeting that may be scheduled by the Owner at a mutually agreeable time after all contract preconditions and other requirements have been met.

C. A corporate officer or someone with legal authority to obligate the company/corporation, project manager (if different from officer), and the intended foreman shall attend. If project foreman does not attend the meeting, it shall be the Contractor's responsibility to supply the information discussed at the meeting to the field foreman.

D. The Owner will be represented by the project contact person, and the Engineer by the project manager, or his principal.

E. Submit all required materials prior to the preconstruction meeting.

F. All containment, personal hygiene, and lead control issues required in this contract will be reviewed. Be prepared to commit designated "competent person(s)" to responsibilities of confined space, scaffold rigging, lead, etc.

2.07 Initial Acceptance of Schedules

~~A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. All schedules are to be submitted prior to the preconstruction meeting.~~ Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress

payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals. All Submittals shall be included with the first submittal package and shall only be submitted by the Contractor and not by Suppliers or Subcontractors. If certain items cannot be submitted with the package, an acceptable Schedule of Submittals must be supplied to the Engineer.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work. If the Engineer determines the Schedule of Values is not acceptable, the Engineer will use the Contractor's Schedule to reallocate values. The Engineer's reallocation interest will be to maintain a sufficient value for work completed toward the end of the project to avoid frontloading values. The Engineer will assign values high enough to bring in another Contractor to finish work in case of default. The Contractor has five (5) days to appeal this reallocated Schedule of Values.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity,

ity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 Reuse of Documents

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or
2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent

of Owner and Engineer and specific written verification or ~~adaption~~adaptation by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 ~~Subsurface and Physical Conditions~~ Physical Conditions

Because of the nature of painting projects, delete all references to underground work or underground conditions.

~~A. Reports and Drawings: The Supplementary Conditions identify:~~

~~1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and~~

~~2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.~~

A. Whenever practical, a physical prebid inspection of the Project was completed prior to preparation of the specifications. During that inspection, a Field Inspection Report (FIR) was prepared. The FIR was used to produce an Engineering Report on the condition of the structure.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

C. If available, the FIR is included in these specification documents. The FIR contains a statement that the author of the FIR was to conduct his investigation and report as if he was a Contractor. This approach helps with the preparation of the Engineer's report. It is included as a courtesy to the Contractor. The Contractor is not an intended third party beneficiary. The report is not intended to be technical data. See Information for Bidders, Section 00200, Site Visit and Site Inspection/Comparison with Bid Documents. It is the Contractor's responsibility to visit the site and to be responsible to know actual site conditions.

4.03 ~~Differing Subsurface or Physical Conditions~~ Differing Physical Conditions

Because of the nature of painting projects, delete all references to underground work or underground conditions.

A. Notice: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or

tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

d. Rough Surfaces in the Wet Interior: The wet interiors of steel structures are subject to corrosion. Based on the age of the tank, maintenance history of the tank, and other factors, the inside of the tank may be pitted. The degree or severity or extent of this pitting will not be considered a hidden condition. No claim of extra for blasting or coating application will be accepted or reviewed. If pit welding or pit filling is completed, that will be done at the bid unit price or a negotiated price. The Owner and Engineer will determine and authorize the extent of pit filling. There will be as many or more unfilled pits than authorized for repair. Contractor cannot rely on pit filling to eliminate some of the application techniques

needed for pitted tanks.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities

~~A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:~~

~~1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and~~

~~2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:~~

~~a. reviewing and checking all such information and data,~~

~~b. locating all Underground Facilities shown or indicated in the Contract Documents,~~

~~c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and~~

~~d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.~~

A. The location of any particular utility cannot be certified as being correct. In general, location and elevation are approximate only.

~~B. Not Shown or Indicated~~

~~1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as~~

~~required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.~~

B. Contractor shall notify each utility before digging for anchors or for any reason. Before starting, call in advance as required by the individual agencies:
Indiana: Indiana Underground 800-382-5544
Illinois: J.U.L.I.E. 800-892-0123
Michigan: Miss Dig 800-482-7171
Ohio: Ohio Utilities Protection Service 800-362-2764; outside Ohio 216-744-5191
Wisconsin: Digger's Hotline 800-242-8511; Milwaukee 414-259-1181
Virginia: Miss Utility 800-552-7001

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

~~A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.~~

4.06 *Hazardous Environmental Condition at Site*

~~A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of~~

~~those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.~~

A. There are no known hazardous environmental conditions on-site. No reports or drawings related to Hazardous Environmental Conditions are known to the Owner or Engineer.

~~B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:~~

~~1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or~~

~~2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or~~

~~3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.~~

B. Not used.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

~~G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~

G. Not used.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

A.2. Supply a Maintenance Bond for two (2) years at 100% contract price to ensure any repair work required after the one (1) year warranty inspection within thirteen (13) months (unless stated elsewhere). The repair scheduling may be delayed several months for Contractor's schedule or Owner's operational requirements. This bond is to remain in effect until repairs have been completed. Per contract, if repairs exceed 10% of any area, then the warranty and bond are extended another year.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act. Use forms acceptable to AIA Industry Standards, or use forms specifically required by the Owner. Supply three (3) original signed and properly executed bonds for each type of bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall

promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

B. Surety or Insurance Companies must, in addition to State license, be incorporated and originating from within the United States. Offshore companies or internet companies are not acceptable. Supply bonds and insurance from companies with a Class A rating or better (rates latest edition and by A.M. Best Co.).

5.03 *Certificates of Insurance*

A. ~~Contractor shall deliver to Owner~~ Contractor shall deliver three (3) copies to , with Engineer, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

~~B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.~~ Not used.

C. Failure of Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. By requiring such insurance and insurance limits herein, Owner does not represent that coverage and limits will necessarily be adequate to protect Contractor, and such coverage and limits shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or

result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. ~~Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:~~

~~1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;~~

~~2. be written on a Builder's Risk "all risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;~~

~~3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);~~

~~4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;~~

~~5. allow for partial utilization of the Work by Owner;~~

~~6. include testing and startup; and~~

~~7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.~~

~~B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.~~

~~C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other~~

additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

Not used.

5.07 Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06⁴ will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

~~B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:~~

~~1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and~~

~~2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.~~

~~C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.~~

~~5.08 Receipt and Application of Insurance Proceeds~~

~~A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.~~

~~B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.~~

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

C. Resident Superintendent shall be fluent in English to the level of competency to complete requirements of 6.01, Paragraph B. Superintendent shall also be fluent or have access to a translator for the primary language of the majority of workers. Degree of fluency to be sufficient so that Superintendent can adequately complete his duties under 6.01.A.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions

of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

B.

1. Notify the Owner of expected arrival a minimum of two weeks (14 days) in advance.

2. Direct all requests for inspection to the Owner for notification of the Engineer. Forty-eight (48) hours notice of all inspection requests is required.

3. A written schedule (strictly followed) will substitute for the forty-eight (48) hours inspection notice. However, twelve (12) hours notice is still required if rain or weather interferes with the schedule.

4. If the inspection visit is canceled, notify the Owner to notify the Engineer to eliminate unnecessary travel time and expense. Twelve (12) hours notice is required.

5. Be at the job site at the scheduled time of inspection if cancellation of the inspection visit is not possible.

6. The Engineer and Owner will establish an inspection schedule with the Contractor at the start of work.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be

submitted to Engineer for review under the circumstances described below.

1. "Or-Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

c. Whenever an article, material, or item of equipment is described by a performance specification, written as a proprietary product, or uses the name of a manufacturer or vendor, the term "or equal" if not inserted, shall be implied. The specific article, material, or item of equipment mentioned shall be understood as indicating the minimum requirements for fulfilling contract obligations in regard to type, function, standard of design, or efficiency.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

5) Additional information may consist of completing Engineer's vendor checklist, field mock-ups, special samples, pilot testing, or other special requirements that Engineer determines necessary to assess if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore.

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E.2. By requesting substitute material, the Contractor acknowledges the extra costs to review submittals and agrees to reimbursement of Engineer. Engineer will invoice Owner and amount will be withheld from Contractor's payment.

E.3. Engineer has reviewed coatings for equal evaluation and suppliers have letter of acceptance. Systems without this letter will be considered substitutes and subject to review charge.

E.4. Prior to Engineer's review of a substitute, Engineer will prepare a Work Change Directive to document Engineer's anticipated costs in reviewing Contractor's substitute. The Work Change Directive shall be executed prior to Engineer commencing its review.

E.5. The Work Change Directive will include Engineer's opinion of the probable hours required to review the substitute. Engineer will notify Contractor if the hours listed on the Work Change Directive are to be exceeded.

a. Engineer's minimum cost for reviewing a substitute will be \$240 (2 hrs. equivalent).

b. Engineer's hourly rate for reviewing a substitute will be \$120 per hour.

F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate

Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

1. "Subcontracting" – This project requires prequalification. This pre-condition extends to Subcontractors.

2. The Contractor agrees not to sublet or assign this work without the written consent of the Owner. Violation of this condition shall be grounds for immediate dismissal of the Subcontractor or Contractor to which the work was sublet or assigned and if a satisfactory (Engineer's opinion) replacement is not on the site working within forty-eight (48) hours, the violations shall then be grounds for Contract termination and Performance Bond forfeiture.

3. Lump sum payments to employees instead of hourly wage will be prima facie evidence of subcontracting. The Owner reserves the right to review payroll records and pay stubs. If subcontracting is approved, no more than 30% of the project may be subcontracted.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcon-

tractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.064, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

H. Owner or Engineer may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of work performed for Contractor by a particular Subcontractor or Supplier.

6.07 Patent Fees and Royalties

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the

Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

B. The only permits not included are environmental air quality, and permits from health agencies for interior painting, which the Owner will procure if needed.

C. Display all wage requirements and other permits on a temporary board.

D. Attach to the Foreman's copy of the specifications, copies of other permits which do not require display.

6.09 Laws and Regulations

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any

such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

D. See Paragraph 3.02.A.1 for clarification of Paragraph 6.09.C. The laws and regulations in effect at the time of opening of Bids (of Effective Date of the Agreement if no bids [EDA]) are considered known to the Contractor. There will be no adjustment in Contract Price or Contract Time for not being "known" to Contractor.

E. Claims made for extra costs resulting from laws and regulations that become effective after the opening of Bids or (EDA), will be reviewed based on the exposure and publication of the law or regulation in advance. There will be no adjustment in Contract Price or Contract Time for environmental or safety regulations, or other laws and regulations with similar public notice and public hearing/review procedures.

F. Regulations dealing with labor rates have a known expiration date. Everyone can safely assume there will be a cost increase with each new issue. If these rates are scheduled to expire during Contract Time, then increase labor costs in Bid for the expected manhours by local cost-of-living factor. If rates increase more than cost-of-living, a Change Order will be reviewed for exact increase of new rate above the adjusted old rate. Copy of payroll will be used to determine increase in wage only, not associated taxes, insurance, and benefits. The Contractor is responsible for requesting extra and supplying documentation establishing extra. All consideration for an increase ends on Milestone Date of Substantial Completion, either original or Change Order extended date.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

Because of the potential of damage from airborne debris and paint drift, in regards to site clean-up,

the term adjacent land or areas will be interpreted to include any property affected by the Project, whether fixed or transient. If it is necessary or desirable to protect adjacent private or public property, work with the Owner and neighbor(s) to move or cover vehicles and permanent structures.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

Any damage to Owner's property resulting from the Contractor's operations shall be repaired or replaced by the Contractor without additional cost.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

Failure to continually maintain site or to immediately clean the site after a complaint or at project completion may result in the Owner completing the work by hire or by the Owner's forces. All cost would be responsibility of the Contractor.

D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

E. The Contractor shall provide adequate signs, barricades, red lights, and watchmen and take all necessary precautions for the protection of the work and the safety of the public. All barricades and obstructions shall be protected at night by signal from sunset-to-sunrise. Barricades shall be of suitable construction and shall be painted to increase their visibility at night. Suitable warning signs shall be so placed and illuminated at night as to show in advance where construction, barricades, or detours exist.

F. The Contractor shall at all times so conduct his work to insure the least obstruction to traffic and inconvenience to the general public and the residences in the vicinity of the work, and to insure the protection of persons and property in a manner satisfactory to the Engineer. No road or street shall be closed to the public except with the permission of the Engineer and proper governmental authorities. The Contractor shall confer with and keep police and fire departments of the municipality fully informed as to streets or alleys which are to be closed to traffic for construction purposes. Fire hydrants on or adjacent to the work shall be kept accessible to fire fighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the usability of sidewalks and the proper functioning of all gutters, sewer inlets and drainage ditches.

G. The Contractor shall have full charge of the premises and work under construction until completion and final acceptance of the work under the Contract except as noted in the Special Conditions. The Engineer and Owner shall have full access to the site and Contractor's personnel and equipment shall be available to the Owner and Engineer to expedite inspections. The Contractor shall be responsible for all injury to work in process of construction, and for all property or materials stored at the premises that may be damaged or stolen while the work is in his care, and he shall make good all such damage or loss without expense to the Owner. The Contractor shall confine the apparatus, the storage of materials, and the operations of his workmen to limits indicated by law, ordinance, permits, or direction of the Engineer, and shall not unreasonably encumber the premises with his materials.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

B. The Contractor shall keep one record copy of all specifications, plans, addenda, modifications, and shop drawings at the site, keep documents in good order and annotated to show all changes made during the construction process. These annotated documents shall be available to the Engineer.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable

(except as otherwise expressly provided in connection with Substantial Completion).

~~Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operations. Submit a copy of all OSHA reportable or recordable injuries, and all OSHA citations relative to this project at project completion.~~

E. Conform to the Occupational Safety and Health Standards of the United States Department of Labor and local safety agencies. This shall be made a condition of each subcontract as entered into pursuant to this contract.

F. Lead/chrome paint removal, and painting of structures are recognized as very hazardous work, and it is further recognized that the painting industry has extensive safety training programs available.

G. Monitor and be responsible for all safety on job site. The Engineer and Owner will not monitor safety practices, and will not assume any responsibility for safety.

H. Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plans, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operations. Submit a copy of all OSHA reportable or recordable injuries, and all OSHA citations relative to this project at project completion.

6.14 Safety Representative

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the

Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

F.1. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than two (2) submittals. Engineer will record Engineer's time for review of subsequent submittals of Shop Drawings, samples, or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time (See SC 6.05.E.5 for rates).

F.2. Pursuant to General Conditions/ Supplemental Conditions 2.07.A.2: All submittals are to be sent to the Engineer as one package (unless a separate Schedule of Submittals is included and approved by the Engineer). All required resubmittals are also to be resubmitted as one package and any delinquent resubmittal must be identified by a new Schedule of Submittals. Failure to include a Schedule of Submittals for delinquent items will be justification by Engineer to consider submittal complete. Delinquent items will be considered reviewed and rejected.

F.3. The Engineer's minimum cost for issuing a second request will be \$240 (2 hours equivalent).

F.4. Engineer's hourly rate after the first hour will be \$120.

G. In the event that the Contractor requests a substitution for a previously approved item, Contractor shall reimburse Owner for Engineer's charges for Engineer's time per Section SC 6.17.F.1 and 2 rates above, unless the need for such substitution is beyond the control of the Contractor.

H. Submit all material to Engineer's office in Lake Odessa, MI to allow fastest review time.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage. This condition (6.19.B.2) does not apply to wet interior surfaces below the high water line. After one (1) year, zero (0) failure or deterioration is acceptable.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

D. Except where noted in the Contract Documents, the Contractor guarantees all material and

equipment furnished and all work performed for a period of one (1) year from the date of substantial completion of the Contract. This warranty will automatically be extended until the tank is ice-free and the warranty inspection can be performed. The Contractor guarantees that the system is free from defects due to faulty materials or workmanship and the Contractor shall make the necessary corrections to correct these defects. If the amount of rework exceeds ten percent (10%) of a portion of the project (i.e. interior painting), then the Owner reserves the right to have the warranty period extended one year for the entire portion of the work.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by

utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

D. If overhead power lines present an unsafe work conditions as determined by OSHA, Owner or Utility, Contractor at his expense and coordination, shall have the Utility temporarily relocate, move, or cover lines, eliminating the hazard.

E. Unless stated differently in Contract Documents, protect all antennas, controls, cables, and associated property of Owner's equipment or material on, in, or near the structure during work. Design construction procedures to maintain operation of antenna system.

F. Unless stated differently in the Contract Documents, protect all antenna controls, cables, and associated property of private telecommunication

companies from damage during work. Design construction procedures to maintain operation of telecommunication systems.

7.02 Coordination

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 Legal Relationships

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

7.04 Claims Between Contractors

A. Should Contractor cause damage to the work or property of any other contractor at the site, or should any claim arising out of Contractor's performance of the work at the site be made by any other Contractor against Contractor, Owner, Engineer, or the construction coordinator, Contractor shall promptly attempt to settle with such other Contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, and construction coordinator and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals

and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other Contractor against Owner, Engineer, Engineer's Consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the work. Should another Contractor cause damage to the work or property of Contractor or should the performance of work by any other Contractor at the site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or claim.

C. If Contractor is delayed at any time in performing or furnishing work by any act or neglect of another Contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and construction coordinator for any delay, disruption, interference, or hindrance caused by any other Contractor. This paragraph does not prevent recovery from Owner, Engineer, or construction coordinator for activities that are their respective responsibilities.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 Replacement of Engineer

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 Furnish Data

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

~~A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.~~

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's

responsibility in respect thereof will be as set forth in the Supplementary Conditions.

B. On request of Contractor prior to the execution of any Change Order involving a significant increase in the Contract Price, Owner shall furnish to Contractor reasonable evidence that adequate financial arrangements have been made by Owner to enable Owner to fulfill the increased financial obligations to be undertaken by Owner as a result of such Change Order.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist

Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

B. A Field Order is written by the Engineer to the Contractor for the purpose of clarification of the specifications or plans. A Field Order is limited to items that do not change the scope of the project. Field Orders become a part of the Contract Documents and become binding upon the Contractor if he fails to object within three (3) working days after receiving the order.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such

authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents. Any plan or methods of accomplishing the work suggested to the Contractor by the Engineer or other representative of the Owner, but not specified or required, shall be used at the Contractor's own risk and responsibility. The Engineer and Owner assume no responsibility.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an

adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

C. If Owner and Contractor are unable to agree on a price for Change Order work, do not proceed with work unless ordered in writing by the Engineer or Owner as a Change Directive. Then General Condition 10.01.B is in effect.

D. If work involved is not essential to the scope of the project and/or there is sufficient time, a Bulletin will be issued and recommended by the Engineer. The Bulletin will request a price for proposed work. If the price as offered or as later negotiated is acceptable, the Bulletin will become the basis of the Change Order. By Owner acceptance and signing, the Bulletin offered by the Contractor may become a combined document: Bulletin # ____/Change Order # ____, or a new separate Change Order may be prepared. The cost or credit to the Owner resulting from a change in the work shall be determined in one or more of the following ways:

1. By mutual acceptance of a lump sum.
2. By unit prices stated in the Contract Documents or subsequently agreed upon.
3. By actual itemized cost and fixed fees as set forth in 2. above. Cost shall be limited to the following: cost of materials, cost of labor, and cost of overhead.

E. At the option of the Owner, an accounting Change Order may be issued at the end of the project before final payment.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any

undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 Notification to Surety

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last

submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries

and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner. Payroll costs, including all items above, shall be calculated at direct payroll costs (documented), times a factor of 1.35 (\$1 payroll equals \$1 payroll, plus \$.35 benefits, etc.) Overtime and holiday expenses shall be calculated the same, the higher direct payroll costs, times a factor of 1.35.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained. Eliminate storage costs.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01. Subcontractor contract price as agreed to by Owner, plus 10%.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

~~c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.~~

c.

1. Rentals of all construction equipment and machinery, and the parts thereof in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the work.

2. Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment. (Use rate book appropriate for the Project.) An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work ~~(except losses and damages within the deductible amounts of property insurance~~

~~established in accordance with Paragraph 5.06.D)~~, provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work

times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

4. Claims reduction of over 25% of estimated quantity of pit filling, or pit sealing, or roof seam sealing will be limited to reasonable (<25% cost of material) material restocking charge.

5. Claims for reduction of over 25% of estimated quantity of pit welding, seam welding, or repairs will not be accepted if mobilization of welder for other repairs was required. Claims for reduction where repair was limited to reduced item will be limited to remaining percentage of mobilization costs.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a

deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

C. The termination of Work during the winter season on account of cold weather shall not be taken as entitling Contractor to any extension of Contract Time.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment

shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

F. Abnormal weather conditions are simply defined as weather conditions that are at variance with the routine. An example of the determination procedure and of the required claim format is:

Project length: 45 days

Substantial completion date: June 30th.

Start date: May 16th.

Three (3) years of data* 2001, 2002, 2003

Average number of rain/wind days: 9

Actual number rain/wind days**: 12

Claim for time extension: 3 days.

*Submit weather history from nearest weather reporting station for three (3) previous years from the same time period. Submit same data for current year. Submit formal, but simple claim (use format above).

**Rain/wind day is a rain or wind day where either rain and/or wind conditions exceeded safe work conditions or were outside the parameters of good paint practices. Wind days are winds in excess of 20 mph for over four (4) hours during normal work hours, and rain days having measurable precipitation.

G. Claim Evaluation: Engineer will evaluate claim and make sole determination as to whether days meet criteria. Engineer will disallow dates where work could have been completed on the interior; dates that result from the Contractor's work practices (i.e. complete wet interior first and then move to outside). Good weather days not used will count against claim.

H. Claimed rain/wind days that extend beyond the scheduled substantial completion date or the extended substantial completion date will not be awarded. Days past substantial completion and good weather days that were not used because of sequencing of project work by Contractor will be considered "days within the control of the Contractor." (See GC 12.03.E)

ARTICLE 13 - TESTS AND INSPECTIONS;
CORRECTION, REMOVAL OR ACCEPTANCE OF
DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

B. Non-Conformance Reports:

1. The Engineer will issue a non-conformance report for every performance item, material, or equipment supplied, and/or environmental situation that fails to meet requirements of the specifications.

2. Correct all work in non-conformance before proceeding.

3. Do not start work until all required equipment is on-site.

4. Immediately correct all environmental non-conformance to prevent accidents. If an incident has already occurred, contact the proper governmental environmental agency and conduct an immediate clean-up per their direction.

5. If issued non-conformance reports are not corrected, the failure will be considered a breach of contract by the Contractor entitling the Owner to damages as follows:

a. Work in non-conformance: If the Contractor refuses to correct, the bonding company will be notified to finish the project. At that point, payment to the Contractor for all completed work will stop until the bonding company authorizes payment, or payment may be made to the bonding company after they have proven assumption of the contract. This clause does not give either party rights to a greater payment than detailed elsewhere in these documents.

b. Equipment specified but never supplied, or broken equipment not repaired or replaced:
- 125% of the rental value of equipment in non-conformance (i.e. non-working decontamination trailer, hand wash facilities, air filtration units, etc.).

c. - Environmental issues: 125% of the estimate of compliance.

*The cost of items 2 and 3 above is damage estimates. The cost of equipment will be the rental charge from a reputable local dealer with 25% extra being for operation cost.

Cost of environmental compliance is the estimated cost of compliance. The extra 25% is potential risk to the Owner for non-conformance. In no situation will the Owner assume liability.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

E. 13.03 Paragraphs E and F and Paragraph 13.04 Uncovering Work, A, B, and D will be used only where applicable, such as insulation over fill pipe, work that can be viewed after it is uncovered. These paragraphs do not apply to coating because "uncovering" the topcoat will subsequently damage the underlying coatings. With coating removal, all work will be considered defective and Paragraph GC 13.04.C shall apply. Paragraph 13.04.D shall not be used with paint

removal.

13.05 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them. Minimum crew size is two (2) personnel and one (1) foreman for confined space work (on tanks up to 300,000 gallons, and three [3] personnel, plus one (1) foreman over 300,000 gallons).

13.06 Correction or Removal of Defective Work

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the

Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

13.10 *Engineer's Fees*

A. The additional engineer's fee resulting from failed work, covered work, missed scheduling, or any Contractor caused item in Article 13 will be the minimum fee of \$240. Engineer's hourly rate will be \$120/hr.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

~~1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.~~

~~2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.~~

~~3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.~~

A. If Contractor fails to submit required material with application for payment, Engineer will notify Contractor of missing documents. If after second submittal material is still missing, Engineer may submit pay application to Owner withholding all monies relative to missing data, or to contact Contractor again. Contractor is responsible for all increased engineering costs to the Owner after second submittal.

1. The Engineer's minimum cost for issuing a second request will be \$240 (2 hours equivalent).

2. Engineer's hourly rate will be \$120/hour.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

- a. to supervise, direct, or control the Work, or
- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
- c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
- d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
- e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

e. Engineer will consider that material stored on-site has no value until properly applied. Engineer will not recommend payment for materials in storage.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions

of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made, or Engineer has reasonable knowledge of, against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed, or Engineer has reasonable knowledge of, in connection with the Work, ~~except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;~~
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

e. Reasonable evidence that the work cannot be completed for the unpaid balance of the contract sum;

f. Reasonable evidence that the work cannot be completed within the contract time, or;

g. Damage to the Owner or another Contractor;

h. Persistent failure to carry out the work in accordance with the Contract Documents;

i. Anticipated liquidated damages;

j. Anticipated withholding by Owner to cover additional Contractor related engineering costs;

k. Amount withheld to complete work calculated at cost of hiring another Contractor to complete work in case of default;

l. Retainage.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

~~D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.~~

D. Contractor is responsible for security, safety, etc. on the site until all his equipment is removed and all keys are returned.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when

Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the

evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, ~~if any~~, to final payment; or full and unconditional waivers of lien from ALL local and all major suppliers.

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. ~~If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.~~

4. A bond will not be sufficient in lieu of releases and waivers of line. A consent of surety for payment and acknowledging any disputes or unsettled claims will be sufficient.

5. If the Contractor fails to submit required material with application for payment, Engineer will notify Contractor of missing documents. If after second submittal material is still missing, Engineer will contact Contractor. Again Contractor is responsible for all increased engineering costs to the Owner after second submittal (see 14.02.A.4.a).

B. Engineer's Review of Application and Acceptance

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicat-

ing in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 Final Completion Delayed

~~A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.~~ Not used

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

~~1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and~~

1. a. Because of the nature of the coating industry, Owner retains all legal remedies, as well as any negotiated or contracted warranties.

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

5. When, in the opinion of the Engineer, the non-conformance reports and daily reports indicate the Contractor is unable or unwilling to complete the contract within the terms of the contract.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

G. Because of health, safety, and security concerns, this contract requires prequalification of Contractors. Termination procedures in this contract are part of this contract and supercedes any requirements of bonding companies. The Owner has no direct contractual relationship with the bonding company. The bond is a contract with the Contractor guaranteeing its performance or payment. The bonding surety when taking over this contract is required to complete work with another prequalified Contractor.

15.03 Owner May Terminate For Convenience

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

~~A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.~~

A. All questions or controversies which may arise between the Contractor and the Owner, under or in reference to this contract, should be resolved to the fullest extent possible at a meeting, shall be carefully documented, and shall become final and binding on all parties concerned. However, should the Owner and Contractor be unable to agree, the interpretation of the Engineer shall be considered binding as per contract requirements. If the matter in controversy cannot be resolved at the project meeting or after the interpretation of the Engineer, then the matter shall be resolved in a Local Court of competent jurisdiction.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

~~C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:~~

~~1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or~~

~~2. agrees with the other party to submit the Claim to another dispute resolution process, or~~

~~3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.~~

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

3. Fax or e-mail notices are sufficient means of notice once it is determined the line of communication is open (i.e. responses to earlier letters). Formal failure to perform or termination or bond notice letters require notice by Paragraphs 1 or 2.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. ~~If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.~~

B. Paragraph A does not refer to Project Time Frame calculations for Liquidated Damages.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

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SECTION 00 73 00
SUPPLEMENTAL CONDITIONS
PROJECT SPECIFICATIONS

ARTICLE 1: SUPPLEMENTAL CONDITIONS

SC 1.00 Supplemental Conditions:
 These Supplemental Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2002 Edition) and other provisions of the Contract Documents as indicated below. All provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplemental Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplemental Conditions have the meaning stated below, which are applicable to both the singular and plural.

SC 1.01 Definitions:
 A.15 Contractor: Successful bidder awarded project.
 A.19 Engineer: Dixon Engineering, Inc.
 A.29 Owner: City of Burton, Michigan.
 A.37 Resident Project Representative: Dixon Engineering, Inc.
 A.57 Tank Terminology: See Section 09 97 13

ARTICLE 5: BONDS and INSURANCE

The Contractor shall provide proof of insurance with the limit of liability of “statutory” Workers’ Compensation. The owner and Engineer shall be named as additional insured on the certificate(s) of insurance. Limits of liability shall be: General Liability \$1,000,000; Automobile Liability \$1,000,000; Excess/Umbrella Liability \$1,000,000.

ARTICLE 6: CONTRACTOR’S RESPONSIBILITIES

SC 6.13 Safety and Protection:
 Add the following paragraphs after Paragraph 6.13.H:
 I. The Owner and Engineer have historically followed the Contractor’s safety plan when on the site. There have been occasions where the

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

Contractor's safety plan has proven inadequate. The specifications now require safety features for the Owner and Engineer which are now the Contractor's contractual obligation to provide. These include such items as safety cables suspended from the roof for inspection of the interior roof, and safety clips on the bottom of the bowl for all protection cables. (Legged tanks only) We encourage the Contractor to modify his fall protection plan and to provide additional cables and fall protection grabs for his personnel. Items such as roof railings are provided for the Owner's safety. Do not rig from the railings – a separate painter's rail is provided for rigging.

ARTICLE 13: TESTS and INSPECTIONS

SC 13.03.G Work completed without waiting for inspections detailed as Hold Points shall determined automatically defective.

ARTICLE 14: PROGRESS PAYMENT

SC 14.02 Change Paragraph A.1: Sentence 1 to read:

1. At least twenty days before Council or Board meeting for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract.

Delete sentence 2, Paragraph A.1: Owner will not pay for material stockpiled or stored.

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SECTION 01 50 00**TEMPORARY CONSTRUCTION FACILITIES and UTILITIES****PART 1 - GENERAL****1.01 SUMMARY**

- A. Provide and maintain temporary facilities and utilities required for construction; remove on completion of work.

1.02 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. National Fire Protection Association (NFPA):NFPA No.70-93
 - 2. National Electrical Code (NEC) and local amendments thereto.
 - 3. Comply with federal, state, and local codes and regulations, and utility company requirements.

PART 2 - PRODUCTS**2.01 TEMPORARY ELECTRICITY and LIGHTING**

- A. Supply temporary lighting sufficient to enable contractor to safely access all work areas.
- B. Electrical requirements in excess of capacity of existing electrical service shall be responsibility of contractor.
- C. Provide, maintain, and remove temporary electric service facilities.
- D. Facilities exposed to weather shall be weatherproof-type and electrical equipment enclosure locked to prevent access by unauthorized personnel.
- E. Pay for installation of temporary service.
- F. Patch affected surfaces and structures after temporary services have been removed.
- G. Provide explosion proof lamps, wiring, switches, sockets, and similar equipment required for temporary lighting and small power tools.

2.02 WATER for CONSTRUCTION

- A. Owner will provide water required for cleaning and other purposes.
- B. Water use shall not exceed usage that might endanger the owner's water system's integrity.

2.03 SANITARY FACILITIES

- A. Provide temporary sanitary toilet facilities conforming to state and local health and sanitation regulations, in sufficient number for use by contractor's employees.
- B. Maintain in sanitary condition and properly supply with toilet paper.

C. Remove from site before final acceptance of work.

2.04 TEMPORARY FIRE PROTECTION

A. Provide and maintain in working order a minimum of two fire extinguishers and such other fire protective equipment and devices would be reasonably effective in extinguishing fires.

2.05 DAMAGE to EXISTING PROPERTY

- A. Contractor is responsible for replacing or repairing damage to existing buildings, sidewalks, roads, parking lot surfacing, and other existing assets.
- B. Owner has the options of contracting for such work and having cost deducted from contract amount if the contractor is not qualified.

2.06 SECURITY

- A. Security is not provided by owner.
- B. Contractor shall be responsible for loss or injury to persons or property where work is involved, and shall provide security and take precautionary measures to protect contractor's and owner's interests.

2.07 TEMPORARY PARKING

- A. Parking not allowed on project site unless designated or approved by owner.
- B. Make arrangements for parking area for employees' vehicles.
- C. Costs involved in obtaining parking area shall be borne by contractor.

PART 3 - EXECUTION

3.01 GENERAL

- A. Maintain and operate systems to ensure continuous service.
- B. Modify and extend systems as work progress requires.

3.02 REMOVAL

- A. Completely remove temporary materials and equipment when no longer required.
- B. Clean and repair damage caused by temporary installation or use of temporary facilities.
- C. Restore existing or permanent facilities used for temporary service to specified or original condition.

3.03 BARRIERS and ENCLOSURES

- A. The contractor shall furnish, install, and maintain as long as necessary, and remove when no longer required adequate barriers, warning signs or lights at all dangerous

points throughout the work for protection of property, workers, and the public. The contractor shall hold the owner harmless from damage or claims arising out of any injury or damage that may be sustained by any person or persons as a result of the work under the contract.

SECTION 01 53 43

PROTECTION of ENVIRONMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Contractor in executing work shall maintain work areas, on-and-off site, free from environmental pollution that would be in violation of federal, state, or local regulations.

1.02 PROTECTION of SEWERS

- A. Take adequate measures to prevent impairment of operation of existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering sewer or sewer structure.

1.03 PROTECTION of WATERWAYS

- A. Observe rules and regulations of local and state agencies, and agencies of U.S. government prohibiting pollution of any lake, stream, river, or wetland by dumping of refuse, rubbish, dredge material, or debris therein.
- B. Provide containment that will divert flows, including storm flows and flows created by construction activity, to prevent loss of residues and excessive silting of waterways or flooding damage to property.
- C. Comply with procedures outlined in U.S. EPA manuals entitled "Guidelines for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-72-015 and "Processes, Procedures, and Methods to Control Pollution Resulting from all Construction Activity," Manual EPA 43019-73-007.

1.04 DISPOSAL of EXCESS EXCAVATED and OTHER WASTE MATERIALS

- A. Dispose waste material in accordance with federal and state codes, and local zoning ordinances.
- B. Unacceptable disposal sites include, but are not limited to, sites within wetland or critical habitat, and sites where disposal will have detrimental affect on surface water or groundwater quality.
- C. Make arrangements for disposal subject to submission of proof to engineer that owner(s) of proposed site(s) has valid fill permit issued by appropriate government agency and submission of haul route plan, including map of proposed route(s).
- D. Provide watertight conveyance for liquid, semi-liquid, or saturated solids that tend to bleed during transport. Liquid loss from transported materials not permitted, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.

E. Waste generated by abrasive blast cleaning is detailed in Section 09 97 13.

1.05 PROTECTION of AIR QUALITY

- A. Contain paint aerosols and V.O.C.'s by acceptable work practices.
- B. Minimize air pollution by requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by contractor, and encouraging shutdown of motorized equipment not actually in use.
- C. Trash burning not permitted on construction site.
- D. If temporary heating devices are necessary for protection of work, they shall not cause air pollution.

1.06 PROTECTION from FUEL and SOLVENTS

- A. Submit plans and photos, or drawings of all containment structures, planned paint storage procedures, planned paint mixing (as it relates to possible spillage), and paint waste disposal.
- B. All required material must be submitted prior to the precon meeting. No equipment may be delivered to the site without approval of submittals.
- C. The owner reserves the right to restrict equipment location.
- D. Protect the ground from spills of fuel, oils, petroleum distillates, or solvents by use of containment system.
 - 1. Total paint, thinner, oils, and fuel delivered to and stored on-site cannot exceed supplied capacity of spill containment provided (i.e. fuel and oil to be sized to exceed possible spill).
 - 2. Do not leave nozzle while fueling.
 - 3. Provide a different containment unit under fuel tank and oil reservoirs for all equipment and fuel storage tanks.
 - 4. Barrels of solvents, even for cleaning, are prohibited. Do not deliver paint thinners in containers greater than five (5) gallons.
- E. Disposal of waste fluids shall be in conformance with federal, state, and local laws and regulations.

1.07 USE of CHEMICALS

- A. Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of U.S. EPA, U.S. Department of Agriculture, state, or other applicable regulatory agency.
- B. Use of such chemicals and disposal of residues shall be in conformance with manufacturer's written instructions and applicable regulatory requirements.

1.08 NOISE CONTROL

- A. Conduct operations to cause least annoyance to residents in vicinity of work, and comply with applicable local ordinances.
- B. Equip compressors, hoists, and other apparatus with mechanical devices necessary to minimize noise and dust. Equip compressors with silencers on intake lines.
- C. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.
- D. Route vehicles carrying materials over such streets as will cause least annoyance to public and do not operate on public streets between hours of 6:00 P.M. and 7:00 A.M., or on Saturdays, Sundays, or legal holidays unless approved by owner.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION**3.01 HAZARDOUS MATERIALS PROJECT PROCEDURES**

- A. Applicable Regulations:
 - 1. RCRA, 1976 – Resource Conservation and Recovery Act: This federal statute regulates generation, transportation, treatment, storage and disposal of hazardous wastes nationally.
 - 2. Act 64, 1979 – Michigan’s Hazardous Waste Management Act: This statute regulates generation, transportation, treatment, storage, and disposal of hazardous wastes.
 - 3. Act 641 as amended 1990 – Michigan’s Solid Waste Act: This statute regulates generation, transportation, treatment, storage and disposal of solid wastes.
- B. Use the Uniform Hazardous Waste Manifest (shipping paper) to use an off-site hazardous waste disposal facility.
- C. Federal, State and local laws and regulations may apply to the storage, handling and disposal of hazardous materials and wastes. The list below includes the regulations which are most frequently encountered:

<u>Topic</u>	<u>Agency and Telephone Number</u>
Small quantity hazardous waste management, including hazardous waste stored in tanks	Hazardous Waste Division, DEQ (517) 373-2730 in Lansing, or District Office Certified County Health Department
Disposal of heavy metals into municipal sanitary sewers	Contact the superintendent of your wastewater treatment plant for permission

Hazard Communication Standards (for chemical in the workplace)

Occupational Health Division,
Michigan Department of Consumer
and Industrial Services (517) 373-1410

Burning of waste oil and other
discharges to the air

Air Quality Division, DEQ (517) 322-
1333 in Lansing, or District Office

Local fire prevention regulations and
codes (including chemical storage
requirements)

Local fire chief or fire marshal

D. Department of Environmental Quality
Hazardous Waste Division
Compliance Section District Offices

Lansing District Office
525 W. Allegan
Constitution Hall - 4th Floor North
P.O. Box 30242
Lansing, MI 48909
(517) 335-6010
(517) 241-3571 (fax)

Attachment: Water Tower Bid Specs (1229 : Water tower updates, repairs, and painting project)

SECTION 05 00 00

METAL REPAIRS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Steel Repair.

1.02 REFERENCES

- A. AWWA D100 Weld Standard
- B. AWS Weld Standard
- C. API 650 Standard

1.03 OMISSIONS

- A. The specifications include all work and materials necessary for completion of the work. Any incidental item(s) of material, labor, or detail(s) required for the proper execution and completion of the work are included.

1.04 DEFINITIONS

- A. Ground Flush: Ground even with adjacent metal, no transition.
- B. Ground Smooth: Ground welds to the point that no cuts or scratches occur when rubbing your hand over the weld. Rebuild with weld any concavity discovered during grinding.

1.05 WORK INCLUDED

- A. Install access tube gap cover.
- B. Install safety railing with painter's rail.
- C. Replace light bulbs in dry interior.

1.06 WORKMANSHIP

- A. Provide material and workmanship necessary to produce a first class job.
- B. Complete work in a manner that is least offensive to neighbors.

1.07 WELDER QUALIFICATIONS

- A. Certified for type and position of weld specified.
- B. The welder shall be specialized in industrial or heavy commercial welding, and experienced in rigging and elevated work.

1.08 SUBMITTALS

- A. Material Safety Data Sheets (MSDS) – for all items as required by law.

- B. Welder's Certification.
- C. Submit materials at least one (1) week prior to preconstruction meeting.

1.09 WORK SEQUENCING

- A. The following is NOT a ways-and-means decision of the contractor. It is accepted and good painting practice:
 - 1. Complete ahead of all cutting and welding all surface preparation, such as immediate area lead paint removal.
 - 2. Complete all welding repairs prior to commencement of any power washing or abrasive blast cleaning.

PART 2 – PRODUCTS

2.01 STEEL PLATING and OTHER STRUCTURAL SHAPES

- A. ASTM – A36.

2.02 WELDS

- A. Final – E70XX Electrodes.
- B. Root – E60XX Electrodes.
- C. Wire – ER70S Electrodes.

PART 3 - EXECUTION

3.01 COATING REPAIR – WET INTERIOR

- A. Complete all welding and cutting prior to any surface preparation for painting to avoid contamination of surfaces.
- B. Remove any residue and weld smoke by solvent cleaning.
- C. Power tool clean to a SSPC-SP11 finish all areas damaged by welding.
- D. Use 3M Scotch-Brite Clean'n Strip Discs.
- E. Feather edges of adjacent coating a minimum of 3 in. from exposed steel.
- F. Apply repair system at 3.5 - 4.5 mils per coat as follows:

<u>Manufacturer</u>	<u>System</u>
Tnemec	20/20
Induron	PE-70/PE-70
Sherwin Williams	646PW/646PW
- G. Contractor has the option to apply one (1) coat of Aquatopoxy at 6.0 mils in lieu of the two coat system.
- H. Surface prepare and coat in accordance with Sections 09 97 13 and 09 97 13.10.
- I. Payment is incidental to weld repairs.

3.02 ACCESS TUBE AIR GAP SEAL

- A. Furnish a 3/8 in. neoprene sheet to cover the gap attach using Andrews compression band part #EX-P1060 (Andrew Corporation, 3 Westbrook Corporate Center, Suite 900 Westchester, IL 60154 1-800-255-1479).
- B. Verify access tube size proper to ordering part. Seal to be airtight.
- C. See Drawing 01.
- D. Cost is incidental to exterior painting.

3.03 SAFETY RAIL and PAINTER'S RAIL

- A. Install a 20 ft. diameter hand rail, and a 22 ft. diameter painter's rail on the tank's roof.
- B. All butt weld sections on the painter's railing to be at a stand-off.
- C. Install 2 in. diameter couplings with brass plugs for safety lines during wet interior work. Threading to be per NPT standard. Locate at every other painter's railing stand-off.
- D. Surface prepare and coat in accordance with Sections 09 97 13 and 09 97 13.10.
- E. See Drawing 02a-02b.
- F. Payment is a separate line item "Safety Rail" which the owner reserves the right to delete.

3.04 RELOCATE ANTENNAS to RAILING

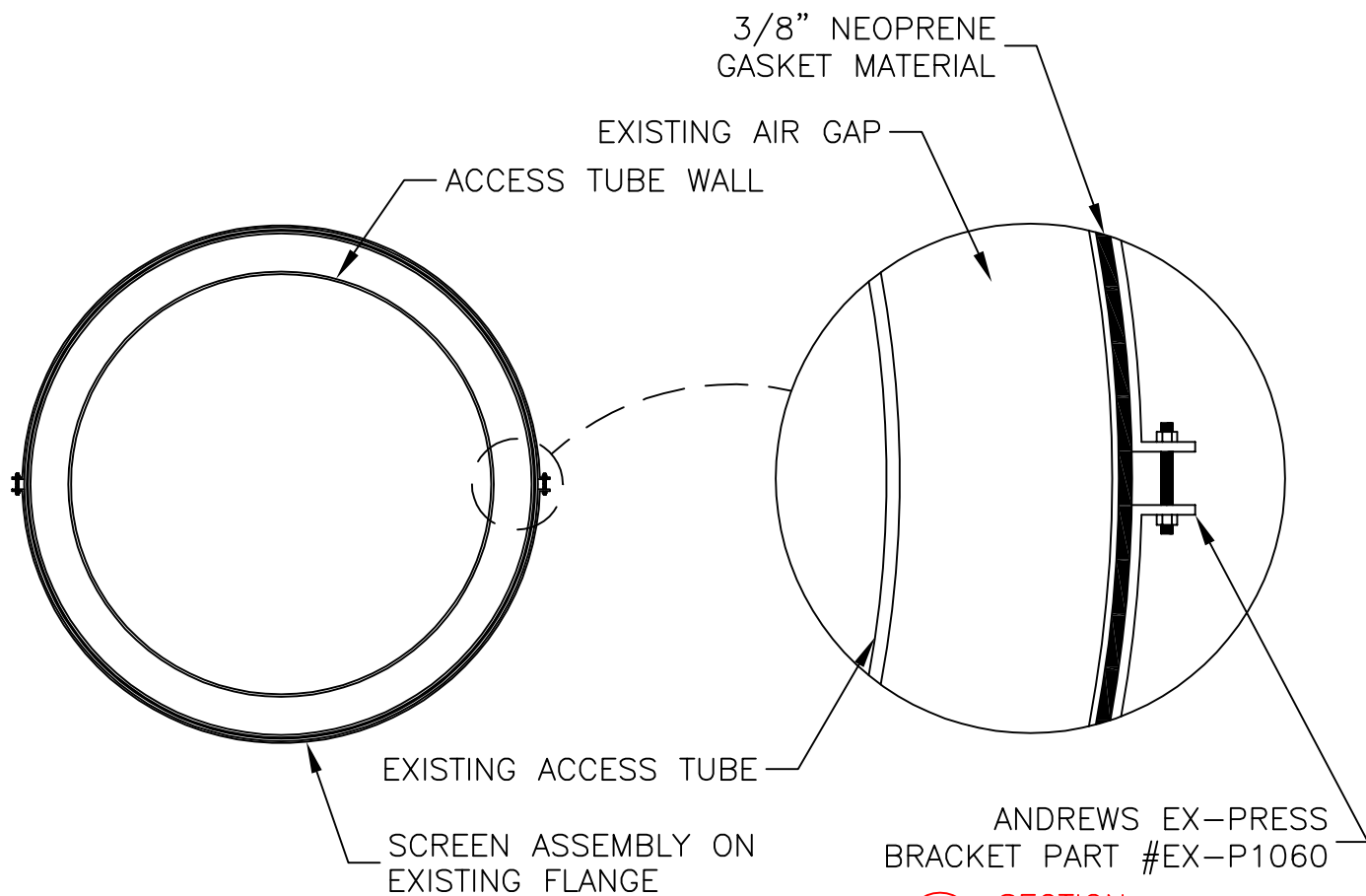
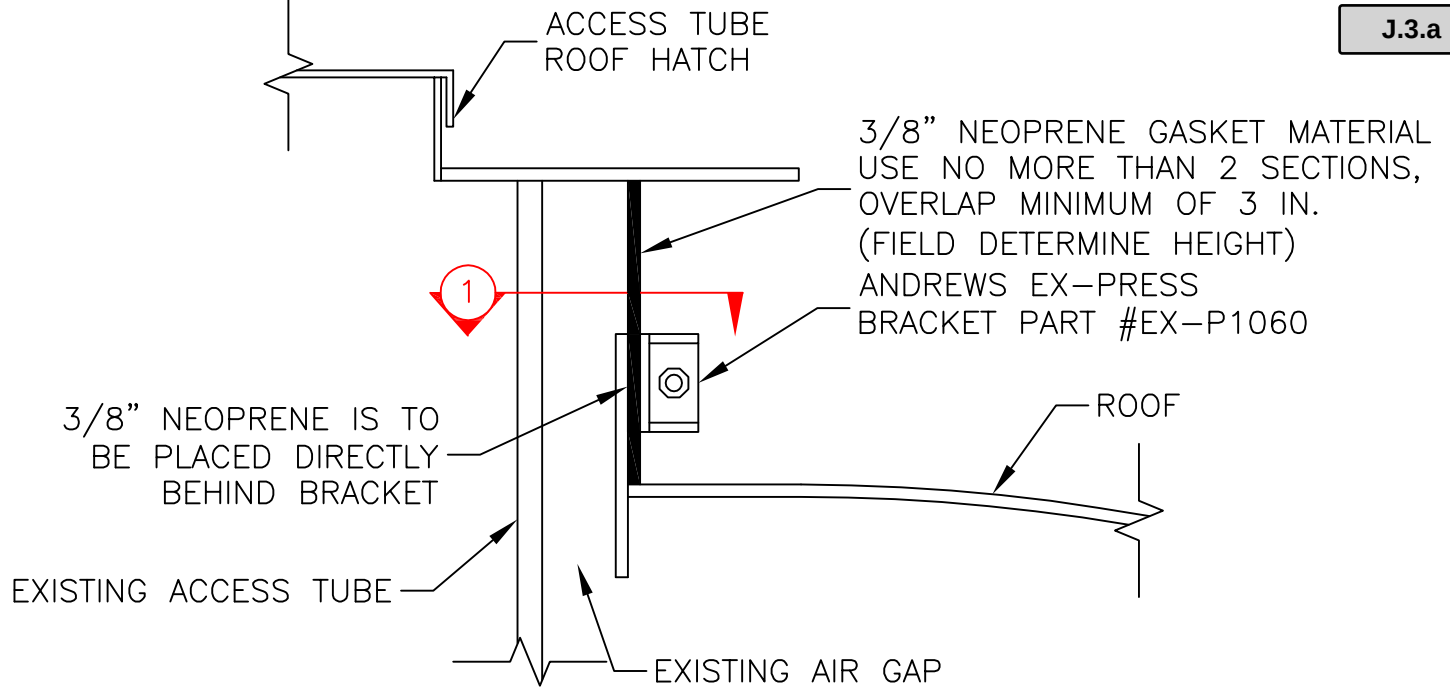
- A. Remove the existing antenna mounting poles on the roof. Grind flush all welds. Rebuild metal if gouged during removal.
- B. Remount the antenna poles (or use new galvanized poles) to the new safety rail using stainless steel U-bolts attached to the top rail, mid rail and kick plate.
- C. Work must be coordinated with the antenna owners. The final location and mounting to be approved by the antenna owner, cable connections to be performed by the antenna owners. Coordination with the antenna owners is the responsibility of the contractor.
- D. Coax to be routed from the access tube to the safety rail on one set of 1/8 inch bent plates in one straight line, spacing to be every 36 inches. Each bent plate is to have holes to accept Andrews snap-in hangers, number of holes and size of bent plate to be determined based on the number of coax on the roof.
- E. All welding for the coax plates are to be 1/8 inch full fillet welds.
- F. See Drawing 03.
- G. Cost is incidental to safety rail installation.

3.05 REPLACE LIGHT BULBS

- A. Replace all dry interior and aviation light bulbs with LED light bulbs
- B. Bulbs to be LED Eco smart A19 8.6 watt 50,000 hour extended use bulbs available at Home Depot or approved equal.
- C. Change bulbs after all equipment has been removed from the tank.
- D. Cost is incidental to the project.

PART 4 – SPECIAL PROVISIONS**4.01 PAINT REPAIR – STEEL REPLACEMENT**

- A. All large pieces of steel to be shop primed using the specified prime coat over a SSPC-SP10 near white surface preparation.
- B. Do not prime 3 in. from area to be welded.
- C. After installation, spot clean welded areas to a SSPC-SP11 and apply coating as specified.
- D. Use only one manufacturer for repairs.
- E. Cost is incidental to metal repairs.



NOTE:
CONTRACTOR TO FIELD VERIFY
DIAMETER OF FLANGE

1 SECTION

Note: Drawing not to scale.



Burton, MI 400,000 Spheroid

Access Tube Gap Cover

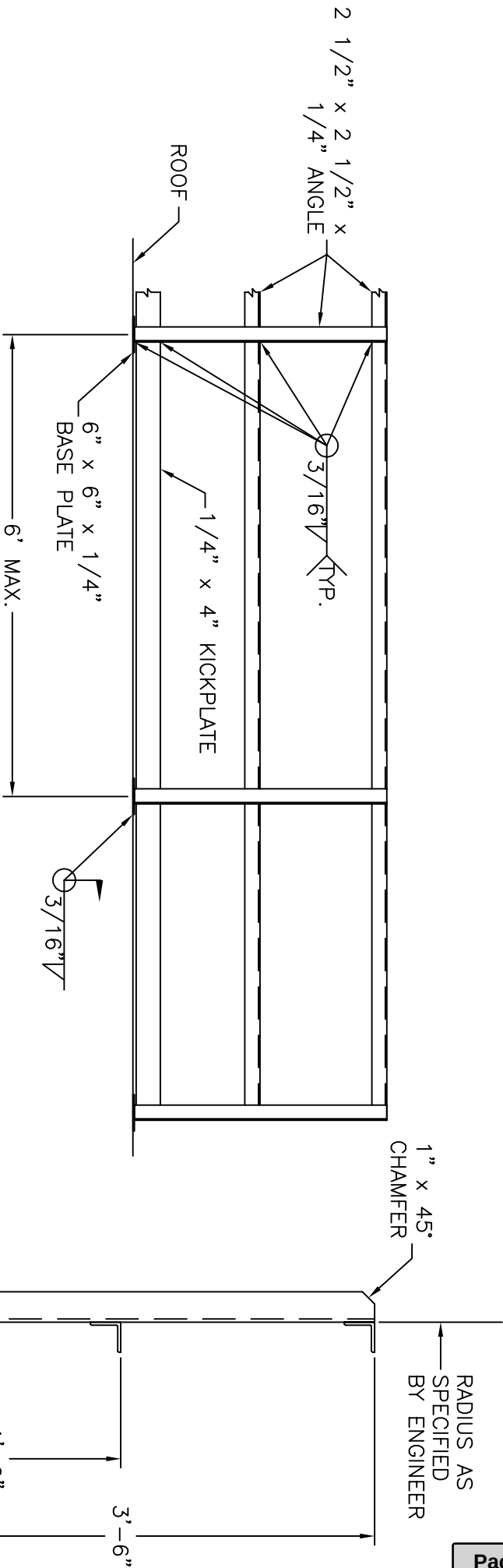
File Name: ATgapcoververtical.dwg

Drawn By: TN

Checked By: IM

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ACCESS TUBE COVER



- NOTES:
1. HANDRAIL AND POST ARE TO BE CONSTRUCTED OF 2 1/2" x 2 1/2" x 1/4" STRUCTURAL STEEL ANGLE. POST BASE PLATES SHALL BE 6" x 6" x 1/4" STEEL PLATE. MIDRAIL SHALL BE 2 1/2" x 2 1/2" x 1/4" STRUCTURAL STEEL ANGLE. ALL WELDS SHALL BE 3/16" CONTINUOUS FILLET WELDS; ALL AROUND.
 2. SPACING BETWEEN MOUNTING PADS SHALL NOT EXCEED 6'. IT MAY BE NECESSARY TO USE MORE THAN THE NUMBER OF PADS SHOWN.
 3. CONSTRUCT THE HANDRAIL IN THE SHOP THEN MODIFY IN THE FIELD.

HANDRAIL

Note: Drawing Not to Scale.



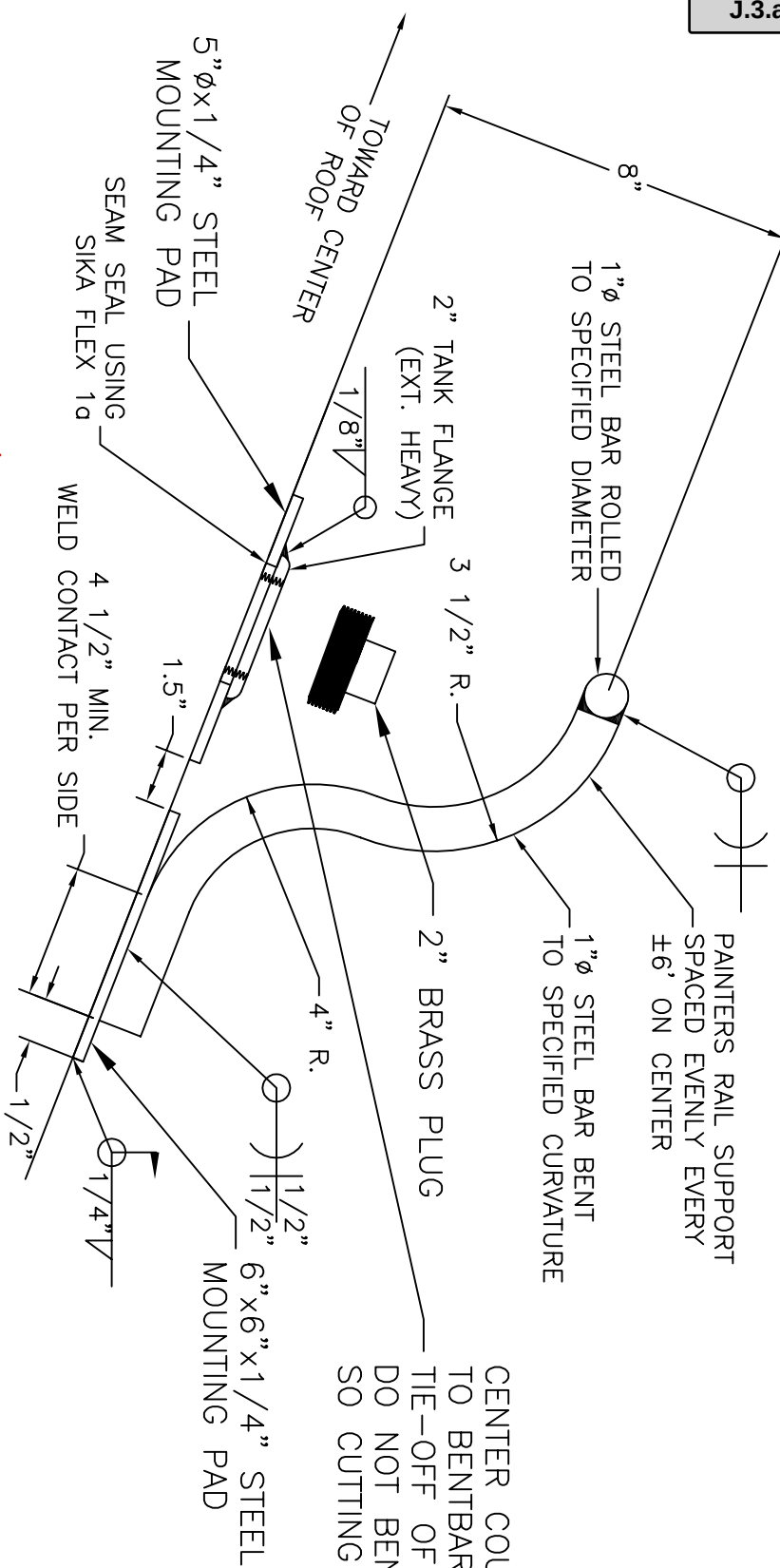
Burton, MI 400,000 Spheroid

Roof Handrail

File Name: handrail.dwg

Drawn By: TMF Date: 08/08/14

Checked By: IMG DWG: 02a

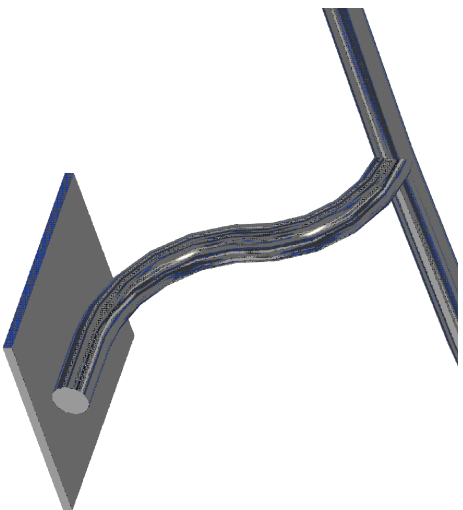


CENTER COUPLING CLOSE TO BENTBAR BRACES FOR TIE-OFF OF SAFETY LINES, DO NOT BEND SAFETY LINES, SO CUTTING EDGE IS AVOIDED.

PAINTER'S RAIL WITH SAFETY COUPLINGS

NOTE:

1. PROVIDE COUPLING AT PAINTER'S RAIL BRACES (ONE AT EVERY OTHER BRACE).
2. ALL WELDED CONNECTION POINTS FOR THE 1" ROLLED STEEL BAR MUST BE COMPLETED AT A STAND-OFF POINT.



ISO VIEW

Note: Drawing Not to Scale.

DIXON
ENGINEERING, INC.

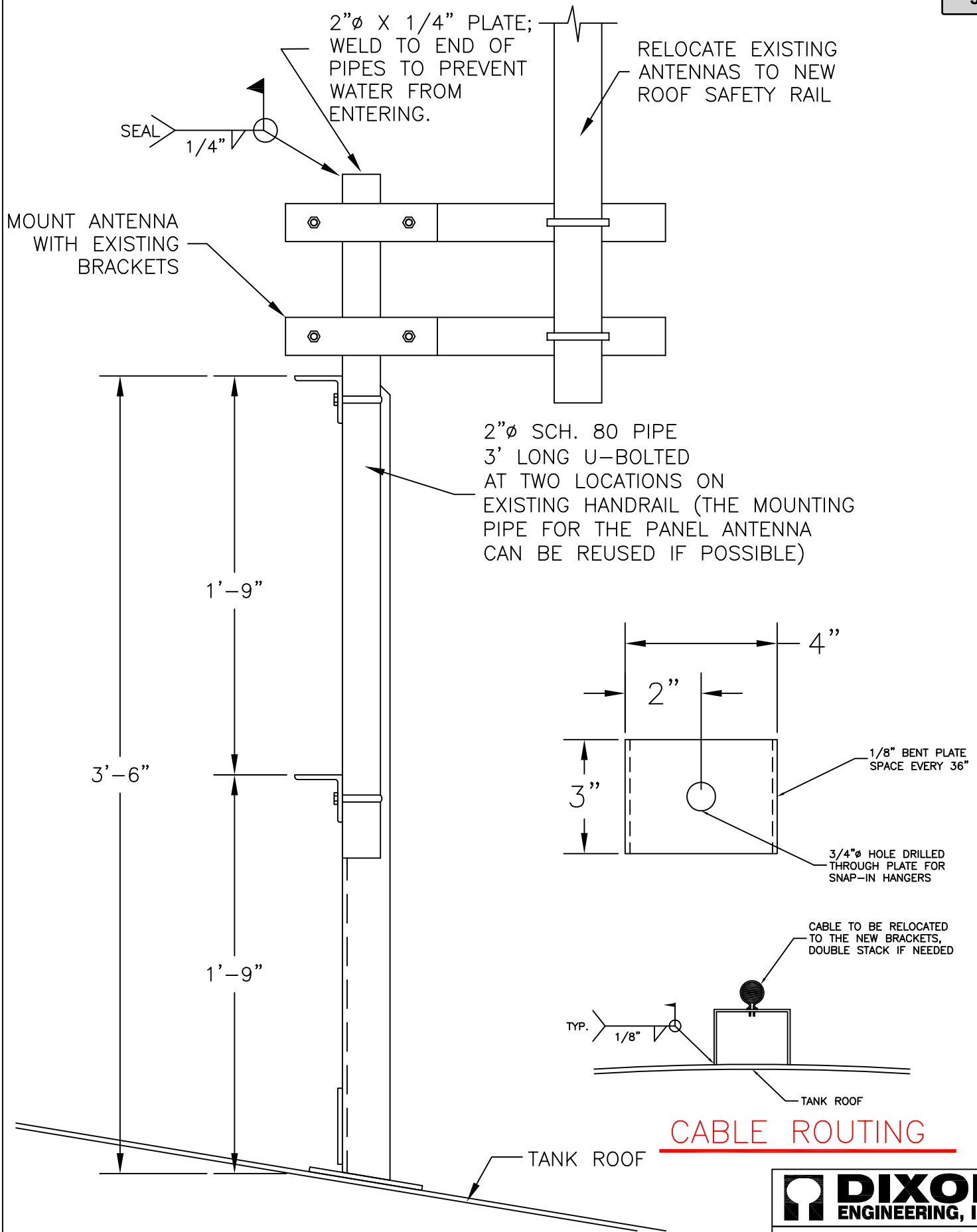
Burton, MI 400,000 Spheroid

Painter's Rail

File Name: painter_rail.dwg

Drawn By: TMF Date: 08/08/14

Checked By: IMG DWG: 02b



ANTENNA MOUNT

CABLE ROUTING



Burton, MI 400,000 Spheroid

Title: Safety Rail

File Name: resroofrail.dwg

Drawn By: T

Checked By: T

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SECTION 09 97 13

STEEL COATING

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Painting of steel structures.
- B. Interior Cleaning and Disinfection

1.02 REFERENCES

- A. AWWA Standards:
 1. D102 – 11 Painting Steel Water Storage Tanks.
 2. C652 – Disinfection of Water Storage Facilities

1.03 WORK INCLUDED

- A. Exterior: Apply a four (4) coat epoxy urethane system to the basebell and a three (3) coat epoxy overcoat system to the rest of the exterior.
- B. Dry Interior: Apply a spot two (2) coat epoxy system.

1.04 EXISTING CONDITIONS

- A. Exterior: Epoxy urethane system applied by CB&I in 1998 (original system).
- B. Wet Interior: Epoxy system applied by CB&I in 1998 (original system).
- C. Dry Interior: Epoxy system applied by CB&I in 1998 (original system).

1.05 TANK TERMINOLOGY

- A. Wet Interior: Internal surfaces, excluding inaccessible areas, to the tank roof, shell, bottom, accessories, and appurtenances that are exposed to the stored water or its vapor. Examples are the interior of the roof, sidewall, bottom and exterior of the access tube within the tank.
- B. Dry Interior: Surfaces of the finished structure, excluding inaccessible areas, that are not exposed to the elemental atmosphere or the stored water or its vapor. Examples are the interior of the access tube, interior of the pedestal, and underside of a suspended bottom within the pedestal.
- C. Exterior: External surfaces, excluding inaccessible areas, of the tank roof, shell, stem, accessories, and appurtenances that are exposed to the elemental atmosphere.
- D. Inaccessible Areas: Areas of the finished structure that, by virtue of the configuration of the completed structure, cannot be accessed to perform surface preparation or coating application (with or without the use of scaffolding, rigging, or staging). Inaccessible areas include such areas as the contact surfaces of roof plate lap joints, underside of roof plates where they cross supporting members, top surface of rafters

- directly supporting roof plates, contact surfaces of bolted connections, underside of column baseplates, contact surfaces of mating parts not intended to be removed or disassembled during routine operation or maintenance of the tank, and inside of risers less than a nominal 36 in. diameter.
- E. Sidewall: Vertical walls of the tank up to the weld seam of the roof.
 - F. Access Tube: Cylindrical tube extending from top of the riser to the roof through the tank.
 - G. Condensate Platform: Platform that covers entire area of the dry riser, and used to collect and stop condensation from entering the base-bell area or bottom of the riser.
 - H. Top Landing: Platform area directly under tank's access tube.
 - I. Mid-Landing: Partial or full landings between top platform and condensate (bottom) platform.
 - J. Basebell: Cone surfaces supporting stem.
 - K. Roof: Very top of tank, including top seam of sidewall.
 - L. Bowl: Area on bottom of the tank proper shaped like a bowl or cone. It extends from the stem out to the sidewall.
 - M. Riser: Center pipe whether wet or dry.

1.06 OMISSIONS or INCIDENTAL ITEMS

- A. It is the intent of these specifications to coat the structure for the purpose of corrosion protection on wet interior surfaces. It is the intent to coat the exterior for corrosion protection and aesthetics.
- B. Any small or incidental items not specifically detailed in the schedule, but obviously a part of the work are included in the work at no additional cost to the owner.
- C. Engineer, as interpreter of the specifications, will determine if disputed items fall under this category. Prevailing custom and trade practices will be considered in this determination.

1.07 PAINTER QUALIFICATIONS – NON-LEAD PROJECTS

- A. Contractor shall complete all coating and surface preparation.
- B. Painter shall be specialized in industrial or heavy commercial painting.
- C. ALL CONTRACTORS SHALL BE PREQUALIFIED, or have successfully completed the SSPC QP1 Contractor Prequalification Program.

1.08 SUBMITTALS

- A. Submit the following with your annual prequalification:
 - 1. Occupational Safety and Health Programs and certification that all site personnel have been trained as required by law.
- B. Submit the following ten (10) days prior to the preconstruction meeting:

1. Material Safety Data Sheets (MSDS) and Product Data Sheets:
 - a. Furnish from all suppliers Material Safety Data Sheets and product data sheets for all applicable materials including, but not limited to, paints, thinners, tank cleaners, degreasers, and abrasive materials.
 - b. Provide for employees one (1) copy of all data sheets at the job site for employee access.
 - c. Provide two (2) copies to the owner.
 - d. Provide two (2) copies to the engineer.
 - e. No work may commence without the complete filing. All MSDS shall conform to requirements of SARA Right-to-Know Act.
2. Fall Prevention Plan and Site Specific Fall Hazard Evaluation:
 - a. Site specific plan to contain a generic drawing of the existing structure and appurtenances of this tank and reflect safety changes specified for this project.
 - b. Certifications for all spiders, scaffolding, stages, etc. to be used on the project. All certifications to be current, less than one year old.
- C. Submit the following at the preconstruction meeting:
 1. Designated OSHA Competent Person and qualifications, if not previously submitted.
 2. Waste hauler and disposal facility.
 3. Submit all power tools and attachments to be used during the project.
- D. Submit the following within two (2) weeks of completion with final pay request:
 1. Waste manifest.
 2. Waivers of lien.
 3. Copies of any formal worker safety or environmental citations received on the project.

1.09 OWNER RESPONSIBILITY

- A. Drain the tank with seven (7) days notice, after contractor meets all precedent conditions of the contract.
- B. Draw samples and test after chlorination; responsibility of good results remains with the contractor. Poor test results could result in added costs to contractor, including rechlorination, cost of water, plus possible liquidated damages.

1.10 WARRANTY

- A. Approximately one (1) year from the date of completion, the tank will be inspected by the owner and/or his representative.
- B. The inspection will be performed in accordance with the applicable portions of AWWA D-102-11 Standard for Painting Steel Water Storage Tanks and industry standards.

- C. The owner will establish a date of inspection and shall notify the contractor ten (10) days in advance. The contractor's attendance will not be required.
- D. The owner will select a third party inspection firm (either engineer or project representative) to document inspection. Contractor shall be notified in advance by the Engineer, the contractor waives all rights to dispute findings if not present for the inspection.
- E. Any failed work will be documented and the contractor will be notified of necessary repair (method and extent). The owner reserves the right to require inspection of the repair work and possibly a second warranty inspection, dependent on degree of failure.
- F. Except where noted in the Contract Documents, the contractor guarantees all material and equipment furnished and all work performed for a period of one (1) year from the date of substantial completion of the contract. This warranty will automatically be extended until the tank is ice-free (if applicable) and the warranty inspection can be performed. The contractor guarantees that the system is free from defects due to faulty materials or workmanship and the contractor shall make the necessary correction to correct these defects. If the amount of rework exceeds ten percent (10%) of a portion of the project, then the owner reserves the right to have the warranty period extended one (1) year for the entire portion of the work.
- G. Cost for one (1) year warranty inspection will be the responsibility of the owner.
- H. Cost for a second warranty inspection and repair inspections will be the responsibility of the contractor and guaranteed by Contractor's Performance Bond.
- I. The owner retains all contractual remedies. The warranty shall not be considered an exclusive remedy.

1.11 DELIVERY and STORAGE of MATERIAL

- A. Submit manufacturer's invoice, with or without paint cost, to the engineer for review. This submittal will be used to identify the quantity of paint recommended by the manufacturer for a job of this size and design, and will be used to check the quantity actually delivered to the project.
- B. Cover bulk materials subject to deterioration because of dampness, weather, or contamination, and protect while in storage.
- C. Maintain materials in original, sealed containers, unopened and with labels plainly indicating the manufacturer's name, brand, type, grade of material, and batch numbers.
- D. Remove from the work site containers that are broken, opened, water marked, and/or contain caked, lumpy, or otherwise damaged materials. They are unacceptable.

- E. Store the material in a climate controlled designated area where the temperature will not exceed the manufacturer's storage recommendations. Heat the storage area to the manufacturer's recommended minimum mixing temperature.
- F. Keep equipment stored outdoors from contact with the ground, away from areas subject to flooding, and covered with weatherproof plastic sheeting or tarpaulins.
- G. Store all painting materials in a location outside the tank.
- H. Do not store or have on-site unapproved material, material from different manufacturers, or materials from different projects.

1.12 ACCESS and INSPECTOR SAFETY

- A. Provide access to all portions of the project where work is being completed. Access must be close enough and secure enough to allow inspector to use inspection equipment without extensions.
- B. Provide personnel to assist with access and to ensure contractor's access equipment is safely used.
- C. Provide separate fall protection for owner and inspectors. Limit fall to 5 ft. vertically.
- D. These specifications require the contractor to supply a separate fall protection cable and grab for each tie-off point for the inspector's use. The contractor is encouraged to provide a separate cable and tie-off for each of his personnel. The cables may be connected to the same tie-off point as the inspector's, but a separate cable and grab are required for each user.

1.13 INSPECTION and TESTING

- A. Prior to the scheduled inspection, remove all dust, spent abrasive, and foreign material from the surface to be coated.
- B. Furnish an instrument for measuring the wet film thickness, and also dry film thickness of each field coat of paint. The dry film thickness testing gauge shall be the magnetic type as manufactured by Elcometer Co., or the Nordson Gauge Co.; spring loaded model with two percent (2%) accuracy margin over a range of one-to-twenty-one (1-21) mils or equal.
- C. Certify to the owner that the specified paint has been applied at the paint manufacturer's recommended coverage, and to the specified thickness required. Also, certify that the paint has been applied in accordance with this contract.
- D. Take all necessary steps, including dry striping by brush or roller, to ensure a holiday-free coating system.
- E. The owner reserves the right to perform low voltage holiday tests on all areas including exterior and dry interior. The interior coatings are subject to low voltage holiday testing.

- F. The owner and engineer reserve the right to perform destructive testing under conditions deemed necessary. Testing may include, but is not limited to, the Tooke thickness test and adhesion testing. Any damage caused by these tests will be corrected to specifications at the contractor's expense.

1.14 CLIMATIC CONDITIONS

- A. Do not apply paint when the temperature, as measured in the shade, is below the manufacturer's required ambient and surface temperatures.
- B. Do not apply paint to wet or damp surfaces, or during rain, snow, or fog.
- C. Do not apply paint when it is expected the relative humidity will exceed 85%, or the surface temperature is less than 5° above dew point, or the air temperature will drop below the manufacturer's requirements for proper cure. Anticipate dew or moisture condensation, and if such conditions are prevalent, delay painting until the owner is satisfied the surfaces are dry.

1.15 APPLICATION

- A. Complete all painting and surface preparation in strict accordance with these specifications, approved paint manufacturer's specifications, and good painting practices per SSPC.
- B. Apply each coating at the rate and in the manner specified by the manufacturer. Check the wet film thickness every 200 sq. ft. to ensure each coat applied meets the dry film thickness range requirements.
- C. Allow sufficient time for each coat of paint to dry and cure. Allow a minimum of twenty-four (24) hours between coats, unless product requirements have a maximum time less than 24 hours.
- D. Apply exterior coating by brush and roller only. Spray application is not permitted without prior approval of the engineer. Even with prior approval, responsibility for damage still remains with the contractor.
- E. Painting or abrasive blast cleaning may be delayed because of poor coverage, the possibility of paint drying too rapidly, or the potential damage from overspray and/or dry spray. In all cases, responsibility for damages rests with the contractor.
- F. The contractor is responsible for the appearance of the finished project, and is warned to prevent contact with any freshly applied coating. Removal of rigging shall be completed so not to mar or damage the coating.
- G. Coatings shall be applied using methods to eliminate roller or spray marks in the finished product on the exterior.
- H. Additional coats required for coverage or to eliminate roller marks, spray marks and to repair dry spray and overspray are the responsibility of the contractor at no additional cost to the owner.
- I. Use of pole extension on spray guns is prohibited for all paint application.

- J. Mixing of partial kits is not permitted. All partial cans of coating must be removed from the site.
- K. Mixing blades to be clean. The engineer has the right to reject mixing blades based on cleanliness or paint build-up. Do not use the same mixing blade for different coatings (i.e. epoxy and urethane coatings).

1.16 PRESSURE RELIEF VALVES

- A. Furnish two (2) pressure relief valves with National Standard Threads designed to waste 250 gallons per minutes at 10 lbs. over pressure.
- B. The valves shall be Jayco – Model 22 in., or equal.
- C. Supply three (3) days prior to draining of the tank.
- D. After work to the tank and successful disinfection have been completed, the owner will return the valves to the possession of the contractor.
- E. Cost shall be incidental to project cost.

PART 2 – PRODUCTS

2.01 COLOR

- A. Supply the engineer with a color chart to allow the owner ample time for the exterior topcoat color selection.
- B. Factory tint the intermediate coat(s) for all areas of the structure if similar to the finish coat. Tinting shall be sufficient to allow visibility of the dissimilar color from 1 ft., and from 100 ft.
- C. After evaluating the bids, the owner shall select the color. The owner recognizes the additional cost for deep color paints. All bids shall be based on common “sky-blue” color. After the color has been selected, document the difference in cost and quantity used for the selected color and the owner will issue a Change Order for the exact cost differential only.
- D. Documentation of additional cost is the responsibility of the contractor, and must be supplied two (2) weeks before application. If necessary documentation is not supplied, any additional cost will be borne by the contractor. If selection/application time is less than two (2) weeks, then as soon as possible. The owner has the right to switch to a less expensive color; therefore, the contractor must submit cost before ordering paint.

2.02 SUBSTITUTIONS

- A. All coatings specified and approved herein have met or exceeded a specified list of ASTM standards. The materials specified are the standard to which all others shall be compared.

- B. The purpose is to establish a standard of design and quality, and not to limit competition.
- C. Other manufacturers wishing to have their products approved have also had their coatings tested using the same representative of Dixon Engineering, Inc., and the same test methods.
- D. Approval by ANSI/NSF Standard 61 is also a requirement for potable water contact coatings.
- E. The selection of coatings also has taken into consideration the manufacturer's current and past performance on availability, stocking, and shipping capabilities, ability to resolve disputes, and any applicable warranties.

2.03 GROUND TARPS

- A. Use impermeable ground tarps, 20 mils thick.
- B. Use ground tarps able to withstand the anticipated construction traffic without tearing or separating.

2.04 EQUIPMENT COVERING

- A. Use material that is 8 – 10 mils thick, and 100% impermeable to cover pumps, motors, and other vulnerable equipment.
- B. Use material resistant to tear and/or rip by mechanical action from abrasive blasting during blasting operations.
- C. Make coverings airtight by use of duct tape at the openings, or other suitable measures.
- D. Meet with representative of equipment owner to verify covering will not damage equipment. Damage is the contractor's responsibility. This includes not only the owner's equipment, but also telecommunication antennas, cables, buildings, controls, etc.

2.05 AIR DRYER for COMPRESSOR

- A. Use air dryers sufficient to remove 98% of the moisture from the compressed air. Size the dryers on total cfm using manufacturer supplied charts. Upon request, supply charts to engineer for verification.
- B. If the fan is not operable, cease all blasting until the dryer is replaced or repaired.
- C. Supply air dryer with an air draw-off valve to check air for dryness, oil contamination, and cleanliness on the outlet side of the air dryer.
- D. For cleaning operations, draw clean air from the outlet side of the air dryer.

PART 3 – EXECUTION

3.01 DISINFECTION

- A. Disinfect the completely painted structure in accordance with AWWA Standard C652 Chlorination Method No. 3.
- B. Furnish the material and labor necessary to disinfect the structure in the required manner. Assist owner during filling and sampling. Promptly repair any defects in the work that may appear.
- C. Do not allow water to enter the distribution system until the structure is proven chemically and bacteriologically safe.
- D. Water vented to waste may not contain any substances in concentrations that can adversely affect the natural environment. No total residual chlorine may be measured in water discharged to surface water.
- E. Pay all additional expenses if it is necessary to repeat the testing and disinfection procedure as a result of defective work or defective testing.

3.02 PROTECTION of NON-WORK AREAS

- A. Protect all non-blasted/painted surfaces prior to all abrasive blast cleaning/painting.
- B. Thoroughly cover the fill/drain pipe, overflow pipe, and all other openings. Do not permit abrasive or paint chips to enter into the piping or distribution system. Use watertight seals on the pipes.
- C. Protect and seal all controls (even if they are not in the immediate work area) that are in danger from the project. Work with the owner so all controls are shut down and vented if necessary.
- D. Cover the pit with boards and tarping to prevent debris from entering. Remove all debris, spent abrasive, etc. from the pit at project completion.

3.03 ANTENNA SYSTEM PROTECTION

- A. Two (2) antennas are mounted on the roof.
- B. The number of antennas listed are from the last known condition, the contractor is to field verify number of antennas.
- C. There are cables routed from the ground up to the antennas with miscellaneous sensitive equipment mounted on the structure and control equipment/buildings located on the ground.
- D. Use material that is 100% impermeable to cover and protect all antennas, antenna cables, and antenna controls/buildings.
- E. Use material resistant to tear by mechanical action from abrasive blasting, power washing and coating application.
- F. Payment for damage to antennas, antenna cables, miscellaneous equipment and/or antenna controls/buildings is the responsibility of the contractor.

- G. Contact the owner of each set of antennas one (1) week prior to the beginning of construction. Name of antenna companies will be available at the preconstruction meeting.
- H. Antennas may remain in service during the project. The contractor is responsible for their own RF safety. Contractor to provide a minimum of one RF monitor for employees on site for the duration of the project.

3.04 HAND WASH FACILITY

- A. Provide OSHA approved hand wash facility with running water. Hot water is not required.
- B. Stock facility with soap and towels, and keep supply replenished.
- C. Test water and dispose of properly after job is completed.

3.05 LIGHTING of WORK SPACE

- A. Provide durable lighting fixtures designed for the intended work environment for use during blasting, painting, and during all inspections.
- B. Encase portable lamps in a non-conductive, shatterproof material. Use only heavily insulated cable with an abrasive resistant casing.
- C. Install all temporary electrical items in accordance with all local, state, and federal codes, including OSHA.
- D. Protect from paint overspray and damage from abrasive materials.
- E. Measure required illumination during surface preparation and coating application at the work surface. Supply 20 ft. candles minimum illumination during blasting and painting, and 30 ft. candles minimum prior to and during inspection, per SSPC-Guide 12. Inspect the prepared surface at the higher illumination prior to calling for inspection. All work must conform to specification requirements prior to the scheduled inspection.
- F. Measure the illumination at the work surface in the plane of the work.

PART 4 – SPECIAL PROVISIONS

4.01 WELD PREPARATION PRIOR to COATING

- A. Prepare all new welds per NACE RPO 0178 prior to coating application. Grind welds to category D.

4.02 SCHEDULING

- A. Complete all welding and any other work that damages the coating before paint operations begin, including surface preparation. The exception is paint removal in the weld area.

- B. If contractor wants a variance in this schedule, request the change and give reason in writing to the project manager. The project manager will reply with a written Field Order if change is approved. Engineer reserves the right to put further restrictions in Field Order. If contractor objects to restrictions, he may revert to the original specifications.

4.03 GRASS RESTORATION

- A. The contractor is to report any damaged ground at the construction site in writing prior to mobilization of equipment, otherwise all repairs to the damaged ground will be the responsibility of the contractor.
- B. Refill all holes, ruts etc and level area around the construction site to the original grade.
- C. Fill material to be clean soil, no gravel, rocks or construction debris is to be used as fill material without the owners consent.
- D. Bring soil to a friable condition by disking, harrowing, or otherwise loosening and mixing to a depth of 3 in. – 4 in. Thoroughly break all lumps and clods.
- E. Rake area to be seeded. Sow seed at a minimum rate of 220 lbs/acre. Use seed intended for the climate.
- F. Work to be completed to the owner's satisfaction.
- G. Cost is incidental to exterior painting.

SECTION 09 97 13.10**STEEL COATING SURFACE PREPARATION****PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Full Field Abrasive Blasting.
- B. Power Tool Cleaning.
- C. High Pressure Water Cleaning.

1.02 REFERENCES**A. AWWA Standards:**

- 1. D102-11 Painting Steel Water Storage Tanks.

B. SSPC and NACE Standards:

- 1. SP11 – Power Tool Cleaning to Bare Metal.
- 2. SP6/NACE No. 3 – Commercial Abrasive Blast.
- 3. SP12/NACE No. 5 – High and Ultra High Pressure Water Jetting.
- 4. VIS 1 (Visual standard for abrasive blasted metal).
- 5. VIS 3 (Visual standard for hand and power tool cleaned metal).

1.03 WORK INCLUDED – SURFACE PREPARATION

- A. Exterior: High pressure water clean (5,000 to 10,000 psi) (except for the basebell), water dampen abrasive blast clean the basebell to a SSPC-SP6 commercial standard, the rest of the exterior is to be spot power tool cleaned to a SSPC-SP11 standard.
- B. Dry Interior: Spot power tool clean to a SSPC-SP11 standard the coating failures throughout (only approximately 20-25 spot failures mostly on the top of the platforms)

1.04 WASTE SAMPLING

- A. Sample waste from each portion of the project and keep waste segregated. Send to a NLLAP certified lab and test for TCLP for 8 metals.
- B. The owner reserves the right to collect samples and to send them to their selected lab. This will be determined at the preconstruction meeting.
- C. Pay all lab fees for 8 metals TCLP analysis on waste samples, total lead, and chrome on soil samples, and any subsequent testing if clean-up is warranted.

PART 2 – PRODUCTS

2.01 EXTERIOR TANK CLEANER

- A. United 727 Weather-Zyme as manufactured by United Laboratories, 320 37th Ave., St. Charles, IL 60174 1-800-323-2594.

2.02 FLASH RUST INHIBITOR – WATER DAMPEN BLASTED AREAS

- A. Hold-Tight 102 as manufactured by Hold-Tight Solutions, Inc., P.O. Box 77066, Houston, TX 77215 1-800-319-8802.

2.03 ABRASIVE – COAL SLAG

- A. The coal slag shall be 20-40 grade, or 30-60 grade.
- B. The abrasive shall be free of moisture, water soluble contaminants, dust, and oil.
- C. The abrasive shall be stored and covered to prevent moisture contamination.
- D. All leaking or spilling bags shall be removed, and affected areas properly cleaned.
- E. All slag abrasive shall meet the requirements of SSPC-AB1 “Mineral and Slag Abrasive” June 1, 1991-Grade 3.
- F. The use of silica sand, flint sand, and glass beads is prohibited.
- G. All abrasive and grit material used, and all equipment supplied shall be subject to approval of the engineer. The abrasive or grit shall be sharp enough and hard enough to remove the mill scale, rust, and paint.

PART 3 – EXECUTION**3.01 WATER DAMPENED BLAST (SSPC-SP6) – EXTERIOR BASEBELL**

- A. Abrasive blast clean all surfaces and appurtenances to a commercial finish (SSPC-SP6), latest edition thereof.
- B. Inject water into the blasting media at the nozzle.
- C. The engineer may require adjustment of the waterflow (increase or decrease) based on the amount of dust generated. Adjust nozzle pressure to reduce ricochet of abrasive. Supply sufficient water to suppress all dust.
- D. Contain all water introduced into the tank, as well as the abrasive. The contractor is advised to use airflow and evaporation to his advantage to reduce the amount of water requiring removal.
- E. Maintain a profile of 1.0 – 2.0 mils.
- F. Furnish and use an approved rust inhibitor injected into the water. Proper mixing and application will be in the manufacturer’s recommendations.
- G. Rinse all residue, abrasive, etc. from the tank each day upon completion.

3.02 POWER TOOL CLEAN (SSPC-SP11) – EXTERIOR and DRY INTERIOR

- A. Solvent clean all visible grease, oil, salts, and residue.

- B. Power tool clean all surfaces and appurtenances to bare metal (SP11) in areas where steel is exposed or rusted, or where coating is abraded.
- C. Retain or produce a surface profile. Surface profile shall be greater than 1.0 mil.
- D. Edges of adjacent coating shall be feathered a minimum of 3 in. from the exposed steel with 3M Scotch-Brite Clean'n Strip discs.
- E. Submit all power tools for approval prior to beginning of work. Approval will be based on quality of tool, functionality, and possibility of damage to steel or adjacent paint.

3.03 HIGH PRESSURE WATER CLEANING - EXTERIOR

- A. Solvent clean all visible grease, oil, salt, algae, and residue in accordance with SSPC-SP1.
- B. High pressure water clean all exterior surfaces and appurtenances at 5,000 – 10,000 psi to remove all dirt, chalk, algae, other foreign material, and all brittle or loose coating, rust, and mill scale. Operational pressure will be determined by the engineer based on field conditions.
- C. Maintain a water jet nozzle distance of 2 in. – 10 in. away from the surface.
- D. Hold the water jet nozzle with 0° - 15° top perpendicular (90°) to the surface at all times.
- E. Only use machines rated at and capable of achieving and maintaining 5,000 – 10,000 psi. Use of a rotating/reciprocating nozzle during water cleaning is permitted but not to increase the pressure of a washer rated lower than required.
- F. Do NOT exceed a rate of 10 sq. ft./minute.
- G. The gauge measuring time of use must be operational on the unit, if not operational the contractor may be shut down and/or deducted price for rental of an operational unit from the final payment.
- H. Feather all edges using power tools per this specification.

3.04 WASTE DISPOSAL – NON-HAZARDOUS

- A. If after testing of the spent abrasive material the TCLP tests indicate the abrasive is not a hazardous waste, dispose the abrasive in a waste disposal facility.
- B. All waste shall be handled by a licensed hauler. Supply the owner with all proper documentation of the final disposal site. The actual bill of lading and all manifests will be required prior to any payment.
- C. Payment for non-hazardous waste disposal is incidental to interior or exterior painting.

3.05 WASTE DOCUMENTATION

- A. Supply proper documentation of storage, transportation, and treatment, or disposal of the waste to the owner. The owner will retain sufficient funds to pay for

hazardous waste transportation, treatment, and any possible fines until all documentation has been received. This retainage will be held, even if the waste has tested non-hazardous.

3.06 TESTING and CLEAN-UP of WASTE

- A. Daily collect all spent abrasive from the ground tarps and dispose in the required receptacles. Prior to receiving test results, spent abrasive shall be stored on ground tarps. The spent abrasive is to be covered and weighted down so no dust can be released.
- B. Furnish containers with proper labels for storage of the spent debris. Containers shall meet requirements of the EPA (or their local counterpart) for hazardous waste disposal. The spent abrasive will be moved directly from the tank into the waste containers. The containers will remain until final test results have been received. Furnishing containers with covers will be incidental to respective repaint, and will not be affected by the owner's final selection of respective interior or exterior disposal.
- C. Waste to remain on-site in covered receptacles until waste test results are received.

SECTION 09 97 13.19.01**DRY INTERIOR STEEL COATING – SPOT TWO COAT EPOXY****PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Partial painting in the dry interior.

1.02 REFERENCES

- A. SSPC and NACE Standards:

1. PA1 – Paint Application.
2. PA2 – Measurements and Calibration.
3. NACE RP 0178 Surface Finish Requirements.

1.03 WORK INCLUDED

- A. Application of a spot two (2) coat epoxy system.

PART 2 – PRODUCTS**2.01 EPOXY POLYAMIDE – SPOT 2 COAT SYSTEM – DRY INTERIOR**

- A. Two (2) coat epoxy polyamide system.

- B. Approved suppliers and system:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66 (spot)/66 (spot)
Induron	PE-70 (spot)/PE-70 (spot)
PPG	Amerlock 2(spot)/Amerlock 2(spot)
Sherwin Williams	646PW(spot)/646PW(spot)

PART 3 – EXECUTION**3.01 EPOXY POLYAMIDE – SPOT 2 COAT EPOXY – DRY INTERIOR**

- A. Apply to all prepared areas a spot two (2) coat epoxy system.
- B. Surface preparation has been previously defined in Section 09 97 13.10.
- C. Apply each coat at the following rates:

<u>Coat</u>	<u>Minimum</u>	<u>Maximum</u>
	<u>D.F.T.</u>	<u>D.F.T.</u>
Primer (spot)	3.5	5.5
Topcoat (spot)	<u>3.5</u>	<u>5.5</u>
Total	7.0	11.0

- D. Each coat to be a different color from the previous coat and is to be approved by the engineer. No color bleed-through should occur if proper application rates are observed.
- E. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- F. Allow a minimum of twenty-four (24) hours between coats (including stripe coat). Additional time may be necessary if low temperatures require an increase in the necessary cure time.

3.02 SCHEDULE of WORK

- A. Complete all exterior and interior welding prior to surface preparation.

SECTION 09 97 13.23.01**EXTERIOR STEEL COATING – FOUR COAT EPOXY URETHANE
REPAINT****PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Painting on the exterior basebell.

1.02 REFERENCES

- A. SSPC and NACE Standards:

1. PA1 – Paint Application.
2. PA2 – Measurements and Calibration.
3. NACE RP 0178 Surface Finish Requirements.

1.03 WORK INCLUDED

- A. Application of a four (4) coat epoxy urethane system.

PART 2 – PRODUCTS**2.01 EPOXY URETHANE – 4 COAT SYSTEM – EXTERIOR**

- A. The coating shall be an epoxy urethane system.
- B. The contractor is advised to follow all rules for safety while using isocyanates.
- C. Ultraviolet protection additives mixed at factory only. There will be no tinting or addition of any material other than the manufacturer's thinners.
- D. Approved suppliers and systems:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66/66/1074/1074UV
Induron	PE-70/PE-70/I-6600/I-6600
Sherwin Williams	646PW/646PW/Acrolon Ultra/Acrolon Ultra

PART 3 – EXECUTION**3.01 EPOXY URETHANE – 4 COAT SYSTEM – EXTERIOR**

- A. Apply to all prepared surfaces and appurtenances a four (4) coat epoxy urethane system.
- B. Surface preparation and paint requirements have been previously defined in Section 09 97 13.10. Apply all coating by brush and roller. Spray application is prohibited.

C. <u>Coat</u>	Minimum <u>D.F.T.</u>	Maximum <u>D.F.T.</u>
Primer	2.0	3.0
Epoxy Intermediate	2.0	3.0
Urethane Intermediate	2.0	3.0
Topcoat	<u>2.0</u>	<u>3.0</u>
Total	8.0	12.0

- D. Each full coat to be a different color from the previous coat and is to be approved by the engineer. No color bleed-through should occur if proper application rates are observed.
- E. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- F. Allow a minimum of twenty-four (24) hours between coats. Additional time may be necessary if low temperatures require an increase in the necessary cure time.
- G. The contractor is advised that Dixon Engineering, Inc. will take dry film thickness readings on the exterior per SSPC-PA2 which requires gauge adjustment from magnetic plane to peak plane.

SECTION 09 97 13.24.01

EXTERIOR STEEL COATING – THREE COAT EPOXY URETHANE OVERCOAT

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Painting on the exterior (stem, bowl, sidewall and roof).

1.02 REFERENCES

- A. SSPC and NACE Standards:

1. PA1 – Paint Application.
2. NACE RP 0178 Surface Finish Requirements.

1.03 WORK INCLUDED

- A. Application of a three (3) coat epoxy urethane system.

PART 2 – PRODUCTS

2.01 EPOXY URETHANE – 3 COAT OVERCOAT SYSTEM – EXTERIOR

- A. The coating shall be an epoxy urethane system.
- B. The contractor is advised to follow all requirements for safety concerning isocyanates.
- C. Ultraviolet protection additives mixed at factory only. There will be no tinting or addition of any material other than the manufacturer's thinners.
- D. Approved suppliers and systems:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66 (spot)/66/1074/1074UV
Induron	PE-70 (spot)/PE-70/I-6600/I-6600
Sherwin Williams	646PW(spot)/646PW/Acrolon Ultra/Acrolon Ultra

PART 3 – EXECUTION

3.01 EPOXY URETHANE – 3 COAT OVERCOAT SYSTEM – EXTERIOR

- A. Apply to all prepared surfaces and appurtenances a three (3) coat epoxy urethane system.
- B. Surface preparation and paint requirements have been previously defined in Section 09 97 13.10. Apply all coatings by brush and roller. Spray application is prohibited.
- C. Apply each coat at the following rates:

<u>Coat</u>	<u>Minimum</u>	<u>Maximum</u>
	<u>D.F.T</u>	<u>D.F.T.</u>
Primer (spot)	2.0	3.0
Epoxy Intermediate	2.0	3.0
Urethane Intermediate	2.0	3.0
Topcoat	<u>2.0</u>	<u>3.0</u>
Total	8.0	12.0

- D. Each full coat to be a different color from the previous coat and is to be approved by the engineer. No color bleed-through should occur if proper application rates are observed.
- E. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- F. Allow a minimum of twenty-four (24) hours between coats. Additional time may be necessary if low temperatures require an increase in the necessary cure time.

3.02 LETTERING

- A. Paint the name "BURTON" in two (2) locations on the tank.
- B. Paint the lettering the same size and style as the existing lettering, and place the lettering in the same locations. Verify size and document locations for application purposes.
- C. Approved Fluorourethane coating system.

<u>Manufacturer</u>	<u>System</u>
Tnemec	700
Induron	Perma-Gloss
Sherwin Williams	FluoroKem HS
- D. Apply lettering coating at 2.0 - 3.0 mils.
- E. Payment is incidental to exterior repainting.

3.03 SCHEDULE of WORK

- A. Complete all exterior and interior welding prior to surface preparation.

SECTION 09 97 23.23.01**CONCRETE FOUNDATION COATING – TWO COAT EPOXY****PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Painting of the concrete foundation(s).

1.02 REFERENCES

- A. SSPC and NACE Standards:

1. PA1 – Paint Application.
2. PA2 – Measurements and Calibration.

1.03 WORK INCLUDED

- A. Application of a two (2) coat epoxy system.

PART 2 – PRODUCTS**2.01 EPOXY POLYAMIDE – 2 COAT SYSTEM – FOUNDATION**

- A. Two (2) coat epoxy polyamide system.
- B. Approved suppliers and manufacturers:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66/66
Induron	PE-70/PE-70
PPG	Amerlock 2/Amerlock 2
Sherwin Williams	646PW/646PW

PART 3 – EXECUTION**3.01 EPOXY POLYAMIDE – 2 COAT EPOXY – FOUNDATION**

- A. Apply to all prepared areas a two (2) coat epoxy system.
- B. Foundations to be water cleaned. Remove dirt 3” below grade around the entire foundation prior to coating, backfill once topcoat is dry to the touch.
- C. Apply each coat at the following rates:

<u>Coat</u>	<u>Minimum D.F.T.</u>	<u>Maximum D.F.T.</u>
Primer	3.5	5.5
Topcoat	<u>3.5</u>	<u>5.5</u>
Total	7.0	10.0

- D. Allow the manufacturer’s minimum time between coatings.
- E. Cost is incidental to exterior painting.

SECTION 26 42 21
IMPRESSED CURRENT CATHODIC PROTECTION for ELEVATED
TANKS without WET RISERS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. SCOPE: Furnish and install a complete automatic controlled impressed current cathodic protection system to prevent corrosion on the submerged interior surfaces of the water storage tank. All work and material are to meet the standards established in AWWA D104-11-Automatically Controlled Impressed-Current Cathodic Protection for the Interior of Steel Water Tanks.
- B. CONFLICTS: Requirements contained in these specifications apply to and govern the work under this section. All General Condition items and Information for Bidder items applicable or contained in these specifications apply. This Technical Specification is intended to expand the General Conditions and/or other Technical Specifications and is not intended to conflict or override any items unless specifically stated. If a conflict is noted, the engineer will review prior to proceeding with the project. If a conflict does exist, the Technical Specifications govern over any General Conditions or Information for Bidders.

1.02 QUALIFICATIONS of CATHODIC PROTECTION MANUFACTURER

- A. The bidder is to have a minimum of five (5) continuous years of successful experience in the manufacture, installation and servicing of automatic cathodic protection systems for water storage tanks. The bidder is to have a permanent service organization located within three hundred (300) miles of the tank location. The contractor (manufacturer) is to have a minimum of twenty-five (25) successful units installed in water storage tanks. The manufacturer and/or his subcontractor must own and maintain or lease the equipment necessary for installation and have proper training in regard to the safety requirements.
- B. New firms may also bid this project; however, they will be subjected to thorough review based on individual experiences of staff, proof of the continuation with firm (i.e. stock ownership, etc.) and financial stability of the firm. Essentially, they will be required to provide sufficient documentation to convince the owner they will be available throughout the ten (10) years to service the system, if needed.

1.03 SHOP DRAWINGS

- A. Within three (3) weeks after the contract is awarded, furnish six (6) sets of shop drawings detailing the proposed installation for review. Submit detailed shop drawings for all items specified.

B. Submit three (3) sets of Operation/Maintenance Manuals directly to the owner.

1.04 GUARANTEE

A. Guarantee the cathodic protection system against all defects in materials and workmanship and further guarantee to prevent corrosion, when maintained in a continuous operation in accordance with the contractor's instructions, as evidence by the absence of pitting (or additional pitting) below the high waterline in the tank for a period of one (1) year. The requirement of a maintenance contract may be beneficial, but cannot be made a precondition to this warranty. In the event corrosion is not prevented, the contractor is to readjust, repair, or replace the system. Guarantee the reference anodes for five (5) years. It is the intention of the owner to inspect the tank, as necessary, to review the performance of the cathodic protection system.

1.05 DESIGN and PERFORMANCE REQUIREMENTS

A. DESIGN CRITERIA:

1. The tank is a 400,000 gallon spheroidal elevated water storage tank. It is approximately 93 ft. to bottom of the tank.
 2. The tank's interior was coated with an epoxy system, and is 99% intact. Total bare surface area to be protected shall be 50% of the tank surface up to the high waterline.
 3. Design tank-to-water potential is to be -900 mv with units capable of adjustment from -850 mv to -1050 mv. The design potential is to be IR drop-free (type A) and based on a copper/copper sulfate reference anode.
 4. Minimum current density is to be 0.5 MA/sq. ft. of the bare surface area.
 5. The minimum design anode system life is to be ten (10) years.
- B. The intent of these specifications is to procure a quality product by an established manufacturer of the latest design. Cost of the equipment is to include all royalty costs arising from patents and licenses associated with furnishing the specified equipment. Design all material to withstand the stresses created under ice conditions. Use the latest state-of-the-art "permanent" system which is designed to be ice-free and designed for use in tanks with ice conditions. Use corrosion resistant materials for all equipment, or protect with corrosion resistant industrial coating approved by the engineer.

PART 2 – PRODUCTS

2.01 CATHODIC PROTECTION SYSTEM

A. Provide a cathodic protection system (ice-free) that is to be a suspended or floating ring-type system. Furnish all items, as necessary, for the complete operating system.

2.02 MATERIALS

- A. Furnish materials for the best quality, regularly used in commercial practice and conforming to the following specifications. Specifically design the cathodic protection system for operation in icing conditions and protect against damage from ice.
- B. Supply only material for use inside the wet interior (i.e. all material in contact with water that meets NSF 61 Standards and bears the NSF or UL label verifying compliance).
- C. Mount the power unit as directed in Part 3 – Execution in a stainless steel, waterproof cabinet suitable for outdoor use, adequately ventilated with stainless steel screens, and with provision for locking. Secure cabinet by using mounting brackets. If mounted on steel, electrically isolate from steel with non-conductive insulator.
- D. Use an electrical insulating material having suitable thickness and mechanical strength for the mounting board. Mount accurate D.C. meters with a D.C. voltmeter on the panel board for indicating output of rectifier.
- E. Include a potential indicating voltmeter on the panel board. This voltmeter is to be part of the sensing circuit, and is to continuously indicate the structure potential value that the control system is maintaining.
- F. Panel Board is to contain the following equipment:
 1. Power Unit: The power unit is to have the necessary circuit breakers, transformer, selenium or silicon rectifying elements, voltmeter(s), ammeter(s), lightning, surge, overload protection, wiring and appurtenances of adequate capacity to meet the requirements established by the Engineering Survey for each corrosion problem. Provide a power unit with voltage adjustments to regulate the current required for corrosion control. The unit is to be adjustable over the entire range of 0-100% of rated capacity. Design the power unit for Single Phase, 60 Hz, 110-120 volt A.C. rated to operate at an ambient temperature of 45° Centigrade. Include a circuit breaker for the A.C. and an overload relay in the D.C. circuit. The entire power unit is to be fully field serviceable. The overall efficiency of the power unit is to exceed 65%, and the power factor is to exceed 90% of full load and rated voltage to the power unit, in the conversion of A.C. to D.C. The power factor is to be greater than 85% at outputs exceeding 25% of the rated capacity.
 2. Automatic Controller: House the controller integrally with the rectifier unit. The automatic controller is to be completely solid state design having no moving parts and capable of automatically maintaining the tank-to-water potential at (-)900 millivolts with respect to a copper-copper sulphate reference electrode within an accuracy of 25 millivolts. The tank-to-water potential measured and maintained by the controller it to be free of “IR” drop error (Type A).

3. Rectifier: Use non-aging tri-amp selenium or silicon rectifiers of the approved selenium type, as manufactured by General Instrument Corporations or equal for rectifier stacks. The rectifier stacks are to have adequate cooling fins so their normal temperature rise at rated capacity will not exceed that specified by the N.E.M.A. and by the manufacturer of the rectifier stacks for cathodic protection service. Use air-cooled rectifier stacks.

Design the transformer for use in cathodic protection rectifiers having separate primary and secondary copper windings. The rectifiers are to be capable of automatically adjusting output to maintain potential within +/- 25mv of -900mv, and to be adjustable over 0-100% of its rated capacity.

4. Tank-to-Water Potential Meter: Equip the controller with a calibrated potential monitoring and display circuit having an integral impedance exceeding 1000 megohms which is to be so connected to read from the system reference cell the tank-to-water potential being maintained by the cathodic protection system.

This voltage reading is to be free of "IR" drop error.

NOTE: If digital readout is provided, provide access to all readings required above.

- G. Run positive wires from the power unit to the anode circuits in rigid steel conduits, as established by the National Electrical Code for the allowable current-carrying capacity. Use rigid, galvanized steel conduit. Use state code for underground wire. Use HMWPE (High Moly) wire from the rectifier to and in the tank.
- H. Equip the system with copper-copper sulfate reference electrode designed for a minimum five (5) year life. Install two (2) electrodes on opposite sides of the bowl. If either electrode fails within five (5) years, replace as often as necessary, free of charge to the owner.
- I. Design the anode system for a minimum life of ten (10) years and securely attach to the tank to prevent damage from ice conditions. Include all labor and material for installation of the anodes, and use submerged floating anodes. The anode system uses mixed metal oxide wire anodes. Attach the anodes to a buoyant submerged structure that is maintained in a totally submerged condition, down to access tube. Anode and reference electrode lead wires are to enter the tank below the minimum water level through pressure tight fittings. Use 3,000 lb. couplings for fitting. Use a separate cord to encircle the supporting cord approximately 8 in. greater radius and design the cord to relieve tension in the loading. Use $\frac{5}{16}$ in. polyester or nylon rope.
- J. Protect all units using lightning arresters, surge protectors, and automatic overload protection in all modes and comply with all FCC regulations. All patent requirements are the responsibility of the contractor.

2.03 ALARM and TELEMETRY CONTROLS

- A. The alarm and telemetry circuits are to be a secondary system designed to read controls and not to interfere in any manner with the primary controls. Use four-to-twenty (4-20) milliamp sensors to read voltage, amperage and potential of both circuits. One alarm light shall be furnished on the cover of the rectifier box. The light shall be activated by a change in amperage, voltage or potential that would signal a possible system failure.

PART 3 – EXECUTION**3.01 INSTALLATION**

- A. The cathodic protection system is to be installed by full-time employees of the supplier of the system who are specifically trained to install and service water tank cathodic protection systems. Subcontractors who are specialized tank personnel may install the cathodic protection system under direct, on-site supervision by a responsible employee of the manufacturer.
- B. Install clips, pressure fittings, mounting supports, and brackets prior to abrasive blasting.
- C. Supply cathodic clips and coupling with location information.

3.02 WELDING

- A. Complete welding of wall attachment clips by a certified welder and use ¼ in. fillet welds all around. No area may be left which would be susceptible to crevice corrosion.
- B. Weld the pressure fitting with ¼ in. fillet continuous welds all around on both the tank's wet interior.
- C. Weld a control panel mounting bracket in-place with ¼ in. continuous fillet weld in the interior basebell, as designated by the owner and engineer.

3.03 INSTRUCTIONS

- A. After installation is complete, energize the system and adjust for optimum operations. After the unit is adjusted, take tank-to-water potential measurements using a copper-copper sulfate reference electrode. Submit a report to the engineer, including all the test results obtained.
- B. After supervising of inspection and start-up operations, provide one (1) additional day for training of the owner and/or his representative. The training is to include minor troubleshooting practices, recordkeeping, and methods used to determine the effectiveness of the system. The training period is at the owner's discretion within one (1) year of start-up.

3.04 MOUNTING PANEL

- A. Locate metal, waterproof cabinet at the base of the tank (inside) at location approved by the owner.
- B. Mount on electrical panel if room is available or install new brackets welded to the basebell, use 3/16 in. bent plate, weld using full fillet welds.

3.05 PAINT REPAIR

- A. All interior burns shall be power tool cleaned to a SSPC-SP11 bare metal condition, and spot coated with the following two (2) coat system at 4.0 to 6.0 mils per coat:

<u>Manufacturer</u>	<u>System</u>
Tnemec	20/20
Induron	PE-70/PE-70
Sherwin Williams	646PW/646PW

- B. Contractor may apply one (1) coat of Aquatopoxy at 6.0 mils in lieu of the two coat system.

3.06 ELECTRICAL SUPPLY

- A. There is a 110 volt power available inside the basebell.
- B. Coordinate with owner and connect electrical source to cathodic protection controls.
- C. Bury all exterior wiring underground from electrical source to cathodic protection controls.

SECTION 13 32 12 **MIXING SYSTEM**

PART 1 – GENERAL

1.01 EQUIPMENT OVERVIEW

- A. These specifications provide the requirements to furnish, install, and place into operation storage tank circulation equipment.

1.02 REFERENCES

- A. Occupational Safety and Health Administration, OSHA
- B. Department of Transportation, DOT
- C. Underwriters Laboratories Inc., UL 508
- D. NSF / ANSI Standard 61

1.03 QUALITY ASSURANCE

- A. Continuous Operation Equipment. The circulation equipment shall operate continuously, all day and all night, using 120 VAC as the power source.
- B. No Visual Defects. The circulation equipment shall have no visual defects, and shall have high quality welds, assembly, and corrosion resistant finish.
- C. Qualified US Manufacturer. The manufacturer of the equipment shall have extensive experience in the production of such equipment, and the equipment shall be manufactured in the continental United States.
- D. Warranty. The circulation equipment shall be warranted to be free of defects in materials and workmanship for a period of 2 years.

1.04 SUBMITTALS

- A. The awarded Bidder shall provide [5] copies of the following documents. Upon acceptance of these documents by the Engineer, the Bidder will be issued a Notice to Proceed, and may then proceed to install the equipment.
 - 1. A qualification statement demonstrating compliance with Section 1.03.
 - 2. Shop drawings for the circulation equipment.
 - 3. Manufacturer's literature, illustrations and specification sheets defining materials of construction, dimensions, and weights.
 - 4. A copy of the warranty statement.
- B. Final submittals shall include:
 - 1. A complete installation, operation and maintenance manual.

1.05 FIELD SERVICES

- A. Safety. Installation personnel shall have received job-specific safety training on (a) Working over Water, (b) Boating Safety, (c) Disinfecting Procedures, (d) Confined Space Entry, (e) Fall Protection, and (f) DOT Compliance.

PART 2 - PRODUCT SPECIFICATIONS

2.01 MANUFACTURER

- A. Specified Equipment. The circulation equipment shall be manufactured by Medora Corporation of Dickinson, ND, or be a pre-approved alternative.
- B. Pre-approved Alternative(s). Alternatives to the specified equipment will be considered on the following basis only.
1. Ten (10) Days Before Bid. To offer equipment as a pre-approved alternative, written application from the alternative supplier shall be made to the Engineer at least 10 days in advance of the bid opening.
 2. No Material Difference in Quality of Equipment or in Vendor Support. The application should include:
 - a. A brief description of how the offered alternative does or does not meet each of the specifications in this document.
 - b. An analysis of how acceptance of the alternative equipment would likely affect the overall water quality goals of the project.
 - c. A statement of the science and support background of the supplier of the alternative equipment, so that the benefits and costs of the alternative equipment to the Owner can be estimated by the Engineer.
 3. Five (5) Days Notice to Bidders. If the alternative equipment is accepted by the Engineer, an informational addendum to these specifications shall be distributed by the Engineer to plan holders at least 5 days in advance of the bid opening.

2.02 PERFORMANCE AND FEATURES

- A. Units Required. To meet the project objectives, the following number of machines are required.

Quantity	Model	Tank or Reservoir
1	SolarBee GS-12 120V	Tank

- B. An unobstructed hatch opening of at least 12 Inch diameter (31cm) round is required for installation of the circulation equipment.

- C. Continuous Operation With 120VAC Power Supply. The circulation equipment shall operate continuously during day and night while connected to electric grid power.
- D. Stainless Steel Construction. The circulation equipment shall be constructed primarily of Type 316 stainless steel metal for strength and superior corrosion resistance.
- E. Motor. The circulation equipment shall be mechanically operated by a submersible motor that meets the following criteria.
 - 1. Direct Drive, with no gearbox and no lubrication maintenance required.
 - 2. Designed for submersible operation.
 - 3. Designed for Continuous Operation without overheating or compromising motor life expectancy.
 - 4. Motor to run directly off of 120 V AC power without stepdown transformer.
- G. SCADA Compatible. The controller shall have the option to add a SCADA Accessory Package including a motor current indicator in a 4-20mA analog output and remote on/off control via 24V DC relay.
- H. Low Elevation Intake: The circulation equipment shall be supplied with an intake capable of being positioned at the lowest elevation of the tank or reservoir floor. The intake level shall bring water into the circulation equipment at horizontal layer within 6 inches (15 cm) of the tank or reservoir floor.
- I. The circulation equipment shall be NSF / ANSI Standard 61 and NSF Annex G listed for safe contact with potable water.
- J. Contractor to furnish and install Motor Control Panels for all equipment installed, the panels are to be installed in the base of the tank on a 1/8" bent plate welded to the riser wall in the dry interior. Weld using 1/8" full fillet welds. Bolt the control panels using stainless steel or galvanized steel bolts. Repair the coating per section 09 97 13 and 09 97 13.10.
- K. Maintenance Requirements. The circulation equipment shall operate normally with the following maintenance features.
 - 1. No scheduled lubrication is required of any system components including motor.
 - 2. No spare parts shall be required to be kept on hand.

PART 3 EXECUTION

3.01 INSTALLATION

- A. The circulation equipment manufacturer shall have capability to provide Installation, Startup, and On-Site Water Testing Services to insure (a) proper machine spatial placement in the reservoir, and (b) proper intake depth setting.
- B. Contractor to provide conduit and electric service from the base of the tank (at the electric panel) up to the roof or utilize the existing conduit if available. All conduit to be galvanized and continuous from ground to roof with no openings.

- C. Contractor to supply coupling and junction box on the roof with water tight seal for electric line and connection point next to the roof hatch for retrieval chain and electric line.
- D. The device is to be installed per manufacturer's recommendations with a weather tight seal on the roof.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Department of Public Works
Category: Contract
Prepared By: Greg Kray
Department Head: Greg Kray

J.4

SCHEDULED

AGENDA ITEM (ID # 1232)

DOC ID: 1232 A

Approve and authorize the Mayor and Clerk to enter into a contract with Dixon Engineering, 1104 Third Avenue, Lake Odessa, MI 48849, for the amount not to exceed amount of \$8,575.00 to provide contract administration and inspection services for DPW project No. 14-001-W "Water Tower", Water Tower updates, repairs, and painting.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Department of Public Works
Category: Budget
Prepared By: Greg Kray
Department Head: Greg Kray

J.5

SCHEDULED

AGENDA ITEM (ID # 1231)

DOC ID: 1231

Approve and authorize the Controller to transfer \$131,071.25 from Water Unappropriated Surplus to DPW project 14-001-W "Water Tower": 400,000 Gallon Spheroid - Exterior Repaint, Dry Interior Spot Repainting, Miscellaneous Repairs, and Cathodic Protection System Installation.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Department of Public Works
Category: Contract
Prepared By: Greg Kray
Department Head: Greg Kray

J.6

SCHEDULED

AGENDA ITEM (ID # 1230)

DOC ID: 1230

Approve and authorize the Mayor and the Clerk to execute a contract with Industrial Painting Contractors to perform DPW project No. 14-001-W "Water Tower": 400,000 Gallon Spheroid - Exterior Repaint, Dry Interior Spot Repainting, Miscellaneous Repairs, and Cathodic Protection System Installation.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Mayor's Office
Category: Appointment
Prepared By: Rik Hayman
Department Head: Rik Hayman

J.7

SCHEDULED

AGENDA ITEM (ID # 1237)

DOC ID: 1237

Approve and authorize the Mayor's appointment of Sherry Adams, 4229 Hillary Circle, Burton, MI 48519, to the Park and Recreation Commission, with a term ending October 2017.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Mayor's Office
Category: Appointment
Prepared By: Rik Hayman
Department Head: Rik Hayman

J.8

SCHEDULED

AGENDA ITEM (ID # 1238)

DOC ID: 1238

Approve and authorize the Mayor's appointment of Robert E. Wilson, 4059 Grand Oaks Court, Burton, MI 48519, to the Park and Recreation Commission, with a term ending October 2017.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Department of Public Works
Category: Bid
Prepared By: Greg Kray
Department Head: Greg Kray

J.9

SCHEDULED

AGENDA ITEM (ID # 1234)

DOC ID: 1234 A

Approve and authorize the acceptance of the bid from Ahern Contracting, Inc., 25875 New Forest Court, Chesterfield, MI 48051 in the amount of \$33,745.00 to reconstruct the City Hall North (Admin) Parking Lot.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Department of Public Works
Category: Contract
Prepared By: Greg Kray
Department Head: Greg Kray

J.10

SCHEDULED

AGENDA ITEM (ID # 1236)

DOC ID: 1236 B

Approve and authorize the Mayor and Clerk to enter into a contract with Ahern Contracting, Inc., 25875 New Forest Court, Chesterfield, MI 48051, in the amount Of \$33,745.00 to reconstruct the City Hall North (Admin) Parking Lot.



Burton City Council
4303 S. Center Road
Burton, MI 48519

Meeting: 10/06/14 07:00 PM
Department: Clerk's Office
Category: Ordinance
Prepared By: Teresa M. Karsney
Department Head: Teresa M. Karsney

K.1

TABLED

AGENDA ITEM (ID # 1214)

DOC ID: 1214

**Approve and authorize Second Reading of an Ordinance
2014-9-144.08 amending Chapter 144 of The City of Burton
Code of Ordinances to define and prohibit the act being a
Disorderly Person and to provide penalties for the violation
thereof.**

HISTORY:

09/15/14 **City Council**

TABLED

Next: 10/06/14

ATTACHMENTS:

- disorderly ordinance burton 2014-9-144.08 (DOCX)

CITY OF BURTON
GENESEE COUNTY, MICHIGAN

ORDINANCE NO. 2014- 9 - 144.08

AN ORDINANCE AMENDING CHAPTER 144 OF
THE CITY OF BURTON CODE OF ORDINANCES
TO DEFINE AND PROHIBIT THE ACT BEING
A DISORDERLY PERSON AND TO PROVIDE
PENALTIES FOR THE VIOLATION THEREOF

THE CITY OF BURTON ORDAINS:

SECTION I

Section 144.08 of Chapter 144 of the Code of Ordinances of
the City of Burton is hereby amended by the redaction of
Section 144.08 and replacement with the following:

SECTION 144.08 DISORDERLY PERSON

- (A) It shall be unlawful hereunder for a person to be a
disorderly person.
- (B) A person is a Disorderly Person if any of the
following:
 - (1) A person creates or unlawfully engages in any
disturbance, fight or quarrel in any public
place, except in reasonable self-defense when
attacked without reasonable provocation or in
reasonable defense of another who was so
attacked;
 - (2) A person disturbs the public peace and quiet by
loud, boisterous or vulgar conduct or language;
 - (3) A person disturbs or unreasonably interferes
with any service of worship or any other
assembly gathered for lawful purposes;
 - (4) A person, without proper authority, conducts
himself or herself in any public place so as to
obstruct the free and uninterrupted passage of
the public.

- (5) A person wanders about the streets, alleys, or other public ways or places, or who is found in those places at late or unusual hours in the night without any visible or lawful business and not giving a satisfactory account of himself or herself;
- (6) A person is intoxicated in a public place and is either directly endangering the safety of another person or persons, or who is acting in a manner that causes a public disturbance;
- (7) A person engages in obscene or indecent conduct;
- (8) A person loiters in or about a police station, police headquarters building, county jail, hospital, court building, or other public building or place for the purpose of soliciting employment of legal services or the services of sureties upon criminal recognizances; or
- (9) A person loiters, loafs, wanders, stands, or remains idle in a public place so as to do either of the following:
 - (a) Obstruct a public street, highway, sidewalk, place or building by hindering, impeding or threatening to hinder or impede the free and uninterrupted passage of vehicles, traffic or pedestrians therein or thereon.
 - (b) Obstruct or interfere with the free and uninterrupted use of property or business lawfully conducted by anyone in, upon, facing or fronting any such public street, highway, sidewalk, place or building as to prevent the free and uninterrupted ingress or egress thereto or therefrom; and who refuses or fails forthwith to obey an

order by a police officer to cease such conduct and to move and disperse.

SECTION II

All other provisions of this Chapter shall be and are hereby ratified.

SECTION III

The violation of the terms of this Ordinance shall be punishable by up to 90 days in the county jail, a fine of not more than \$500.00, or both.

SECTION IV

This Ordinance shall be published in a newspaper of general circulation within the City of Burton, Genesee County, Michigan, and shall become effective 30 days after publication.

SECTION V

A copy of this Ordinance may be inspected at the City Hall, 4303 S. Center Road, Burton, Michigan, during regular business hours.

CITY OF BURTON,

By: PAULA ZELENKO, MAYOR

By: TERESA KARSNEY, CLERK

Ordinance introduced on: September 2, 2014
Second Reading:
Publication date:
Effective date: