

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File

FROM: Clarence Jones, Project Manager

DATE: August 1, 2012

SUBJECT: State Revolving Fund (SRF) Project No. 5458-01
Allegan County-Kalamazoo Lake Sewer and Water Authority Project Plan
Green Project Reserve (GPR) Qualifying Costs

In the Part III Application for the above-referenced project, the accompanying bid information was used to determine the final qualifying GPR amounts to be included in the Order of Approval package.

The following items eligible for GPR qualification are from the bid proposals of the successful low bidders, (Franklin Holwerda Company and Parkway Electric & Communications, LLC) on the Allegan County Kalamazoo Lake Sewer and Water Authority Wastewater Treatment Facility and Lift Station improvements.

HVAC (Wastewater Treatment Facility)	\$ 9,000
HVAC (Wastewater Treatment Facility electrical)	\$ 1,250
Aerated Circulators (Lagoons)	\$ 97,000
Aerated Circulators (Lagoons Electrical)	<u>\$ 1,050</u>
GPR Total	\$108,300

Based on the information supplied by Fleis and Vandenbrink, installation of the new high efficiency HVAC will result in a 29 per cent annual reduction in electrical usage and the addition of the two solar powered lagoon circulators will reduce electrical energy usage by 20-25 per cent per year and provide up to \$29,000 annual savings in electrical costs.

Attached is a copy of the bid proposals. The total eligible construction costs for this project is \$4,017,738. Therefore the percentage of green construction is $\$108,300 \div \$4,017,738 = 0.03$. Since the SRF loan amount is \$4,765,000, the total green cost (construction and non-construction) is $\$4,765,000 \times 0.03 = \$142,950$.

Because 50 per cent of the GPR eligible costs qualify for "principal forgiveness," the maximum amount usable for this purpose is \$128,655 multiplied by 50 per cent = \$71,475.

Please note that the eligibility of the two GPR items was documented in a categorical case presentation sent July 5, 2011 by Mr. Carey Bond of Fleis & Vandenbrink Engineers of Grand Rapids on behalf of Allegan County for the Kalamazoo Lake Sewer and Water Authority. The categorical case presentation and supported by Mr. Marcus Tironi of the Kalamazoo District Office, Water Resources Division, in his memorandum dated on July 22, 2011.

Attachment

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: Clarence T. Jones, Environmental Quality Analyst
Revolving Loan Section, Resource Management Division

FROM: Marcus J. Tironi, P.E.
Kalamazoo District Office, Water Resources Division

DATE: July 22, 2011

SUBJECT: Kalamazoo Lake Sewer & Water Authority (KLSWA) SRF Project No. 5458-01

The purpose of this memo is to confirm the basis for determining that the KLSWA SRF Project No. 5458-01 qualifies for the Green Project Reserve (GPR) funding under Public Law 111-88. This project will implement improvements to its existing wastewater treatment facility (WWTF) and incorporate green components that provide environmental benefits.

Components qualifying for GPR: Substantial energy conservation is accomplished by using solar energy to displace 20-25% of the aeration requirement of the electrically powered aspirating aerators. In addition, the HVAC system qualifies for GPR monies as well since a premium efficient Energy Star-rated HVAC system is proposed which represents a nearly 30% reduction in energy consumption.

Per the KLSWA July 2011 Supplement, cost estimates for the GPR aerated lagoon improvements are \$171,600, and cost estimates for the high-efficiency HVAC system of the WWTF Building are \$138,000. However, actual costs that qualify for GPR will be determined after bids are received and the amount of the loan established. At that point, the percentage of this loan that is provided by Public Law 111-88 can be applied to the total amount spent on this portion of the project to determine the GRP.

Kalamazoo Lake Sewer and Water Authority, Allegan County
SRF Project No. 5458-01
Summary of Components Qualifying for Green Project Reserve
Revised July 2011 per the 2011 Supplement

Executive Summary and Overview of the Project

As presented in the SRF Project Plan, as Supplemented in 2011, the Kalamazoo Lake Sewer and Water Authority (KLSWA) has committed to implement improvements to its existing wastewater treatment facility (WWTF) and several lift stations throughout the collection system.

The recommended alternative incorporates several green components that will provide environmental benefits beyond those commonly achieved at other wastewater utilities. The recommended alternative is in keeping with the Authority's commitment to provide reliable wastewater service while pursuing innovative, environmentally protective, and cost effective technologies.

The recommended alternative exhibits environmental benefits through innovative design, to:

1. Reduce aeration electrical power consumption by over 20%, reducing greenhouse gas emissions accordingly.
2. Utilize energy efficient treatment technology.
3. Reduce power consumption by 20% at the WWTF Building and other buildings onsite.

Specifically, the Project is a "Categorical Eligible Project" under the "Energy Efficiency" guidelines where "Energy Efficiency" is the use of improved technologies and practices to reduce the energy consumption of water quality projects, use energy in a more efficient way, and/or produce/utilize renewable energy.

The KLSWA improvements project accomplishes one of the categories used in the energy efficiency definition, summarized as follows, and further detailed below and in the references.

Reduction in energy consumption:

The WWTF is designed to treat 1.0 million gallons per day of wastewater. In order to accomplish this, approximately 300-360 lbs of oxygen per hour (lb O₂/hr) need to be imparted to the water to support the microorganisms that perform the treatment. The aerated lagoons were designed to accomplish the required oxygen transfer using 16-20, 10-hp aspirating aerators. New treatment technology has been developed that utilizes solar energy to effectively mix large wastewater lagoons. The solar powered lagoon circulators bring water from low-dissolved oxygen layers near the bottom of the lagoon up to the surface where oxygen can be imparted, as illustrated in Figure 1.

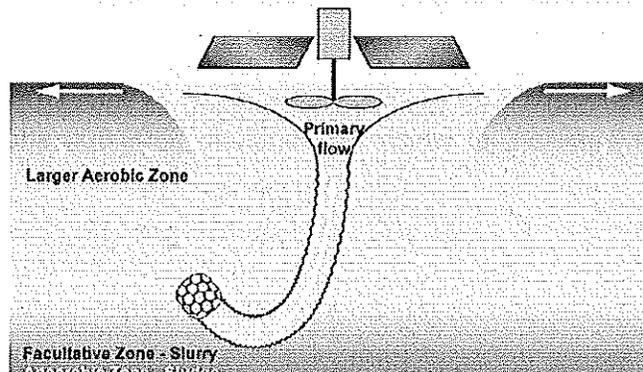


Figure 1 – Solar Powered Lagoon Circulator Flow Pattern Diagram¹

Use of two solar lagoon circulators at this WWTF can displace 20-25% of the required oxygen transfer and associated aspirating aerator motor load, thereby reducing the electrical usage a proportionate amount. This amount of aeration reductions is consistent with case studies.^{2,3,4} This corresponds to approximately 293,000 kW/year in energy savings, or \$29,300 annually at an electrical cost of \$0.10 per kWh. The payback period for the solar powered circulators and related non-construction project costs is just under 6 years.

The existing WWTF Building was built in the 1970s. The project, as supplemented in 2011, includes renovating the existing footprint and a small expansion (750 sq. ft) to the existing building. The building renovation and expansion would be designed to meet the current building code and standards, including more recent requirements for energy efficient doors and windows, roof, insulation, HVAC, and other building components.

Specifically, the HVAC system qualifies for Green Project Reserve monies because a premium efficient EnergyStar-rated HVAC system is proposed. Current standard gas fired rooftop HVAC systems have approximately 80% efficient heating capabilities and the cooling systems have an energy ratio (ER, ratio of net cooling capacity in btu per hr to the total electrical energy input in watts) of 10. High efficient models have a similar heating efficiency, but have a cooling system ER of 14⁵. A current standard rooftop model would utilize about 21,177 ccf of natural gas annually for the heating system and 22,093 kWh/yr for the cooling system. It is estimated that the high efficiency HVAC system would save approximately 6,300 kWh per year for the expanded SWBCSWA WWTF Building. This represents a 29% reduction in electrical usage. Premium efficiency HVAC systems have a slightly higher capital cost than standard efficiency models. The payback period on the increased equipment capital cost is estimated at 15 years.

This design qualifies as a *Categorical Project* with over 20 percent reduction in energy consumption, in conformance with the following definition from DNRE guidance:

"3.2-2 Projects that achieve a 20% reduction in energy consumption are categorically eligible for GPR. New POTW projects or capacity expansion projects should be designed to maximize energy efficiency and should select high efficiency premium motors and equipment where cost effective. Estimation of the energy efficiency is necessary for the project to be counted toward GPR. If a project achieves less than a 20% reduction in energy efficiency, then it may be justified using a business case."⁶

Components Qualifying for Green Project Reserve

The substantial energy conservation is accomplished by using solar energy (a free and renewable energy resource) to displace 20-25% of the aeration requirement of the electrically powered aspirating aerators. The pre-design budgetary project cost estimate for the green project reserve aerated lagoon improvements components totals \$171,600 including equipment, construction and non-construction project costs.

The pre-design budgetary cost estimate for the green project reserve component (high-efficiency HVAC system) of the WWTF Building renovation and expansion is estimated at approximately \$138,000. The total Project budget, as revised in the 2011 Supplement, is approximately \$4.3 million, of which we conclude \$309,600 should qualify for the Green Project Reserve.

References

¹ Solarbee, Inc. *Village of St. Henry Wastewater Treatment Plant Cuts Mechanical Aeration Time by 60% with Solar-Powered Circulation Technology*. www.solarbee.com

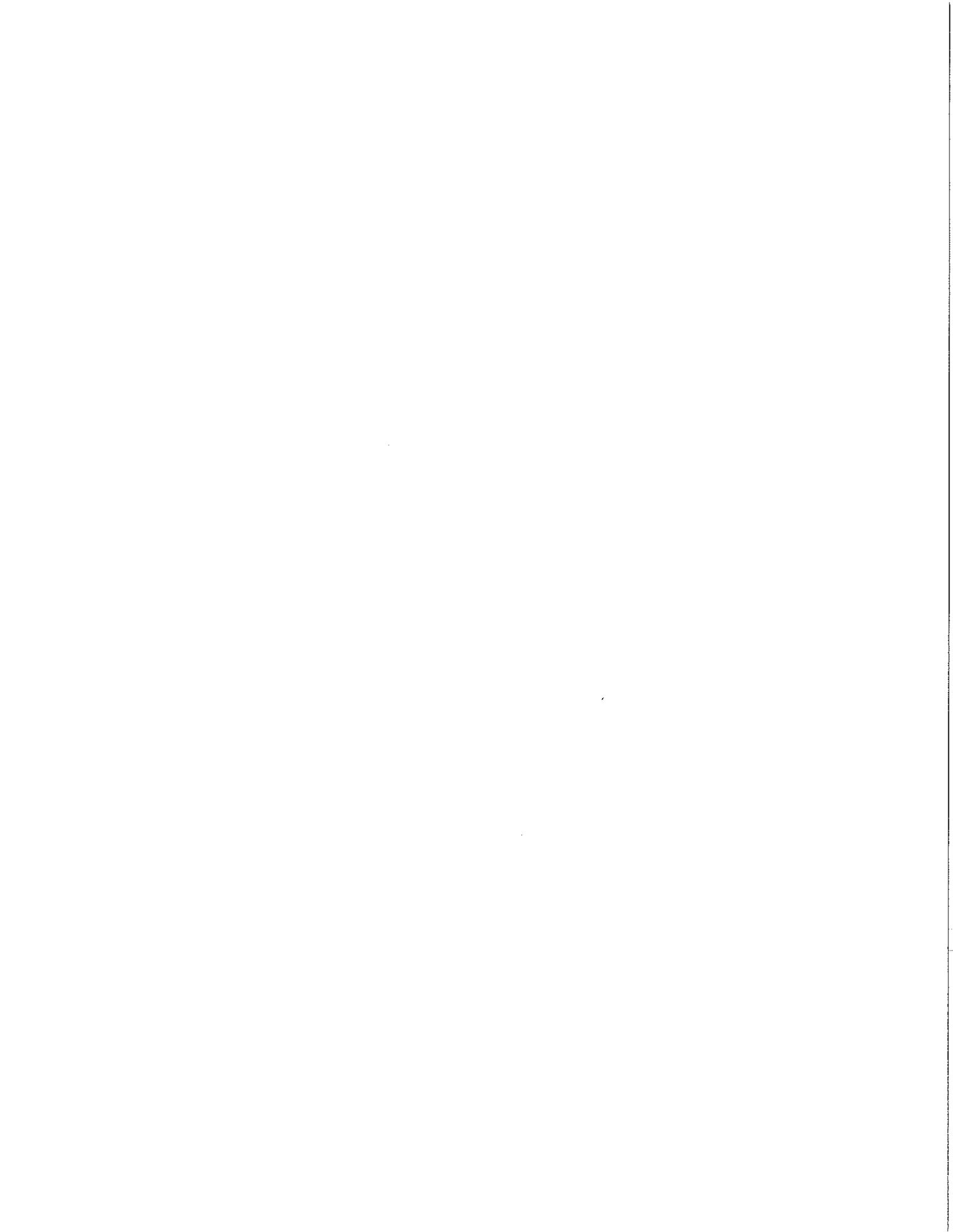
² Solarbee, Inc. *Summarized Case Study – Superior Wastewater Treatment System, Superior, WI.* May 24, 2010. www.solarbee.com

³ Solarbee, Inc. *Table 2 – Average Equivalent Mixing Horsepower Provided by Solarbee Mixers in Similar Installations*.

⁴ Robert Mowris & Associates. *Impact Evaluation Report: City of Gridley*. February 28, 2002.

⁵ Discussions with Quality Air Heating and Cooling

⁶ Michigan DNRE. *2010 Clean Water and Drinking Water State Revolving Fund: 20% Green Project Reserve, Guidance for Determining Project Eligibility*. April 21, 2010.



Contract 1

SECTION 00 41 00

BID FORM

PROJECT IDENTIFICATION:

ALLEGAN COUNTY BOARD OF PUBLIC WORKS
ON BEHALF OF
KALAMAZOO LAKE SEWER & WATER AUTHORITY
ALLEGAN COUNTY, MICHIGAN

Wastewater Treatment System
SRF Project No. 5458-01

Contract 1 - WWTF Improvements

ARTICLE 1 - BID RECIPIENT

- 1.01 This Bid is submitted to F & V Construction Management, Inc. on behalf of Kalamazoo Lake Sewer & Water Authority, 6449 Old Allegan Road, Saugatuck, MI 49453.
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with CM in the form included in the Bidding Documents 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 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER and CM.

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>
Addendum Number 1	7/10/12

- 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 Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that may be identified in

the Supplementary General Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that may be identified in the Supplementary General Conditions as containing reliable "technical data."

- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings that may be identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) 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; and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that 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 required, 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, CM and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. 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.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies 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 collusive 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 engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner or CM, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner and CM of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner or CM, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder may bid only one of the Contracts shown below. Each Contract will be awarded separately.

5.01.1 For Scope of Work for each Contract, see Section 00 52 00 – Agreement, Schedule A.

5.02 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Contract 1a: Excavation/Site Work

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Chem. Feed & Storage	LS	1	\$	\$
4	Lagoon Impvs-Valves & Aerators	LS	1	\$	\$
5	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1a:

_____ (\$ _____)
 (use words) (use figures)

Contract 1b: Concrete

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
3	Utility Building	LS	1	\$	\$
4	Clarifiers	LS	1	\$	\$
5	Chem. Feed & Storage	LS	1	\$	\$
6	Grit Channels & Contact Chamber				
6a	Repair Type A	LF	90	\$	\$
6b	Repair Type B	CF	20	\$	\$

6c	Repair Type C	CF	20	\$	\$
6d	Repair Type D	LF	30	\$	\$
6e	Repair Type E	CF	20	\$	\$
7	Lagoon Impvs-Valves & Aerators	LS	1	\$	\$
8	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1b:

_____ (\$ _____)
 (use words) (use figures)

Contract 1c: Masonry

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1c:

_____ (\$ _____)
 (use words) (use figures)

Contract 1d: General Trades

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Clarifiers	LS	1	\$	\$
4	Chem. Feed & Storage	LS	1	\$	\$
5	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1d:

_____ (\$ _____)
 (use words) (use figures)

Contract 1e: Roofing

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Lift Station #1	LS	1	\$	\$
4	Chem. Feed & Storage	LS	1	\$	\$
5	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID -- CONTRACT 1e:

_____ (\$ _____)
 (use words) (use figures)

Contract 1f: Flooring

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID -- CONTRACT 1f:

_____ (\$ _____)
 (use words) (use figures)

Contract 1g: Painting

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
3	Utility Building	LS	1	\$	\$
4	Clarifiers	LS	1	\$	\$
5	Chem. Feed & Storage	LS	1	\$	\$
6	Grit Channels & Contact Chamber	LS	1	\$	\$
7	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID -- CONTRACT 1g:

_____ (\$ _____)
 (use words) (use figures)

G. Alternate No. 7 – Water Meters A126 & Sewer Maintenance A127 Wall:
 Under the Base Bid the new walls will be constructed to create rooms A126 & A127; under this Deductive Alternate these walls will not be constructed and related mechanical and electrical will be modified accordingly to still accomplish these functions but without the new C.M. U. walls.

DEDUCT cost from Base Bid _____ (\$ _____)

H. Alternate No. 8 – Gate Monitoring System:
 Under the Base Bid the Digital Video Recording and Monitoring System (Part of Access Control System, 28 13 00), including but not limited to (2) 20" LCD, flat screen color monitors, video camera with zoom lens in weatherproof housing with wall mount bracket and digital recorder with all interconnecting cabling and installation will be installed: Under this Deductive Alternate the gate system will be installed but the recording and monitoring component(s) will not be.

DEDUCT cost from Base Bid _____ (\$ _____)

5.03 All specified cash allowances are included in the price(s) set forth above, and have been computed in accordance with Paragraph 4.7 of the General Conditions.

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

A. 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.

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 on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

6.03 TIME ALTERNATE:

If Bidder takes exception to the Contract Time(s) stipulated in the Agreement, Bidder is requested to stipulate below his proposed alternate time(s) and completion dates for performance of the Work.

6.04 SUBCONTRACTOR LISTING:

Bid is submitted on the basis of the use of the following Subcontractors:

<u>WORK ITEM/TRADE</u>	<u>FIRM</u>	<u>CITY</u>
<u>Painting</u>	<u>Kooi</u>	<u>Grand Rapids</u>
<u>TCC</u>	<u>Enertemp</u>	<u>Grand Rapids</u>

Insulation	IES	Grand Rapids
T & B	TES	Grand Rapids

Please note for each work item, if work is to be performed by Bidder or Subcontractor. If by Subcontractor, provide name and City for each Subcontractor. Failure to list Subcontractors with the Bid waives Bidder's rights to a change in Contract Time or Price or withdrawal of Bid and Bid Security, in the event OWNER or CM has reasonable objections to any Subcontractor.

If Subcontractors are not identified above, OWNER or CM shall have the right to reject any Subcontractor for reasonable cause. In this case, the apparent low Bidder shall engage a Subcontractor acceptable to OWNER and CM and waives the right to withdraw Bid and Bid Security, and further, waives right to a change in Contract Time or Price due to failure to list.

6.05 BID ALTERNATES:

- A. See SECTION 01 23 00 – ALTERNATES for a detailed description of each Alternate.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Project References;
- D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

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 the Supplementary General Conditions.

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

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

Name (typed or printed): _____

A Corporation

Corporation Name: Franklin Holwerda Company (SEAL)

State of Incorporation: Michigan

Type (General Business, Professional, Service, Limited Liability):

General Business

By: Micah Holt
(Signature -- attach evidence of authority to sign)

Name (typed or printed): Micah Holt

Title: Secretary/Treasurer
(CORPORATE SEAL)

Attest Laura French

Laura French, Admin Assist
Date of Qualification to do business in Michigan [State where Project is located] is 07 / 17 / 1947.

Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address 2509 29th Street, S.W.

Wyoming, MI 49519

Phone No. (616) 538-3231 Fax No. (616) 538-2797

E-mail joubnier@franklinholwerda.com

SUBMITTED on July 13, 2012

State Contractor License No. 7106527

END OF SECTION

Contract 1

SECTION 00 41 00

BID FORM

PROJECT IDENTIFICATION:

ALLEGAN COUNTY BOARD OF PUBLIC WORKS
ON BEHALF OF
KALAMAZOO LAKE SEWER & WATER AUTHORITY
ALLEGAN COUNTY, MICHIGAN

Wastewater Treatment System
SRF Project No. 6458-01.

Contract 1 – WWTF Improvements

ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to F & V Construction Management, Inc. on behalf of Kalamazoo Lake Sewer & Water Authority, 6449 Old Allegan Road, Saugatuck, MI 49453.
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with CM in the form included in the Bidding Documents 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 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER and CM.

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>
Addendum No. 1	July 10, 2012
_____	_____
_____	_____

- 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 Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that may be identified in

the Supplementary General Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that may be identified in the Supplementary General Conditions as containing reliable "technical data."

- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings that may be identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) 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; and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that 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 required, 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, CM and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. 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.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATION

4.01 Bidder certifies 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 collusive 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 engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner or CM, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner and CM of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner or CM, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder may bid only one of the Contracts shown below. Each Contract will be awarded separately.

5.01.1 For Scope of Work for each Contract, see Section 00 52 00 – Agreement, Schedule A.

5.02 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Contract 1a: Excavation/Site Work

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Chem. Feed & Storage	LS	1	\$	\$
4	Lagoon Impvs-Valves & Aerators	LS	1	\$	\$
5	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1a:

N. A.

(\$ _____)

(use words)

(use figures)

Contract 1b: Concrete

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
3	Utility Building	LS	1	\$	\$
4	Clarifiers	LS	1	\$	\$
6	Chem. Feed & Storage	LS	1	\$	\$
6	Gril Channels & Contact Chamber				
6a	Repair Type A	LF	90	\$	\$
6b	Repair Type B	CF	20	\$	\$

6c	Repair Type C	CF	20	\$	\$
6d	Repair Type D	LF	30	\$	\$
6e	Repair Type E	CF	20	\$	\$
7	Lagoon Impvs-Valves & Aerators	LS	1	\$	\$
8	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1b:

N.A. (\$ _____)
 (use words) (use figures)

Contract 1c: Masonry

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1c:

N.A. (\$ _____)
 (use words) (use figures)

Contract 1d: General Trades

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Clarifiers	LS	1	\$	\$
4	Chem. Feed & Storage	LS	1	\$	\$
5	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1d:

N.A. (\$ _____)
 (use words) (use figures)

Contract 1e: Roofing

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Lift Station #1	LS	1	\$	\$
4	Chem. Feed & Storage	LS	1	\$	\$
5	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1e:

N. A. (use words) (\$ (use figures))

Contract 1f: Flooring

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1f:

N. A. (use words) (\$ (use figures))

Contract 1g: Painting

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
3	Utility Building	LS	1	\$	\$
4	Clarifiers	LS	1	\$	\$
5	Chem. Feed & Storage	LS	1	\$	\$
6	Grit Channels & Contact Chamber	LS	1	\$	\$
7	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1g:

N. A. (use words) (\$ (use figures))

Contract 1h: Glass/Glazing

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	Utility Building	LS	1	\$	\$
3	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1h:

N.A. (\$ _____)
 (use words) (use figures)

Contract 1i: Process/Mechanical/Plumbing

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$
2	High-Eff. HVAC Components (GPR Item)	LS	1	\$	\$
3	Utility Building	LS	1	\$	\$
4	Clarifiers	LS	1	\$	\$
5	Chem. Feed & Storage	LS	1	\$	\$
6	Lagoon Impvs-Valves & Aerators	LS	1	\$	\$
7	Lagoon Mixers (GPR Item)	LS	1	\$	\$
8	Miscellaneous	LS	1	\$	\$

TOTAL BASE BID – CONTRACT 1i:

N.A. (\$ _____)
 (use words) (use figures)

Contract 1j: Electrical and Controls

Item No.	Work Area	Unit	Qty	Unit Price	Amount
1	WWTF Building	LS	1	\$	\$ 196,900.00
2	High-Eff. HVAC Components (GPR Item)	LS	1	\$	\$ 1,250.00
3	Utility Building	LS	1	\$	\$ 25,450.00
4	Clarifiers	LS	1	\$	\$ 1,500.00

5	Chem. Feed & Storage	LS	1	\$	\$ 11,200.00
6	Lagoon Impvs-Valves & Aerators	LS	1	\$	\$ 0
7	Lagoon Mixers (GPR Item)	LS	1	\$	\$ 1,050.00
8	Miscellaneous	LS	1	\$	\$ 33,100.00

TOTAL BASE BID - CONTRACT 1j:

Two Hundred Seventy Thousand Four Hundred Fifty (\$ 270,450.00)
 (use words) (use figures)

BID ALTERNATES

- A. Alternate No. 1 - Tanker Back-up Lane:
 Under Base Bid the tanker back-up lane will remain as is; under this Additive Alternate a new Crushed Concrete back-up lane, located northeast of east parking lot, will be constructed. See Site Plan.

ADD cost to Base Bid N.A. (\$ 0)

- B. Alternate No. 2 - New Pole Mounted Light Fixtures:
 Under the Base Bid the exterior site (pole) lighting will remain largely as is; under this Additive Alternate new light fixtures will be installed on the existing poles?

ADD cost to Base Bid Three Thousand Two Hundred Fifty (\$ 3,250.00)

- C. Alternate No. 3 - Electrical Components Existing Aerator Control Panels:
 Additive Alternate; replace electrical components in existing aerator control panels located around Lagoon #1 and #3. Refer to Electrical Drawing ES-1.

ADD cost to Base Bid Twenty Five Thousand Six Hundred (\$ 25,600.00)

- D. Alternate No. 4 - Existing Roof Re-Roof:
 Under the Base Bid the existing WWTF Building will be re-roofed as detailed and specified; under this Deductive Alternate the existing roof area of main building will not be Re-roofed, but will be repaired as outlined in the Alternate description, see specifications.

DEDUCT cost from Base Bid N.A. (\$ 0)

- E. Alternate No. 5 - Gravel-Stop/Fascia:
 Under the Base Bid the existing Gravel-Stop/Fascia will be re-clad with a new pre-finished metal system as detailed and specified; under this Deductive Alternate the existing fascia on the existing building will remain, but will be scraped, cleaned, and receive an opaque stain finish over all existing exposed wood. The New Addition will not be affected by these alternates and will receive the new pre-finished metal gravel-stop and fascia system.

DEDUCT cost from Base Bid N.A. (\$ 0)

- F. Alternate No. 6 - O.H. Door Electric Operators:
 Under Base Bid the unheated bays' overhead doors are to be manually operated; under this Additive Alternate these six (6) doors will receive the specified O.H. Door electric operators (see Doors: B101C, D & E).

Two Thousand Six Hundred Seventy Five
 ADD cost to Base Bid (\$ 2,675.00)

- G. Alternate No. 7 – Water Meters A126 & Sewer Maintenance A127 Wall:
Under the Base Bid the new walls will be constructed to create rooms A126 & A127; under this Deductive Alternate these walls will not be constructed and related mechanical and electrical will be modified accordingly to still accomplish these functions but without the new C.M. U. walls.

DEDUCT cost from Base Bid N.C. (\$ 0)

- H. Alternate No. 8 – Gate Monitoring System:
Under the Base Bid the Digital Video Recording and Monitoring System (Part of Access Control System, 28 13 00), including but not limited to (2) 20" LCD, flat screen color monitors, video camera with zoom lens in weatherproof housing with wall mount bracket and digital recorder with all interconnecting cabling and installation will be installed: Under this Deductive Alternate the gate system will be installed but the recording and monitoring component(s) will not be.

DEDUCT cost from Base Bid N.A. (\$ 0)

- 5.03 All specified cash allowances are included in the price(s) set forth above, and have been computed in accordance with Paragraph 4.7 of the General Conditions.
- 5.04 Unit Prices have been computed in accordance with Paragraph 11.03 of the General Conditions.
- A. 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.

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 on or before the dates or within the number of calendar days indicated in the Agreement.

- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

6.03 TIME ALTERNATE:

If Bidder takes exception to the Contract Time(s) stipulated in the Agreement, Bidder is requested to stipulate below his proposed alternate time(s) and completion dates for performance of the Work.

N.A.

6.04 SUBCONTRACTOR LISTING:

Bid is submitted on the basis of the use of the following Subcontractors:

<u>WORK ITEM/TRADE</u>	<u>FIRM</u>	<u>CITY</u>
<u>Trenching</u>	<u>Custom Trenching</u>	<u>Grand Rapids</u>

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please note for each work item, if work is to be performed by Bidder or Subcontractor. If by Subcontractor, provide name and City for each Subcontractor. Failure to list Subcontractors with the Bid waives Bidder's rights to a change in Contract Time or Price or withdrawal of Bid and Bid Security, in the event OWNER or CM has reasonable objections to any Subcontractor.

If Subcontractors are not identified above, OWNER or CM shall have the right to reject any Subcontractor for reasonable cause. In this case, the apparent low Bidder shall engage a Subcontractor acceptable to OWNER and CM and waives the right to withdraw Bid and Bid Security, and further, waives right to a change in Contract Time or Price due to failure to list.

6.06 BID ALTERNATES:

- A. See SECTION 01 23 00 – ALTERNATES for a detailed description of each Alternate.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Project References;
- D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

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 the Supplementary General Conditions.

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

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

Name (typed or printed): _____

A Corporation

Corporation Name: Parkway Electric & Communications, LLC (SEAL)

State of Incorporation: MI

Type (General Business, Professional, Service, Limited Liability):

Limited Liability

By: [Signature]
(Signature -- attach evidence of authority to sign)

Name (typed or printed): Arthur Barrios

Title: Project Manager
(CORPORATE SEAL)

Attest [Signature]

Date of Qualification to do business in MI (State where Project is located) is 12 / 3 / 2003.

Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address 11952 James Street
Holland, MI 49424

Phone No. 616-820-1125 Fax No. 616-392-6880

E-mail aj@parkwayelectric.com

SUBMITTED on July 13, 20 12.

State Contractor License No. 6110280.

END OF SECTION

