

**ADDENDUM NO. 2  
TO SPECIFICATIONS AND PLANS FOR THE  
DIGESTER COVER REMOVAL PROJECT  
CITY OF CARO, MICHIGAN**

ISSUED: March 18, 2022

HRC Job. No. 20210539

This Addendum is issued prior to receipt of bids to provide for certain changes and clarifications to the Specifications and/or the Plans, as herein specified, and is hereby made a part of the Contract Documents and shall be taken into consideration in preparing the Proposal. All other conditions remain the same. The following lists the extent of this Addendum. Descriptions of the changes or clarifications are given within each heading. **Please note that the date and time of the bid opening is still scheduled for Tuesday, Thursday March 24, 2022 at 1:00 pm, at the City of Caro Municipal Building.**

**The Bidder shall acknowledge the receipt of this Addendum on the Bid form.** Failure to acknowledge Addendum No. 1 in the submission of bids may be justification for the bid proposal being rejected as non-responsive.

The following lists the extent of this Addendum. Description of the changes or clarifications are given within each heading:

**QUESTIONS**

**Question:** Please verify what fencing is assumed in the 100 LF bid item. Is there new permanent fence anticipated other than that necessary for the contractor to perform the work?

**Answer:** This line item is related to the note on Figure 1 regarding the removal and replacement of the site fencing. This line item includes permanent fencing only as shown on Figure 1. This fencing is detailed in the Chain Link Fence Detail shown on Figure 1.

**SPECIFICATIONS**

**Section 01950 Sequence of Construction and Special Project Requirements.**

Paragraph 1.5 A is revised as follows:

1.5 A. The weight of the cover is as much as 125,000-lbs. This is based on the equipment record drawings (as shown in Appendix B), including a safety factor.

This section is amended to include the following:

**1.7 HOT WORK**

A. The sludge digester produces explosive gas during normal operation. As such, the contractor

**Bloomfield Hills**  
555 Hulet Drive  
Bloomfield Hills, MI 48302  
248-454-6300

**Delhi Township**  
2101 Aurelius Rd.  
Suite 2A  
Holt, MI 48842  
517-694-7760

**Detroit**  
535 Griswold St.  
Buhl Building, Ste  
1650  
Detroit, MI 48226  
313-965-3330

**Grand Rapids**  
1925 Breton Road SE  
Suite 100  
Grand Rapids, MI  
49506  
616-454-4286

**Jackson**  
401 S. Mechanic St.  
Suite B  
Jackson, MI 49201  
517-292-1295

**Kalamazoo**  
834 King Highway  
Suite 107  
Kalamazoo, MI 49001  
269-665-2005

**Lansing**  
215 S. Washington  
SQ  
Suite D  
Lansing, MI 48933  
517-292-1488

shall be responsible to take necessary precautions to avoid injury to persons on site and to prevent damage to the City-owned facilities and property, particularly while conducting HOT WORK (such as welding, cutting, and similar spark-producing operations).

B. A coordination meeting shall be held with the Contractor, Owner and Engineer at least 7-days prior to conducting any hot work. At this meeting the Contractor shall present their hot work safety plan.

C. Hot work safety protocols must comply with all OSHA standards as well as NFPA 820.

E. The contractor shall be solely responsible for safety during hot work, and for verifying that their hot work safety plan is being followed correctly.

#### 1.8 TANK CLEANING

A. In preparation for the work, the City will empty the contents of the tank, leaving sludge remaining in the center cone of the tank to a depth of approximately 2-ft.

B. The Contractor shall be responsible for removing the remaining sludge, which can be pumped to a location on site as dictated by the Owner.

C. The Contractor shall be responsible for conducting any additional cleaning and preparation of the tank to render a suitable working environment as deemed necessary for removal purposes.

#### **Appendix B – Record Drawings, Primary Digester**

This appendix is amended to include the attached drawing.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Dan Royal, P.E.  
Project Engineer

ATTACHMENTS: Record drawing (1-sheet), pre-bid meeting minutes.

DRAWING NO. H118039-102

PFT FLOATING COVER SPECIFICATION - STEEL ROOF

( / ) 55'-0" DIAMETER DIGESTER

DESIGN

GENERAL

Floating cover is designed to receive a welded steel plate roof and is made up of fabricated assemblies which are piece marked for erection. A 1/4" bottom chord slope is maintained. All shop welding to be shield arc welding and conform to the latest standards of the American Welding Society.

MATERIALS

All structural steel used in the floating cover will comply with ASTM No. A-36 specifications as amended to date.

All plate is 1/4" minimum thickness.

LOADS AND STRESSES

All structural members are designed to provide for the floating cover to be self supporting when resting in an empty tank. Design loadings are as follows:

Dead load and roof load 39 psf  
 Live, snow and vacuum load 50 psf  
 Total 89 psf

Maximum allowable stresses shall not exceed the limiting stresses as set forth in AISC specifications for structural steel with 36,000 psi yield point (A36).

Because of possible corrosion, the ceiling plate is not considered as a structural member in the structural calculations. No structural members come in direct contact with the digester contents.

DESCRIPTION

- ( / 2 ) Rim plate assemblies, 1/4" thick material, furnished with splice connection.
- ( / 2 ) Truss assemblies. Furnished with bolted connections at the gas dome and rim plate.
- ( / 1 ) Gas dome.  
 Ceiling plate sections, 1/4" plate.  
 Roof plate sections, 1/4" plate.  
 Channel roof support purlins, ( / 1 ) outer ring.
- ( / 1 ) Pressure equalization unit.
- ( / 1 ) 30" I.D. entrance hatch with gas-tight bolted cover plate.
- ( / 1 ) 48" I.D. manhole with gas-tight bolted cover plate.
- ( / 2 ) 8" drain sumps located in outer ceiling plate sections.
- ( / 2 ) 3" capped air-tight access wells.
- ( / 2 ) 8" sampling wells with gas-tight, quick-opening covers. ( / 1 ) sampling well to stop at the ceiling plate and ( / 1 ) sampling well to extend to the bottom of the rim plate.
- ( / 6 ) Top roller assemblies located at alternate trusses.
- ( / 2 ) Bottom spring guide shoes located midway between trusses.
- ( / 1 ) 3" Combination pressure and vacuum relief assembly with flame cell of the unit weighted diaphragm type. Weights allow adjustment of the relief pressure in increments of 1/4" v.c.
- ( / 1 ) Gas pipe housing, 24" O.D.

FLOTATION WEIGHT

The installed weight of the floating cover including any required ballast is designed to provide a static gas pressure in excess of 3/4" v.c. A minimum 6" freeboard is maintained under all conditions to top rim angle.

ESTIMATED WEIGHT OF FLOATING COVER

Structural steel	<u>47365</u> *
<u>STEEL ROOF</u>	<u>23640</u> *
<u>CONCRETE INSULATION @ 37" (W.F.T. @ 2 1/2")</u>	<u>17615</u> *
<u>BALLAST &amp; BALLAST BEAMS</u>	<u>21222</u> *
<u>PEARTR &amp; APPURTENANCES</u>	<u>5500</u> *
	*
TOTAL	<u>115342</u> *
Equivalent weight	<u>9.51</u> * v.c.
PVR setting	<u>8 1/2</u> * v.c.

SURFACE PREPARATION AND PAINTING (SHOP COAT)

NO PAINT REQUIRED.

REFERENCE DRAWINGS:

- General Arrangement Floating Cover H118039-101
- Miscellaneous Details H118039-103
- Pressure-Vacuum Relief Details H118039-104
- GUIDE ANGLES H118039-105
- BALLAST SUPPORT BEAMS & BLOCKS H118039-106
- STRESS ANALYSIS H118039-107

REV. NO.	REV. DATE	DESCRIPTION OF REVISION	REV. BY	DATE

EST. NO. 70387		DIMENSIONS IN INCHES UNLESS SPECIFIED		MICRO FILMED
CUSTOMER: MIDWEST MECHANICAL CONTRACTORS	TOLERANCES UNLESS OTHERWISE SPECIFIED	TITLE: FLOATING COVER SPECIFICATION		
LOCATION: CARO, MI	TWO PLACE DEC. + .06	STRUCTURAL DIMENSIONS	1/16"	
ENGINEER: EDMONDS ENGR. INC. WADE TRIM ASSOC. INC.	THREE PLACE DEC. + .005	ANGULAR SURFACES	SEA ✓	
CONFIDENTIAL - ALL RIGHTS RESERVED	SCALE: FULL	DRAWING MADE FROM	741-40427	
<b>Envirox</b> a Reinard Company	WALKESSA, WI. 53187	DRY'N: EXM	PROJ. NO.: PGB	DATE ISSUED: 1/31/68
		CHK'D: JEM	APP'D: LL	PRICE CODE: 6454/01
			PART OR ORDER NO. H118039	DRAWING NO. H118039-102

**PRE-BID MEETING MINUTES  
DIGESTER COVER REMOVAL PROJECT  
CITY OF CARO, MICHIGAN**

Date: March 14, 2022  
Time: 1:00 pm  
Meeting Held: City of Caro Wastewater Treatment Plant

HRC Job No. 20210539

<u>Attendee Name</u>	<u>Representing</u>	<u>Phone No.</u>
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Attendees are shown on the attached sign-in sheet

**PURPOSE:** Pre-Bid Meeting

These minutes are intended to be a summary of those items discussed. Any corrections and/or comments should be noted to the writer as soon as possible.

1. Introductions and sign in
  - a. Those in attendance are shown on the attached sign in sheet
2. Project purpose
  - a. To remove the digester cover and prepare for inspection, which will be conducted under a separate contract
  - b. The digester cover is a 55-ft diameter floating steel cover installed in the mid-1980's
3. Special Requirements
  - a. Contractor responsible for site restoration with seed. Replacement of landscaping shrubs in the project area is not required.
  - b. Contractor responsible for acquiring SESC and Building permits.
4. Bid form
  - a. The project does include multiple line items, ensure that the form is fully completed when submitting bids
5. Document Distribution
  - a. Only plan holders will receive addendums.
6. Project Schedule
  - a. The schedule requirements in the specifications were reviewed. Contactors shall have 120 days to achieve substantial completion and 180-days for final completion
7. Questions are to be submitted to [droyal@hrcengr.com](mailto:droyal@hrcengr.com)
  - a. Questions received by Close of Business on Thursday March 17 will be answered via addendum. The engineer will make every effort to answer questions received after that deadline.
8. The site was made available to those in attendance for visual inspection

Respectfully submitted,

HUBBELL, ROTH & CLARK, INC.



Dan Royal, PE  
Project Engineer

DJR/djr

pc: All present  
HRC; File



### Meeting Sign-In Sheet

Project Name: Digester Cover Removal Date of Meeting: 3-14-22  
 Purpose of Meeting: Pre-bid meeting  
 For the Township/City/Village of: Caru, MI  
 Location of Meeting: W L T P

No.	Name	Agency/Company	Phone Number	Email
1	Dan Roghi	HRC	248-505-3243	DRoghi@HRCEngr.com
2	Kean Field	City of Caro	(989) 555-7611	KField@caro-city.net
3	Mike Puzle	McNelly Crane	984-6214055	Mike@mcnellycrane.com
4	Jonathan Vogel	Titus Welding Co	248-476-9366	jonathan@tituswelding.com
5	Mike Pula	Dobson	989-280-3977	mikepula@dobsonindustrial.com
6	Tony Solinski	Lee Machinery	248-904-7763	Anthony.Solinski@lee-machinery.com
7	ALAN SIMANSKI	FISHER	989-488-9138	ASIMANSKI@THEFISHER.CO
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