

# CONSTRUCTION DOCUMENTS PROJECT MANUAL

DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY AND TRANSPORTATION

PUBLIC WORKS ENGINEERING 1919 ALLIANT ENERGY CENTER WAY MADISON, WISCONSIN 53713

# **REQUEST FOR BIDS NO. 309014**

# STEWART LAKE HYDRAULIC DREDGE 3106 CTY. HWY. JG MT. HOREB, WI 53572

Pre-bid Conference: MONDAY, JUNE 15, 2009 / 1:00 P.M Location

Opening Date / Time: THURSDAY, JUNE 25, 2009 / 2:00 P.M.

Performance / Payment Bond: 100% OF CONTRACT AMOUNT

Location: ON SITE

Location: PUBLIC WORKS OFFICE

Bid Deposit: 5% OF BID AMOUNT

# FOR INFORMATION ON THIS REQUEST FOR BIDS, PLEASE CONTACT:

JOHN SCHRAUFNAGEL, PROJECT ENGINEER
DANE COUNTY DEPARTMENT OF PUBLIC WORKS,
HIGHWAY & TRANSPORTATION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN 53713
TELEPHONE NO.: 608/266-4798

FAX NO.: 608/267-1533

E-MAIL: SCHRAUFNAGEL@CO.DANE.WI.US

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## **LEGAL NOTICE**

### INVITATION TO BID

Dane County Public Works, Highway & Transportation Dept., 1919 Alliant Energy Center Way, Madison, WI 53713, will receive sealed Bids until:

# 2:00 P.M., THURSDAY, JUNE 25, 2009

# **REQUEST FOR BIDS NO. 309014**

STEWART LAKE HYDRAULIC DREDGE 3106 CTY. HWY. JG MT. HOREB, WI 53572

Dane County is inviting Bids for a 21,480 cubic yard hydraulic dredge on Stewart Lake in Mt. Horeb, WI. The project will involve constructing pipelines and pumps to transport dredge slurry to the elevated dewatering site. The work includes developing the dewatering site and returning decanted water back to Stewart Lake

Request for Bids package may be obtained at Dane County Public Works, Highway & Transportation Dept., 1919 Alliant Energy Center Way, Madison, WI 53713, by calling 608-266-4018, or downloading it from <a href="www.countyofdane.com/pwht/bid/logon.aspx">www.countyofdane.com/pwht/bid/logon.aspx</a>. Please call John Schraufnagel, Project Manager, at 608-266-4798, for any questions or additional information.

All Bidders wishing to submit Bids must be a registered vendor with Dane County & pay an annual registration fee & be prequalified as a Best Value Contractor. Complete Vendor Registration Form at <a href="https://www.danepurchasing.com">www.danepurchasing.com</a> or obtain one by calling 608-266-4131. Complete Prequalification Application for Contractors at <a href="https://www.co.dane.wi.us/pwht/pwengineer.aspx">www.co.dane.wi.us/pwht/pwengineer.aspx</a> or obtain one by calling 608-266-4018.

Bidders are strongly encouraged to attend a prebid conference on Monday, June 15, at 1:00 PM at Stewart Lake, 3106 Cty. Hwy. JG, Mt. Horeb, WI 53572.

PUBLISH: JUNE 8 & 15, 2009 - WISCONSIN STATE JOURNAL

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# 1. GENERAL

- A. Before submitting Bid, bidder shall thoroughly examine all Construction Documents. Successful Bidder shall be required to provide all the Work that is shown on Drawings, set forth in Specifications, or reasonably implied as necessary to complete Contract for this project.
- B. Bidder shall visit site to become acquainted with adjacent areas, means of approach to site, conditions of actual site and facilities for delivering, storing, placing, and handling of materials and equipment.
- C. Pre-bid meeting is scheduled on June 15, 2009 at 1:00 PM at Stewart Lake, 3106 CTY. HWY. JG, Mt. Horeb, WI 53572. Attendance by all bidders is optional, however bidders and subcontractors are strongly encouraged to attend.
- D. Questions about this bid document can be directed to the Project Engineer, John Schraufnagel, 608/266-4798, Schraufnagel@co.dane.wi.us.
- E. Failure to visit site or failure to examine any and all Construction Documents will in no way relieve successful Bidder from necessity of furnishing any necessary materials or equipment, or performing any work, that may be required to complete the Work in accordance with

Drawings and Specifications. Neglect of above requirements will not be accepted as reason for delay in the Work or additional compensation.

#### 2. DRAWINGS AND SPECIFICATIONS

- A. Drawings and Specifications that form part of this Contract, as stated in Article 1 of General Conditions of Contact, are enumerated in Document Index of these Construction Documents.
- B. Complete sets of Drawings and Specifications for all trades will be issued to all Bidders, irrespective of category of work to be bid on, in order that all Bidders may be familiar with work of other trades as they affect their bid.
- C. Complete sets can be mailed out if contractor does not have access to computer or printer.
- D. Bidder will need to pay all postage fees if hard copy is mailed out.

### 3. INTERPRETATION

- A. No verbal explanation or instructions will be given in regard to meaning of Drawings or Specifications before Bid Opening. Bidders shall bring inadequacies, omissions or conflicts to Owner or Engineer's attention at least ten (10) days before Bid Opening. Prompt clarification will be available to all bidders by Addendum.
- B. Failure to so request clarification or interpretation of Drawings and Specifications will not relieve successful Bidder of responsibility. Signing of Contract will be considered as implicitly denoting that Contractor has thorough understanding of scope of the Work and comprehension of Construction Documents.
- C. Owner or Engineer will not be responsible for verbal instructions.

### 4. QUALIFICATIONS OF BIDDER (CONTRACTOR AND SUBCONTRACTOR)

- A. Before award of Contract can be approved, Owner shall be satisfied that Bidder involved meets following requirements:
  - 1. Has completed at least one (1) project of at least fifty percent (50%) of size or value of Division of work being bid and type of work completed is similar to that being bid. If greater magnitude of experience is deemed necessary, other than size or value of work, such requirements will be described in appropriate section of Specifications.
  - 2. Maintains permanent place of business.
  - 3. Can be bonded for terms of proposed Contract.
  - 4. Has record of satisfactorily completing past projects and supplies list of five (5) most recent, similar projects, with architect or engineer's and owner's names, addresses and telephone numbers for each project. Submit to Public Works Project Engineer within three (3) days after Bid Opening. Criteria which will be considered in determining satisfactory completion of projects by bidder will include:
    - a) Completed contracts in accordance with drawings and specifications.

- b) Diligently pursued execution of work and completed contracts according to established time schedule unless Owner grants extensions.
- c) Fulfilled guarantee requirements of construction documents.
- d) Is not presently on ineligible list maintained by County's Department of Administration for noncompliance with equal employment opportunities and affirmative action requirements.
- e) Authorized to conduct business in Wisconsin. By submitting Bid, bidder warrants that it has: complied with all necessary requirements to do business in State of Wisconsin; that persons executing contract on its behalf are authorized to do so; and, if corporation, that name and address of bidder's registered agent are as set forth in Contract. Bidder shall notify Owner immediately, in writing, of any change in its registered agent, their address, and bidder's legal status. For partnership, term "registered agent" shall mean general partner.
- B. County's Public Works Project Engineer will make such investigations as are deemed necessary to determine ability of bidder to perform the Work, and bidder shall furnish to County's Public Works Project Engineer or designee all such information and data for this purpose as County's Public Works Project Engineer may request. Owner reserves right to reject Bid if evidence submitted by, or investigation of, bidder fails to satisfy Owner that bidder is responsible and qualified to carry out obligations of Contract and to complete the Work contemplated therein.

### 5. BID GUARANTEE

- A. Bank certified check, cashier's check or Bid Bond, payable to County in amount not less than five percent (5%) of maximum bid, shall accompany each Bid as guarantee that if Bid is accepted, Bidder will execute and return proposed Contract and Performance and Payment Bonds within ten (10) days after being notified of acceptance of Bid. Company issuing bonds must be licensed to do business in Wisconsin.
- B. Any bid, which is not accompanied by bid guarantee, will be considered "No Bid" and will not be read at Bid Opening.
- C. If successful Bidder so delivers Contract, Certificate of Insurance, and Performance and Payment Bonds, check will be returned to Bidder. In case Bidder fails to deliver such Contract, insurance, and bond, amount of bid guarantee will be forfeited to County as liquidated damages.
- D. All checks tendered as bid guarantee, except those of three lowest qualified, responsible bidders, will be returned to their makers within three (3) days after Bid Opening. All such retained checks will be returned immediately upon signing of Contract and Performance and Payment Bonds by successful Bidder.

## 6. WITHDRAWAL OF BIDS

- A. Bids may be withdrawn by written request received from bidder or authorized representative thereof prior to time fixed for Bid Opening, without prejudice to right of bidder to file new Bid. Withdrawn Bids will be returned unopened. Negligence on part of bidder in preparing their Bid confers no right for withdrawal of Bid after it has been opened.
- B. No Bid may be withdrawn for period of sixty (60) days after Bid Opening date.

C. If Bid contains error, omission or mistake, bidder may limit liability to amount of bidder's guarantee by giving written Notice of Intent not to execute Contract to Owner within seventy-two (72) hours of Bid Opening.

### 7. CONTRACT FORM

A. Sample copy of contract that successful Bidder will be required to enter into is included in these Construction Documents and bidders are required to familiarize themselves with all conditions contained therein.

# 8. CONTRACT INTERESTS BY COUNTY PUBLIC OFFICIALS

A. In accordance with Wisconsin Statute 946.13, county official may not bid for or enter into any contract involving receipts or disbursements of more than \$7,500.00 in a year, in which they have private pecuniary interest, direct or indirect if at same time they are authorized to take official action with respect to making of this Contract. Any contract entered into in violation of this Statute is void and County incurs no liability thereon. This subsection does not affect application and enforcement of Wisconsin Statute 946.13 by state prosecutors in criminal courts of this state.

### 9. EMERGING SMALL BUSINESS PROVISIONS

- A. Emerging Small Business Definition. For purposes of this provision, ESB is defined as:
  - 1. Independent business concern that has been in business minimum of one year;
  - 2. Business located in State of Wisconsin;
  - 3. Business comprised of less than 25 employees;
  - 4. Business must not have gross sales in excess of three million dollars (\$3,000,000.00) over past three years; and
  - 5. Business does not have history of failing to complete projects.
- B. Emerging Small Business (ESB) Involvement. Bidder shall make good faith effort to award minimum of ten percent (10%) of the Work to ESBs. Bidder shall submit report to Dane County Contract Compliance Officer within twenty-four (24) hours after Bid Opening demonstrating such efforts. Good faith efforts means significant contact with ESBs for purposes of soliciting bids from them. Failure to make or demonstrate good faith efforts will be grounds for disqualification.
- C. Emerging Small Business Report. Emerging Small Business Enterprise Report is to be submitted by Bidder in separate envelope marked "Emerging Small Business Report". This report is due by 2:00 p.m. following specified twenty-four (24) hours after Bid Opening. Bidder who fails to submit Emerging Small Business Report shall be deemed not responsive.
- D. **ESB Goal.** Ten percent (10%) ESB participation is goal of this project. ESB utilizations are shown as percentage of total Bid. If Bidder meets or exceeds specified goal, Bidder is only

required to submit Form A - Certification, and Form B - Involvement. Goal shall be met if Bidder qualifies as ESB.

- E. Report Contents. Following award of Contract, Bidder shall submit copies of executed contracts for all Emerging Small Businesses. Emerging Small Business Report shall consist of these:
  - 1. Form A Certification;
  - 2. Form B Involvement;
  - 3. Form C Contacts;
  - 4. Form D Certification Statement (if appropriate); and
  - 5. Supportive documentation (i.e., copies of correspondence, telephone logs, copies of advertisements).
- F. **ESB Listing.** Bidders will solicit bids from ESB listing provided by Dane County.
- G. **ESB Certification.** All contractors, subcontractors and suppliers seeking ESB certification must complete and submit Emerging Small Business Certification Application to Dane County Contract Compliance Program.
- H. Certification Statement. If ESB firm has not been certified by County as ESB prior to submittal of this Bid, ESB Report cannot be used to fulfill ESB goal for this project unless firm provides "Form D Certification Statement". Certification statement must be completed and signed by ESB firm.
- I. Questions. Questions concerning Emerging Small Business provisions shall be directed to:

Dane County Contract Compliance Officer City-County Building, Room 421 210 Martin Luther King, Jr. Blvd. Madison, WI 53703 608/266-5623

- J. Substituting ESBs. In event of any significant changes in subcontract arrangements or if need arises to substitute ESBs, Bidder shall report such proposed changes to Contract Compliance Officer to making any official changes and request authorization to substitute ESB firm. Bidder further agrees to make every possible effort to replace ESB firm with another qualified ESB firm.
- K. Good Faith Efforts. Good faith efforts can be demonstrated by meeting all of these obligations:
  - 1. Selecting portions of the Work to be performed by ESBs in order to increase likelihood of meeting ESB goal including, where appropriate, breaking down Contract into smaller units to facilitate ESB participation.
  - 2. Advertising in general circulation, trade associations, and women / minority focus media concerning subcontracting opportunities.
  - 3. Providing written notices to reasonable number of specific ESBs that their interest in Contract was being solicited in sufficient time to allow ESBs to participate effectively.

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- 4. Following up on initial solicitations of interest by contacting ESBs within five (5) working days prior to Bid Opening date to determine with certainty whether ESB were interested, to allow ESBs to prepare bids.
- 5. Providing interested ESB with adequate information about Drawings, Specifications and requirements of Contract.
- 6. Using services of available minority, women and small business organizations and other organizations that provide assistance in recruitment of MBEs / WBEs / ESBs.
- 7. Negotiating in good faith with interested ESBs, not rejecting ESBs as unqualified without sound reason based on thorough investigation of their capabilities.
- 8. Submitting required project reports and accompanying documents to County's Contract Compliance Officer within twenty-four (24) hours after Bid Opening.
- L. **Appeals Disqualification of Bid.** Bidder who is disqualified may appeal to Public Works & Transportation Committee and Equal Opportunity Commission.

### 10. METHOD OF AWARD - RESERVATIONS

- A. Following will be basis of award of Contract, providing cost does not exceed amount of funds then estimated by County as available to finance Contract(s):
  - 1. Lowest dollar amount submitted by qualified responsible bidder on Base Bid for all work comprising project, combined with such additive Owner accepted alternates.
  - 2. Owner reserves right to reject all bids or any bid, to waive any informality in any bid, and to accept any bid that will best serve interests of County.
  - 3. Unit Prices and Informational Bids will not be considered in establishing low bidder.

### 11. SECURITY FOR PERFORMANCE AND PAYMENTS

- A. Simultaneous with delivery of signed Contract, Bidder shall be required to furnish Performance and Payment Bonds as specified in Article 29 of General Conditions of Contract, "Contract Security." Surety Company shall be licensed to do business in Wisconsin. Performance and Payment Bonds must be dated same date or subsequent to date of Contract. Performance and Payment Bonds must emulate information in Sample Performance and Payment Bonds in Construction Documents.
- B. Provide certified copy of power of attorney from Surety Company showing that agent who signs Bond has power of attorney to sign for Surety Company. Secretary or Assistant Secretary of company must sign this certification, not attorney-in-fact. Certification must bear same or later date as Bond. Power of Attorney must emulate model power of attorney information detailed in Sample Performance and Payment Bonds.
- C. If Bidder is partnership or joint venture, State certified list, providing names of individuals constituting partnership or joint venture must be furnished. Contract itself may be signed by

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- one partner of partnership, or one partner of each firm comprising joint venture, but Performance and Payment Bonds must be signed by all partners.
- D. If Bidder is a corporation, it is necessary that current certified copy of resolution or other official act of directors of corporation be submitted showing that person who signs Contract is authorized to sign contracts for corporation. It is also necessary that corporate seal be affixed to resolution, contract, and performance and payment bonds. If your corporation has no seal, it is required that above documents include statement or notation to effect that corporation has no seal.

### 12. TAXES

- A. Bidder shall include in Bid, all Sales, Consumer, Use and other similar taxes required by law.
- B. In accordance with Wisconsin Statute 71.80(16)(a), successful nonresident bidder, whether incorporated or not, and not otherwise regularly engaged in business in this state, shall file surety bond with State of Wisconsin Department of Revenue payable to Department of Revenue, to guarantee payment of income taxes, required unemployment compensation contributions, sales and use taxes and income taxes withheld from wages of employees, together with any penalties and interest thereon. Amount of bond shall be three percent (3%) of Contract or subcontract price on all contracts of \$50,000 or more.

### 13. SUBMISSION OF BIDS

- A. All Bids shall be submitted on standard Bid Form bound herein and only Bids that are made on this Bid Form will be considered. Entire Bid Form and other supporting documents, if any, shall be removed or copied from Construction Documents, filled out, and submitted in manner specified hereinafter. Submit completed Bid Bond with Bid as well.
- B. No bids for any subdivision or any sub-classification of this Work, except as indicated, will be accepted. Any conditional Bid, amendment to Bid Form or appended item thereto, or inclusion of any correspondence, written or printed matter, or details of any nature other than that specifically called for, which would alter any essential provision of Construction Documents, or require consideration of unsolicited material or data in determining award of Contract, will disqualify Bid. Telecommunication alterations to Bid will not be accepted.
- C. Bidders must submit single Bid for all the Work.
- D. Bid amounts shall be inserted in words and in figures in spaces provided on Bid Form; in case of conflict, written word amounts will govern.
- E. Addenda issued after Bid Letting shall become part of Construction Documents. Bidders shall acknowledge receipt of such addenda in appropriate space provided on Bid Form. Bid will be rejected if receipt of any particular addendum applicable to award of Contract has not been acknowledged on Bid Form.
- F. Bids shall be signed, placed in envelope, sealed and delivered before time of closing to place designated in Invitation to Bid, and identified with project name, bid number, location, category of work being bid upon, Bid Opening date, name and address of bidder.

- G. Bidder shall be responsible for sealed Bid being delivered to place designated for Bid Opening on or before date and time specified. Bids received after time of closing will be rejected and returned to bidder unopened.
- H. Bid will be considered invalid and will be rejected if bidder has not signed it.
- I. Faxed Bids will not be accepted.
- J. Bidder's organization shall submit completed with Bid, Fair Labor Practices Certification form, included in these Construction Documents.

## 14. SUBCONTRACTOR LISTING

A. Bidders shall be required to submit list of major subcontractors.

# 15. ALTERNATE BIDS

- A. Bidder shall carefully read requests for Alternate Bids, and thoroughly examine Drawings and Specifications to determine extent various changes and conditions will affect Bid.
- B. Space is provided in Bid Form for requested Alternate Bids. Failure to submit bid for any requested Alternate Bids may result in rejection of entire Bid.
- C. Bidder shall state amount to be added / subtracted to Base Bid for providing alternates, including all incidentals, omissions, additions, and adjustments as may be necessary or required by such changes. If there is no difference in price, Bidder shall state, "No Change".
- D. Descriptions of requested Alternate Bids are as set forth in Construction Documents.

### 16. INFORMATIONAL BIDS

- A. Bidder shall state amount that is included in Base Bid for all equipment, materials and labor required to complete the Work described. Informational bids are amounts requested for accounting purposes and for allocation of funds only. It is not intended to omit any of the Work described or related items from this project.
- B. Description of requested Informational Bids, if any, is as set forth in Construction Documents.

### 17. UNIT PRICES

- A. Provide unit prices where requested on Bid Form. Unit prices will include all costs for materials, labor, insurance, taxes, overhead and profit necessary to perform specified work. Estimated quantities are approximate only. Payment will be based upon actual quantities placed, provided or installed. Failure to provide requested unit prices may result in rejection of entire Bid.
- B. Owner reserves right to accept or reject any unit prices as given in Bid.

C. Bidder shall refer to Bid Form and applicable specification section to determine basis of unit measure and detailed information related to each unit price item requested.

### 18. COMMENCEMENT AND COMPLETION

- A. Successful Bidder shall commence work when schedule and weather permit, but no later than stated in Bid Form. Contractor shall pursue the Work regularly and continuously at reasonable rate to insure completion of the Work, dredging must be completed be 10-15-09 and project must be completed by 12-31-09.
- B. Should it be found impossible to complete the Work on or before time specified for completion, written request may be submitted for extension of time setting forth reasons believed to justify granting of such request. Refer to Article 20 of General Conditions of Contract, titled "Time for Completion." DNR has a regulation that is part of the permit that no dredging can take place after 10-15-09.

### 19. WORK BY OWNER

- A. This work will be accomplished by Owner or will be let under separate contracts and will not be included under this Contract:
  - 1. Disposal of lake bottom debris that is stored at designate location by contractor.
  - 2. New seeding and mulch. Contractor will be responsible for damage to staging sites or areas adjacent to projects.
  - 3. Permits.
  - 4. Before and after measurements if this alternate is accepted.
  - 5. Hazardous Materials.

### 20. SPECIAL HAZARDS COVERAGE

A. Contractor is not responsible for removal or disposal of hazardous materials.

# FORM A

# DANE COUNTY EMERGING SMALL BUSINESS REPORT - CERTIFICATION

In accordance with General Conditions of Contract, submit this Emerging Small Business Report within 24 hours after Bid Opening.

PROJECT NAME:	
BID NO.:	BID OPENING DATE:
BIDDER INFORMATION	
COMPANY NAME:	
ADDRESS:	
TELEPHONE NO.:	
CONTACT PERSON:	

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### FORM B

# DANE COUNTY Page of EMERGING SMALL BUSINESS REPORT - INVOLVEMENT (Copy this Form as necessary to provide complete information) COMPANY NAME: \_\_\_\_\_\_ PROJECT NAME: BID NO.: ESB NAME: \_\_\_\_\_CONTACT PERSON: ADDRESS: \_\_\_\_\_\_PHONE NO.: \_\_\_\_ CITY: \_\_\_\_\_\_ STATE: \_\_\_\_ ZIP: \_\_\_\_ ESB NAME: \_\_\_\_\_ CONTACT PERSON: \_\_\_\_ ADDRESS: PHONE NO.: CITY: \_\_\_\_\_ STATE: \_\_\_\_ ZIP: \_\_\_\_ ESB NAME: \_\_\_\_\_ CONTACT PERSON: \_\_\_\_ ADDRESS: PHONE NO.: CITY: \_\_\_\_\_ STATE: \_\_\_\_ ZIP: \_\_\_\_

#### FORM C

# DANE COUNTY Page \_\_\_ of \_\_\_ **EMERGING SMALL BUSINESS REPORT - CONTACTS** (Copy this Form as necessary to provide complete information) COMPANY NAME: \_\_\_\_\_ PROJECT NAME: \_\_\_\_\_ BID NO.: DID DID YOU ESB FIRM NAME PERSON ESB ACCEPT REASON FOR \_\_\_\_ DATE \_\_\_\_ CONTACTED\_\_\_\_ BID? BID? REJECTION CONTACTED 1) \_\_\_\_\_\_ 2) \_\_\_\_\_\_ 3) \_\_\_\_\_\_ 5) \_\_\_\_\_\_

# FORM D

# DANE COUNTY EMERGING SMALL BUSINESS REPORT - CERTIFICATION STATEMENT

I, Name	Title	of
Company	certify to best of my	y knowledge and
belief that this business meets Er	merging Small Business definition as indicated in	n Article 9 and
that information contained in this	s Emerging Small Business Report is true and co	rrect.
Bidder's Signature	Date	

#### **SECTION 00 41 13**

# **BID FORM**

BID NO. 309014

PROJECT: STEWART LAKE HYDRAULIC DREDGE

TO:

DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY &

TRANSPORTATION PROJECT ENGINEER 1919 ALLIANT ENERGY CENTER WAY

MADISON, WISCONSIN 53713

### BASE BID - LUMP SUM AND UNIT PRICING

Dane County is inviting Bids for a 21,480 cubic yard hydraulic dredge on Stewart Lake in Mt. Horeb, WI. The project will involve constructing pipelines and pumps to transport dredge slurry to the elevated dewatering site. The work includes developing the dewatering site and returning decanted water back to Stewart Lake. The undersigned, having examined the site where the Work is to be executed and having become familiar with local conditions affecting the cost of the Work and having carefully examined the Drawings and Specifications, all other Construction Documents and Addenda thereto prepared by Foth Engineering and Dane County Department of Public Works, Highway & Transportation hereby agrees to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the entire Work, as specified in the Construction Documents, for the Base Bid lump sum and unit pricing as follows:

	SCHEDULE "A"					
No.	Description	Unit	Estimated Quantity	Uni	t Price	Price
1	Mobilization and Demobilization	LS	1	\$	/EA	\$
2	Stewart Lake Site Access Preparation	LS	1	\$	/EA	\$
3	Dewatering Site Topsoil Removal and Stockpiling	LS	1	\$	/EA	\$
	Dewatering Site Development Dewatering Site/Effluent Discharge System Construction (Check Only One Proposed Method) Dewatering Cell Geotextile Tubes	LS	1	\$	/EA	\$
5	Dredging Sediments	CY	21,480	\$	/EA	\$
6	Sediment Dewatering Operations	CY	21,480	\$	/EA	\$
7A	Mobilize Debris Removal Equipment	LS	1	\$	/EA	\$
7B	Oversize Material (Debris) Removal and Disposal	Tons	5	\$	/EA	\$
8	Sediment Management and Stockpiling	CY	21,480	\$	/EA	\$

Total.	Φ		
	Numeric Price		
		and	/100 Dollars

Bid No. 309014 ver. 04/08

Tatal. ¢

### DEDUCTIVE BID ITEM ALTERNATES

The Owner may perform Bid Item 3, Unit Price Bid Schedule "A", thereby eliminating this bid item from the bid.

No.	Description	Unit	Estimated Quantity	Price
Α	Dewatering Site Topsoil Removal and Stockpiling	LS	1	\$

The Owner may decide to dredge less than the stated quantity in Bid Item 5., Unit Price Schedule A. If Owner selects this Deductive Alternate B, this Alternate B Bid Item will replace Bid Item 5. Provide Unit Price with Bid that is valid for estimate quantity range. Actual quantity to be determined as part of Bid Award.

No.	Description	Unit	Estimated Quantity	Unit Price
В	Dredging Sediments (12,000 cy – 17,183 cy)	CY	1	\$/EA

In the base bid (included in Bid Item 1), Contractor is responsible for all pre and post QA Hydrographic Survey measurements with owner/engineer supervision and inspection. If the owner selects Deductive Alternate C, others will do this work.

No.	Description	Unit	Estimated Quantity	Price
С	Hydrographic Survey measurements done by others, deduct	LS	1	\$

Receipt of the following addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No(s).	through	
Dated		

Dane County Public Works must have this project completed by October 15, 2009. Assuming this Work can be started by July 20, 2009, what dates can you commence and complete this job?

Commencement Date:	Completion Date:
	(final, not substantial)

(Name of Corporation, Partnership or Person submitting Bid) Select one of the following: 1. A corporation organized and existing under the laws of the State of \_\_\_\_\_\_, or 2. A partnership consisting of \_\_\_\_\_\_, or 3. A person conducting business as \_\_\_\_\_\_\_, Of the City, Village, or Town of \_\_\_\_\_\_ of the State of \_\_\_\_\_ I have examined and carefully prepared this Bid from the associated Construction Documents and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Bid in (its) (their) (my) behalf; and that the said statements are true and correct. In signing this Bid, we also certify that we have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a Bid; that this Bid has been independently arrived at without collusion with any other bidder, competitor, or potential competitor; that this Bid has not been knowingly disclosed prior to the opening of Bids to another bidder or competitor; that the above statement is accurate under penalty of perjury. SIGNATURE: \_\_\_\_\_ (Bid is invalid without signature) Print Name: Date: Telephone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_ Email Address: Contact Person: BID CHECK LIST: These items must be included with Bid or completed before bidding ☐ Bid Form ☐ Bid Bond ☐ Fair Labor Practices Certification □Vendor Registration

I hereby certify that all statements herein are made on behalf of:

Bid No. 309014 ver. 04/08

## DANE COUNTY VENDOR REGISTRATION PROGRAM

All bidders / proposers wishing to submit a bid / proposal must be a registered vendor with Dane County & pay an annual registration fee. Complete a Vendor Registration Form at www.danepurchasing.com, or obtain one by calling 608/266-4131.

# **EQUAL BENEFITS REQUIREMENT**

By submitting a Bid, the contractor acknowledges that a condition of this contract is to provide equal benefits as required by Dane County Code of Ordinances Chapter 25.016. Contractor shall provide equal benefits as required by that Ordinance to all required employees during the term of the contract. For more information:

www.danepurchasing.com/partner benefit.aspx

Bid No. 309014 ver. 04/08

# **SECTION 00 52 14**

# **COUNTY OF DANE**

# **PUBLIC WORKS CONTRACT**

Contract No. \_\_\_\_\_\_ Bid No. <u>309014</u>

Authority: Res, 2009-10
THIS CONTRACT, made and entered into as of the date by which authorized representatives of both parties have affixed their signatures, by and between the County of Dane (hereafter referred to as "COUNTY") and (hereafter, "CONTRACTOR"), and
WITNESSETH:
WHEREAS, COUNTY, whose address is c/o Associate Public Works Director, 1919 Alliant Energy Center Way, Madison, WI-53713, desires to have CONTRACTOR provide construction services for Stewart Lake Dredge ("the Project"); and WHEREAS, CONTRACTOR, whose address is is able and willing to construct the Project in accordance with the Construction Documents,  NOW, THEREFORE, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which is acknowledged by each party for itself, COUNTY and CONTRACTOR do agree as follows:
1. CONTRACTOR agrees to construct, for the price of \$ the Project and at the CONTRACTOR'S own proper cost and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence labor, insurance, and other accessories and services necessary to complete the Project in accordance with the conditions and prices stated in the Bid Form, General Conditions of Contract, the drawings which include all maps, plats, plans, and other drawings and printed or written explanatory matter thereof, and the specifications therefore as prepared by (hereinafter referred to as "the Architect / Engineer"), and as enumerated in the Project Manual Document Index, all of which are made a part hereof and collectively evidence and constitute the
<ol> <li>COUNTY agrees to pay the CONTRACTOR in current funds for the performance of the Contract subject to additions and deductions, as provided in the [General Conditions of Contract Conditions of Contract], and to make payments on account thereof as provided in Article entitled, "Payments to Contractor" of the General Conditions of Contract.</li> <li>During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure</li> </ol>
5. During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure

equal employment opportunities. The CONTRACTOR agrees in accordance with Wisconsin

Sample Public Works Contract

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RFB No. 309014

rev. 06/09

Statute 111.321 and Chapter 19 of the Dane County Code of Ordinances not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs. Such equal opportunity shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation. CONTRACTOR agrees to post in conspicuous places, available to all employees and applicants for employment, notices setting forth the provisions of this paragraph.

- 4. CONTRACTOR shall file an Affirmative Action Plan with the Dane County Contract Compliance Officer in accord with Chapter 19 of the Dane County Code of Ordinances. CONTRACTOR must file such plan within fifteen (15) days of the effective date of this Contract. During the term of this Contract CONTRACTOR shall also provide copies of all announcements of employment opportunities to COUNTY'S Contract Compliance Office, and shall report annually the number of persons, by race, ethnicity, gender, and disability status, which apply for employment and, similarly classified, the number hired and number rejected.
- 5. During the term of this Contract, all solicitations for employment placed on CONTRACTOR'S behalf shall include a statement to the effect that CONTRACTOR is an "Equal Opportunity Employer."
- 6. CONTRACTOR agrees to comply with provisions of Chapter 25.016 of the Dane County Code of Ordinances, which pertains to domestic partnership benefits.
- 7. CONTRACTOR agrees to furnish all information and reports required by COUNTY'S Contract Compliance Officer as the same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and the provisions of this Contract.
- **8.** CONTRACTOR agrees that all persons employed by CONTRACTOR or any subcontractor shall be paid no less than the minimum wage established under Chapter 40, Subchapter II, Dane County Code of Ordinances. CONTRACTOR agrees to abide by and comply with the provisions of Chapter 40, Subchapter II of the Dane County Code of Ordinances, and said Subchapter is fully incorporated herein by reference.
- 9. This Contract is intended to be a Contract solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties including, but not limited to, employees of either of the parties.
- 10. The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that the express terms of this Contract shall not be amended in any fashion except in writing, executed by both parties.

IN WITNESS WHEREOF, COUNTY and CONTRACTOR, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

\*\*\*\*\*

# FOR CONTRACTOR:

Signature	Date
Printed or Typed Name and Title	
Signature	Date
NOTE: If CONTRACTOR is a corporation, Secretary Regulations, unincorporated entities are required to pro Employer Number in order to receive payment for serving the Contract is not valid or effectual for any purpose undesignated below, and no work is authorized until the Coproceed by COUNTY'S Associate Public Works Direct	ovide either their Social Security of the ces rendered.  Intil approved by the appropriate authority CONTRACTOR has been given notice to
FOR COUNTY	Y:
Kathleen M. Falk, County Executive	Date
Robert Ohlsen, County Clerk	Date

# **SECTION 00 72 14**

# GENERAL CONDITIONS OF CONTRACT

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### 1. CONSTRUCTION DOCUMENTS

- A. Construction Documents, listed in Table of Contents of this Specification volume shall form part of this Contract and provisions of Construction Documents shall be as binding upon parties as if they were fully set forth in Contract itself.
- B. These shall also be considered as part of Construction Documents: Addenda, including additions and modifications incorporated in such addenda before execution of Contract; requests for information; construction bulletins; change orders; and written interpretations by Architect / Engineer or Public Works Project Engineer that are made after execution of Contract.
- C. Construction Documents are complementary, and what is required by one shall be as binding as if required by all. Intent of Construction Documents is to include all labor, materials and equipment necessary for proper execution of the Work.

# 2. **DEFINITIONS**

- A. These terms as used in this Contract are respectively defined as follows:
  - 1. All uses of term "County" in Construction Documents shall mean Dane County.
  - 2. All uses of term "Department" in Construction Documents shall mean Department of Public Works, Highway & Transportation, which is a unit of Dane County government. Department is County agency overseeing Contract with Contractor.
  - 3. Public Works Project Engineer is appointed by and responsible to Department. Public Works Project Engineer has authority to act on behalf of Department and will sign change orders, payment requests and other administrative matters related to projects.
  - 4. Public Works Project Engineer is responsible for supervision, administration and management of field operations involved in construction phase of this Work.
  - 5. Term "Work" includes all labor, equipment and materials necessary to produce project required by Construction Documents.
  - 6. Term "Substantial Completion" is date when project or specified area of project is certified by Architect / Engineer that construction is sufficiently completed, in accordance with Construction Documents, and as modified by any subsequent changes agreed to by parties, so that County may occupy project or specified area of project for use for which it was intended subject to permit approval for occupancy.
  - 7. Contractor is person, firm, or corporation with whom County makes Contract. Though multiple contracts may be involved, Construction Documents treat them throughout as if each were of singular number.

## 3. ADDITIONAL INSTRUCTIONS AND DRAWINGS

A. Contractor may be furnished additional instructions and detail drawings as necessary to carry out the Work included in Contract. Additional drawings and instructions thus supplied to Contractor will coordinate with Construction Documents and will be so prepared that they can be reasonably interpreted as part thereof. Contractor shall carry out the Work in accordance with additional detail drawings and instructions.

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## 4. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Unless otherwise specified, Contractor shall submit three (3) copies of all Shop Drawings for each submission, until receiving final approval. After final approval, provide five (5) additional copies for distribution and such other copies as may be required.
- B. Contractor shall submit, on an on-going basis and as directed, Product Data such as brochures that shall contain catalog cuts and specifications of all furnished mechanical and electrical equipment. After Architect / Engineer's approval, one (1) copy shall remain in Architect / Engineer's file, one (1) kept at Department's office and one (1) kept at job site by Contractor for reference purposes.
- C. Samples shall consist of physical examples furnished by Contractor in sufficient size and quantity to illustrate materials, equipment or workmanship, and to establish standards to compare the Work.
  - 1. Submit Samples in sufficient quantity (minimum of two (2)) to permit Architect / Engineer to make all necessary tests and of adequate size showing quality, type, color range, finish, and texture. Label each Sample stating material, type, color, thickness, size, project name, and Contractor's name.
  - 2. Submit transmittal letter requesting approval, and prepay transportation charges to Architect / Engineer's office on samples forwarded.
  - 3. Materials installed shall match approved Samples.
- D. Contractor shall review Shop Drawings and place their dated stamp thereon to evidence their review and approval and shall submit with reasonable promptness and in orderly sequence to cause no delay in the Work or in work of any other contractor. At time of submission, Contractor shall inform Architect / Engineer in writing of any deviation in Shop Drawings or Samples from requirements of Construction Documents. Architect / Engineer will not consider partial lists.
- E. Architect / Engineer will review and approve or reject Shop Drawings with reasonable promptness to cause no delay. Architect / Engineer's approval shall not relieve Contractor from responsibility for errors or omission in Shop Drawings.
- F. Contractor shall not commence any work requiring Shop Drawing, Product Data or Sample submission until Architect / Engineer has approved submission. All such work shall be in accordance with approved Shop Drawings, Product Data and Samples.
- G. Contractor shall keep on site of the Work, approved or conformed copy of Shop Drawings and shall at all time give Department access thereto.
- H. By stamping and submitting Shop Drawings, Product Data and Samples, Contractor thereby represents that he or she has or will determine and verify all field measurements, field construction criteria, materials, catalog numbers, and similar data and that he or she has checked and coordinated each Shop Drawing, Product Data and Sample with requirements of the Work and of Construction Documents. Architect / Engineer shall return without examination, Shop Drawings, Product Data and Samples not so noted.
- I. All Shop Drawings from any one Contractor should be numbered consecutively and on cover sheet shall bear name and location of project, name of Contractor, date of submittal and date of each correction or revision and associated Specification section and page number.

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### 5. CUTTING AND PATCHING

- A. Contractor shall be responsible for all cutting, fitting or patching required to complete the Work or to make its parts fit together properly.
- B. Contractor shall not damage or endanger portion of the Work or fully or partially completed construction of County or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. Contractor shall not cut or otherwise alter such construction by County or separate contractor except with written consent of County and of such separate contractor; such consent shall not be unreasonably withheld. Contractor shall not withhold unreasonably from County or separate contractor, Contractor's consent to cutting or otherwise altering the Work.

#### 6. CLEANING UP

- A. Contractor shall keep premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under Contract. Contractor shall remove from and about the Work waste materials, rubbish, Contractor's tools, construction equipment, machinery, and surplus materials at completion of the Work. Contractor shall maintain streets and sidewalks around the Work site in clean condition. Contractor shall remove all spillage and prevent tracking of spillage arising from performance of the Work, into, out of, and within the Work site. Contractor shall establish regular maintenance program of sweeping, vacuuming and / or hosing to minimize accumulation of dirt and dust upon such areas.
- B. If Contractor fails to clean up as directed in Construction Documents, County may do so and shall charge Contractor cost thereof.
- C. Contractor shall be responsible for broken windows and glass, and at completion of the Work shall replace such damaged or broken windows and glass. After replacing damaged or broken windows and glass, Contractor shall remove all labels, wash and polish both sides of all windows and glass.
- D. In addition to general cleaning (sweeping, vacuuming and / or hosing, as is appropriate to work surface), Contractor shall perform following final cleaning for all trades at completion of the Work:
  - 1. Remove temporary protections;
  - 2. Remove marks, stains, fingerprints and other soil or dirt from painted, decorated and finished woodwork and wall surfaces;
  - 3. Remove spots, plaster, soil and paint from ceramic tile, marble and other finished materials, and wash or wipe clean;
  - 4. Clean fixtures, cabinet work and equipment, removing stains, paint, dirt and dust, and leave same in undamaged, new condition;
  - 5. Clean aluminum in accordance with recommendations of manufacturer; and
  - 6. Clean resilient floors thoroughly with well-rinsed mop containing only enough moisture to clean off any surface dirt or dust and buff dry by machine to bring surfaces to sheen.

### 7. USE OF SITE

A. Contractor shall provide County and Architect / Engineer access to the Work under all circumstances.

B. Contractor shall confine operations at site to areas permitted by County, law, ordinance, permits and Construction Documents and shall not unreasonably encumber site with materials or equipment. Contractor shall assure free, convenient, unencumbered, direct and safe access to all properties adjacent to the Work for County, its employees, invitees and guests.

### 8. MATERIALS AND WORKMANSHIP

- A. Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, necessary to complete the Work required by this Contract, within time specified, in accordance with provisions of Construction Documents.
- B. All equipment and materials incorporated in the Work covered by this Contract are to be new; use recycled and / or recovered materials to extent that such use is technically and economically feasible. Recovered materials are products recovered from solid waste in form identical to original form for use that is same as, or similar to original use. Recycled materials are products manufactured from solid waste.
- C. If requested, Contractor shall furnish satisfactory evidence as to kind and quality of construction materials proposed or used. Contractor shall furnish to Architect / Engineer, for approval, manufacturer name and model, performance capacities and other pertinent information of machinery, mechanical, electrical or other types of equipment, which Contractor plans to install.
- D. If not otherwise provided, materials and labor called for in this Contract shall be provided and performed in accordance with established practice and standards recognized by Architects, Engineers, Department, and construction industry.
- E. Reference to "Standard" specifications of any association or manufacturer, or codes of County authorities, intends most recent printed edition or catalog in effect on date that corresponds with date of Construction Documents.
- F. Whenever reference is made in Specifications that work shall be "performed", "applied", in accordance with "manufacturer's directions or instructions", Contractor to whom those instructions are directed shall furnish three (3) printed copies of such instructions to Architect / Engineer before execution of the Work.

# 9. CONTRACTOR'S TITLE TO MATERIALS

A. Contractor or any subcontractor shall not purchase materials or supplies for the Work subject to any chattel mortgage or under conditional sale contract or other agreement by which seller retains interest. Contractor warrants that all materials and supplies used in the Work are free from all liens, claims or encumbrances and Contractor has good title to them.

# 10. "OR EQUAL" CLAUSE

A. Whenever equipment or materials are identified on Drawings or in Specifications by reference to manufacturer's or vendor's name, trade name, catalog number, and other identifying information, it is intended to establish standards; and any equipment or material of other manufacturers and vendors which will perform adequately duties imposed by

general design will be considered equally accepted provided equipment or material so proposed is, in opinion of Architect / Engineer, of equal substance and function. Architect / Engineer and Department shall provide written approval before Contractor may purchase or install it.

- B. Equipment or materials of manufacturers, other than those named, may be used only upon following conditions:
  - 1. That, in opinion of Architect / Engineer and Department, proposed material or equipment item is fully equal or superior (in design, materials, construction, workmanship, performance, finish, etc.) to named item. No compromise in quality level, however small, is acceptable.
  - 2. That, in substituting materials or equipment, Contractor assumes responsibility for any changes in system or for modifications required in adjacent or related work to accommodate such substitution despite Architect / Engineer's and Department's approval, and all costs growing out of approval of "or equal" items shall be responsibility of Contractor. No extra costs resulting from such approval shall become responsibility of Department, Architect / Engineer or any other separate Contractor.
  - 3. It shall be understood that use of materials or equipment other than those specified, or approved equal by Architect / Engineer and Department, shall constitute violation of Contract, and that Architect / Engineer and Department shall have right to require removal of such materials or equipment and their replacement with specified materials or equipment at Contractor's expense.
  - 4. Product and manufacturer named first in Specifications or on information shown on Drawings is basis of selection of manufactured items and equipment, particularly mechanical equipment. In using other than first named products or manufacturers, including those specified as additionally approved or acceptable, Contractor assumes responsibility for any changes in system and for modifications in any work required to accommodate them. Architect / Engineer's approval of such additionally acceptable products or manufacturers, either in Specifications or in Addendum, does not relieve Contractor from obligation to coordinate such optional products with other Contractors, whose work may be affected by them, and to pay all additional costs resulting from their inclusion into the Work. Contractor's liability shall include payment of Architect / Engineer's fees for any additional services made necessary by or directly connected to such product changes. No extra costs resulting from such changes shall become responsibility of Department, Architect / Engineer or any other separate Contractor.
- C. No request for approval of "or equal" materials will be entertained except from Contractor. Identify any request for substitution as substitution on Contractor's letter of transmittal and give reasons for substitution. Department may in its sole discretion allow substitutions of materials.

### 11. PATENTS AND ROYALTIES

- A. If Contractor uses any design, device or material covered by letters, patent or copyright, it is mutually agreed and understood, that, without exception, contract prices shall include all royalties or costs arising from use of such design, device or materials, in any way involved in the Work.
- B. Contractor shall indemnify and save harmless County from any and all claims for infringement by reason of use of such patent or copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify County for any cost,

Bid No. 309014 rev. 01/09 expense or damage which it may be obliged to pay by reason of such infringement at any time during prosecution of the Work or after completion of the Work.

## 12. SURVEYS, PERMITS, REGULATIONS AND TAXES

- A. Department will furnish to Contractor all site, topography and property surveys necessary for execution of the Work.
- B. Contractor shall procure all permits, licenses and approvals necessary for execution of this Contract.
- C. Contractor shall give all notices and comply with all State of Wisconsin, Federal and local laws, codes, rules and regulations relating to performance of the Work, protection of adjacent property, and maintenance of passageways, guard fences or other protective facilities.
- D. Contractor shall pay all Sales, Consumer, Use and other similar taxes required by law.
- E. Contractor shall promptly notify Architect / Engineer of any variances of Drawings or Specifications with that of any State of Wisconsin, federal or local law, code, rule or regulation. Upon such notification, Architect / Engineer will require correction of variance to comply with applicable law, code, rule or regulation at no additional cost to Contractor.
- F. Work under this Contract shall comply with all applicable State of Wisconsin, Federal and local laws, codes and regulations.
- G. Contractor shall pay charges for water, sewer and other utility connections made by municipalities where required by Specifications.

### 13. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE

- A. Contractor shall provide and pay for all materials, labor, tools, equipment, transportation and superintendence necessary to execute, complete and deliver the Work within specified time. Contractor agrees to secure at their own expense all personnel necessary to carry out the Work. Such personnel shall not be deemed County employees nor shall they have or be deemed to have any direct contractual relationship with County.
- B. Performance of any work necessary after regular working hours, on Sundays or Legal Holidays shall be without additional expense to County. Performance of any work at site at other than normal working hours must be coordinated with Public Works Project Engineer.
- C. Contractor shall furnish, erect, maintain and remove such temporary works as may be required.
- D. Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of Construction Documents.
- E. At the Work site, Contractor shall give personal superintendence to the Work or shall employ construction superintendent or foreman, experienced in character of work covered by Contract, who shall have full authority to act for Contractor. Understand that such superintendent or foreman shall be acceptable to Architect / Engineer and Department.

- F. Remove from project or take other corrective action upon notice from Architect / Engineer or Department for Contractor's employees whose work is considered by Architect / Engineer or Department to be unsatisfactory, careless, incompetent, unskilled or otherwise objectionable.
- G. Contractor and subcontractors shall be required to conform to Labor Laws of State of Wisconsin and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable to the Work.
- H. Presence and observation of the Work by Architect / Engineer or Public Works Project Engineer shall not relieve Contractor of any obligations.

### 14. WEATHER CONDITIONS

A. In event of temporary suspension of work, or during inclement weather, or whenever Architect / Engineer shall direct, Contractor shall, and shall cause subcontractors to protect carefully all work and materials against damage or injury from weather. If, in opinion of Architect / Engineer or Department, any work or materials that have been damaged or injured due to failure on part of Contractor or any subcontractors so to protect the Work, such materials shall be removed and replaced at expense of Contractor.

### 15. PROTECTION OF WORK AND PROPERTY

- A. Contractor shall at all times safely guard County's property from injury or loss in connection with this Contract. Contractor shall at all times safely guard and protect the Work, and adjacent property, from damage. Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in Contract, or by County, or County's duly authorized representative.
- B. Contractor may act diligently, without previous instructions from Architect / Engineer and / or Department, in emergency that threatens loss or injury of property, or safety of life. Contractor shall notify Architect / Engineer and / or Department immediately thereafter. Promptly submit any claim for compensation by Contractor due to such extra work to Architect / Engineer and / or Department for approval as provided for in Article 18 herein.

### 16. INSPECTION AND TESTING OF MATERIALS

- A. Authorized representatives and agents of County government shall have access at all times to the Work wherever it is in preparation or progress and Contractor shall provide facilities for such access and for inspection.
- B. Should it be considered necessary or advisable at any time before final acceptance of the Work to make examination of work already completed, by removing or tearing out same, Contractor shall upon request, promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any aspect, due to fault of Contractor or subcontractors thereof, Contractor shall assume all expenses of such examination and of satisfactory reconstruction. Contractor will be reimbursed for such examination and replacement in accordance with Article 18 A.3., of these General Conditions of Contract if such work is found to meet requirements of Contract.
- C. If Specifications, Architect / Engineer's, or Public Works Project Engineer's instructions require any work to be specially tested or approved, Contractor shall give Architect /

Bid No. 309014 rev. 01/09 Engineer and Public Works Project Engineer timely notice of its readiness for testing or inspection. Test all materials and equipment requiring testing in accordance with accepted or specified standards, as applicable. Architect / Engineer shall recommend laboratory or inspection agency and Department will select and pay for all initial laboratory inspection services. Should retesting be required, due to failure of initial testing, cost of such retesting shall be borne by Contractor.

D. Cost of any testing performed by manufacturers or Contractor for substantiating acceptability of proposed substitution of materials and equipment, or necessary conformance testing in conjunction with manufacturing processes or factory assemblage, shall be borne by Contractor or manufacturer responsible.

### 17. REPORTS, RECORDS AND DATA

A. Contractor shall submit to Architect / Engineer and Public Works Project Engineer such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, invoices, records and other data as either may request concerning work performed or to be performed under this Contract.

### 18. CHANGES IN THE WORK

- A. Make no changes, except in cases of emergency, in the Work covered by approved Construction Documents without having prior written approval of Department. Charges or credits for the Work covered by approved change shall be determined by one of these methods:
  - 1. Unit bid prices previously approved.
  - 2. Agreed lump sum based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
    - f) Social Security and old age and unemployment contributions.
    - g) Add to cost under (2), fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit and any other general expense.
    - h) On that portion of the Work under (2) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit and any other general expense.
    - i) Department may require correct amount of costs with supporting vouchers; Contractor shall keep and present in such form as directed.
  - 3. Cost-plus work, with not-to-exceed dollar limit, based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.

- c) Ownership or rental cost of construction tools and equipment during time of use on extra work. Rental cost cannot exceed fifty percent (50%) replacement value of rented equipment.
- d) Power and consumable supplies for operation of power equipment.
- e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
- f) Social Security and old age and unemployment contributions.
- g) To cost under (3), there shall be added fixed fee to be agreed upon but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit, and any other general expense.
- h) On that portion of the Work under (3) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit, and any other general expense.
- i) Contractor shall keep and present, in such form as directed, correct amount of cost together with such supporting vouchers as may be required by Department.
- B. If Contractor claims that by any instructions given by Architect / Engineer, Department, by drawings or otherwise, regarding performance of the Work or furnishing of material under Contract, involves extra cost, Contractor shall give Department written notice of cost thereof within two (2) weeks after receipt of such instructions and in any event before proceeding to execute work, unless delay in executing work would endanger life or property.
- C. No claim for extra work or cost shall be allowed unless it was done in pursuance of written Change Order from Architect / Engineer and approved by Department, as previously mentioned, and claim presented with payment request submitted after changed or extra work is completed.
- D. Negotiation of cost for change in the Work shall not be cause for Contractor to delay prosecution of the Work if Contractor has been authorized in writing by Public Works Project Engineer to proceed.

### 19. EXTRAS

A. Without invalidating Contract, Department may order extra work or make changes by altering, adding to or deducting from the Work, contract sum being adjusted in accordance with Article 18 herein.

# 20. TIME FOR COMPLETION

A. Contractor agrees that the Work shall be prosecuted regularly and diligently and complete the Work as stated in Construction Documents.

### 21. CORRECTION OF WORK

A. All work, all materials whether incorporated in the Work or not, and all processes of manufacture shall at all times and places be subject to inspection of Architect / Engineer and Public Works Project Engineer who shall be judge of quality and suitability of the Work, materials, and processes of manufacture for purposes for which they are used. Should they fail to meet Architect / Engineer's and Public Works Project Engineer's approval they shall

- be reconstructed, made good, replaced or corrected, by Contractor at Contractor's expense. Immediately remove all rejected material from site.
- B. If Contractor defaults or neglects to carry out the Work in accordance with Construction Documents or fails to perform any provision of Contract, Department may, after ten (10) days' written notice to Contractor and without prejudice to any other remedy County may have, make good such deficiencies. In such case, appropriate Change Order shall be issued deducting from Contractor's payments then or thereafter, cost of correcting such deficiencies, including cost of Architect / Engineer's additional services made necessary by such default, neglect or failure.

### 22. SUBSURFACE CONDITIONS FOUND DIFFERENT

A. If Contractor encounters subsurface or latent conditions at site materially differing from those shown on Drawings or indicated in Specifications, Contractor shall immediately give notice to Architect / Engineer and Public Works Project Engineer of such conditions before they are disturbed. Architect / Engineer will thereupon promptly investigate conditions, and if Architect / Engineer finds that they materially differ from those shown on Drawings or indicated in Specifications, Architect / Engineer will at once make such changes as necessary, any increase or decrease of cost resulting from such changes to be adjusted in manner provided in above Article 18 entitled "Changes in the Work".

### 23. RIGHT OF DEPARTMENT TO TERMINATE CONTRACT

- A. In event that any provisions of this Contract are violated by Contractor or by any subcontractors, County may serve written notice upon Contractor and Surety of its intention to terminate Contract, such notice to contain reasons for such intention to terminate Contract, and unless within ten (10) days after serving of such notice upon Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made, Contract shall, upon expiration of said ten (10) days, cease and terminate.
- B. In event of any such termination, County shall immediately serve notice thereof upon Surety and Contractor, and Surety shall have right to take over and perform Contract subject to County's approval; provided, however, that if Surety does not commence performance thereof within ten (10) days from date of mailing to such Surety of notice of termination, County may take over the Work and prosecute same to completion by contract, or by force account, at expense of Contractor; Contractor and Surety shall be liable to County for any excess cost occasioned County thereby, and in such event County may take possession of and utilize in completing the Work, such materials and equipment as may be on the Work site and therefore necessary.

# 24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES

- A. Contractor shall be responsible for Construction Schedule and coordination. Immediately after execution and delivery of Contract and before making first payment, Contractor shall notify all subcontractors to furnish all required information to develop Construction Schedule. Contractor and all subcontractors associated with the Work shall furnish following information from each Division of Specifications:
  - 1. List of construction activities:
  - 2. Start, finish and time required for completion of each activity;
  - 3. Sequential relationships between activities:

- 4. Identify all long lead-time items, key events, meetings or activities such as required submittals, fabrication and delivery, procurement of materials, installation and testing;
- 5. Weekly definition of extent of work and areas of activity for each trade or Subcontract; and
- 6. Other information as determined by Public Works Project Engineer.
- B. In addition to above requested items, Contractor shall request delivery dates for all County-furnished equipment, materials or labor. This shall include any work handled by Department under separate contracts such as asbestos abatement, air and water balancing, etc. Indicate on Construction Schedule these associated delivery and installation dates.

### C. Progress Reporting:

- Contractor shall update and publish Construction Schedule on monthly basis. Revisions
  to Schedule shall be by Contractor and made in same detail as original Schedule and
  accompanied by explanation of reasons for revision; and shall be subject to approval by
  Department.
- 2. Failure of Contractor to keep Schedule in updated format shall result in County hiring firm specializing in construction schedule development and deducting those costs associated with updating process from payments due Contractor.
- 3. Contractor shall submit show actual percentage of each activity completed, estimated future progress, and anticipated completion time.
- D. Responsibility for timely completion requires:
  - 1. Contractor and subcontractors understand that performance of each is interdependent upon performance of others.
  - 2. Whenever it becomes apparent from current schedule, that phasing or progress completion dates will not be met, Contractor must take some or all following actions at no additional cost to County:
    - a) Increase construction manpower in such quantities and crafts as will eliminate backlog of work.
    - b) Increase number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination of foregoing to eliminate backlog of work.
    - c) Reschedule work (yet remain in conformance with Drawings and Specifications).
  - 3. Prior to proceeding with any of above actions, Contractor shall notify Public Works Project Engineer.
- E. Maintain current Construction Schedule at all times. Revise Construction Schedule in same detail as original and accompany with explanation of reasons for revision. Schedule shall be subject to approval by Architect / Engineer and Public Works Project Engineer.

### 25. PAYMENTS TO CONTRACTOR

- A. Contractor shall provide:
  - 1. Detailed estimate giving complete breakdown of contract price by Specification Division; and
  - 2. Periodic itemized estimates of work done for purpose of making partial payments thereon.

Submit these estimates for approval first to Architect / Engineer, then to Public Works Project Engineer. Costs employed in making up any of these schedules are for determining basis of partial payments and not considered as fixing basis for additions to or deductions from Contract price.

- B. County will make partial payments to Contractor for value, proportionate to amount of Contract, of all labor and material incorporated in the Work during preceding calendar month upon receipt of Application and Certificate for Payment form from Architect / Engineer and approval of Department.
- C. Contractor shall submit for approval first to Architect / Engineer, and then to Public Works Project Engineer all Application and Certificate for Payment forms. If requested, Application and Certificate for Payment shall be supported by such additional evidence as may be required, showing Contractor's right to payment claimed.
- D. Application and Certificate for Payment for preparatory work and materials delivered and suitably stored at site to be incorporated into the Work at some future period, will be given due consideration. Requesting payment for materials stored off site, may be rejected, however, if deemed essential for reasons of job progress, protection, or other sufficient cause, requests will be considered, conditional upon submission by Contractor of bills of sale, photographs and such other procedures as will adequately protect County's interest such as storage in bonded warehouse with adequate coverage. If there is any error in payment, Contractor is obligated to notify Department immediately, but no longer than ten (10) days from receipt of payment.
- E. Payments by County will be due within forty-five (45) days after receipt by Department of Application and Certificate for Payment.
- F. County will retain five percent (5%) of each Application and Certificate for Payment until final completion and acceptance of all the Work covered by Contract. However, anytime after fifty percent (50%) of the Work has been furnished and installed at site, County will make remaining payments in full if Architect / Engineer and Public Works Project Engineer find that progress of the Work corresponds with Construction Schedule. If Architect / Engineer and Public Works Project Engineer find that progress of the Work does not correspond with Construction Schedule, County may retain up to ten percent (10%) of each Application and Certificate for Payment for the Work completed.
- G. All material and work covered by partial payments made shall become sole property of County, but this provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made, or restoration of any damaged work, or as waiver of right of County to require fulfillment of all of terms of Contract.
- H. County will make final payment within sixty (60) days after final completion of the Work, and will constitute acceptance thereof.
- County may make payment in full, including retained percentages and less authorized deductions, upon completion and acceptance of each Division where price is stated separately in Contract.
- J. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit to this Department, as requested and with final application for payment for work under said contract, affidavit(s) as required to prove that all debts and claims against this Work are paid in full or otherwise satisfied, and give final evidence of release of all liens against the Work and County. If Wisconsin Prevailing Wage Rate Determination is required for this Work, use "Prime Contractor Affidavit of

Compliance With Prevailing Wage Rate Determination" and "Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination" (if applicable). If Wisconsin Prevailing Wage Rate Determination is not required for this Work, use "Dane County, Wisconsin Contractor Wage Affidavit". Forms of such affidavits are included in Supplementary Conditions.

### 26. WITHHOLDING OF PAYMENTS

- A. County, after having served written notice on said Contractor, may either pay directly any unpaid bills of which Department has written notice, or withhold from Contractor's unpaid compensation sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged; whereupon, payment to Contractor shall be resumed in accordance with terms of this Contract, but in no event shall these provisions be construed to impose any obligations upon County to either Contractor or Contractor's Surety.
- B. In paying any unpaid bills of Contractor, County shall be deemed agent of Contractor, and any payment so made by County, shall be considered as payment made under Contract by County to Contractor and County shall not be liable to Contractor for any such payment made in good faith.
- C. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from all claims growing out of lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in performance of this Contract.
- D. At Department's request, Contractor shall furnish satisfactory evidence that all obligations of nature designated above have been paid, discharged or waived.

### 27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

- A. Making of final payment shall constitute waiver of all claims by County except those arising from:
  - 1. Unsettled lien;
  - 2. Faulty or defective work appearing after substantial completion;
  - 3. Failure of the Work to comply with requirements of Construction Documents; or
  - 4. Terms of any special guarantees required by Construction Documents.
- B. Acceptance of final payment shall constitute waiver of all claims by Contractor.

### 28. PAYMENTS BY CONTRACTOR

- A. Contractor shall pay following not later than fifth (5<sup>th</sup>) day following each payment received from County:
  - 1. All transportation and utility services rendered;
  - 2. All materials, tools, and other expendable equipment that have been delivered at site of the Work to extent of ninety percent (90%) of cost thereof, and balance of cost thereof when said balance is paid to Contractor; and
  - 3. Each subcontractor, respective amount allowed Contractor because of work performed by subcontractor to extent of subcontractor's interest therein.

### 29. CONTRACT SECURITY

- A. Contractor shall furnish Performance and Payment Bonds in amount at least equal to one hundred percent (100%) of Contract price as security for faithful performance of this Contract and payment of all persons performing labor on project under this Contract and furnishing materials in connection with this Contract.
- B. Sample Performance and Payment Bonds that Contractor will be required to execute is bound into these Construction Documents. Before construction Contract is consummated, completed Performance and Payment Bonds must be approved by Department.

### 30. ASSIGNMENTS

A. Contractor shall not assign whole or any part of this Contract or any moneys due or to become due hereunder without written consent of Department. In case Contractor assigns all or any part of any moneys due or to become due under this Contract, instrument of assignment shall contain clause substantially to effect that it is agreed that right of assignee in and to any moneys due or to become due to Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for performance of the Work called for in this Contract.

### 31. MUTUAL RESPONSIBILITY OF CONTRACTORS

A. If, through acts of neglect on part of Contractor or any subcontractor shall suffer loss or damage on the Work, Contractor agrees to settle with such subcontractor by agreement or arbitration if such other subcontractor will so settle. If such subcontractor shall assert any claim against County on account of any damage alleged to have been sustained, Department shall notify Contractor, who shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives against any such claim.

### 32. SEPARATE CONTRACTS

- A. Department may award other contracts for the Work and all Contractors shall fully cooperate with each other and carefully adjust their work to that provided under other contracts as may be directed by Department. No Contractor shall commit or permit any act that will interfere with performance of the Work by any other Contractor.
- B. Contractor shall coordinate the Work with those of other Contractors. Cooperation will be required in arrangement for storage of materials and in detailed execution of the Work. Contractor, including subcontractors, shall keep informed of progress and detail work of others and shall notify Architect / Engineer or Department immediately of lack of progress or defective workmanship on part of others. Failure of Contractor to keep informed of the Work progressing on site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by Contractor of status of the Work as being satisfactory for proper coordination with Contractor's own work.

### 33. SUBCONTRACTS

- A. Contractor may use services of specialty subcontractors on those parts of the Work that, under normal contracting practices, are performed by specialty subcontractors.
- B. Contractor shall not award any work to any subcontractor without prior approval of Department. Qualifications of subcontractors shall be same as qualifications of Contractor. Request for subcontractor approval shall be submitted to Department fifteen (15) days before start of subcontractor's work. If subcontractors are changed or added, Contractor shall notify Department in writing.
- C. Contractor shall be as fully responsible to County for acts and omissions of subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for acts and omissions of persons directly employed by Contractor.
- D. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to Contractor by terms of General Conditions of Contract and other Construction Documents insofar as applicable to work of subcontractors and to give Contractor same power as regards terminating any subcontract that Department may exercise over Contractor under any provision of Construction Documents.
- E. Nothing contained in this Contract shall create any contractual relation between any subcontractor and County.
- F. Contractor shall insert in all subcontracts, Articles 26, 33, 43 and 45, respectively entitled: "Withholding of Payments", "Subcontracts", "Affirmative Action Provision and Minority / Women / Disadvantaged Business Enterprises", and "Minimum Wages", and shall further require all subcontractors to incorporate physically these same Articles in all subcontracts.

### 34. PUBLIC WORKS PROJECT ENGINEER'S AUTHORITY

- A. Public Works Project Engineer shall:
  - 1. Administer and ensure compliance with Construction Documents;
  - 2. Provide responsible on-site observations of construction and have authority to request work and to stop work whenever necessary to insure proper enforcement of Construction Documents;
  - 3. Convene and chair project meetings and foreman's coordination meetings when necessary to coordinate resolution of conflicts between Contractors, Architects, Engineers, Consultants, and Department; and
  - 4. Check and inspect material, equipment and installation procedures of all trades for proper workmanship and for compliance with Drawings, Specifications and Shop Drawings, permit no material on project site that is not satisfactory and reject work not in compliance with Construction Documents.

### 35. ARCHITECT / ENGINEER'S AUTHORITY

- A. Architect / Engineer is retained by, and is responsible to Department acting for County.
- B. Architect / Engineer shall determine amount, quality, acceptability, and fitness of several kinds of work and materials that are provided under this Contract and shall decide all questions that may arise in relation to said work and construction thereof.

- C. Architect / Engineer shall decide meaning and intent of any portion of Specifications and of any Drawings where they may be found obscure or be in dispute.
- D. Architect / Engineer shall provide responsible observation of construction. Architect / Engineer has authority to stop the Work whenever such stoppage may be necessary to insure proper execution of Construction Documents.
- E. Architect / Engineer shall be interpreter of conditions of Construction Documents and judge of its performance.
- F. Within reasonable time, Architect / Engineer shall make decisions on all matters relating to progress of the Work or interpretation of Construction Documents.
- G. Architect / Engineer's decisions are subject to review by Public Works Project Engineer.

### 36. STATED ALLOWANCES

- A. Stated allowances enumerated in Instructions to Bidders shall cover net cost of materials or equipment, and all applicable taxes. Contractor's cost of delivery and unloading at site, handling costs on site, labor, installation costs, overhead, profit and any other incidental costs shall be included in Contractor's bid, but not as part of cash allowance.
- B. Department will solicit at least two (2) bids on materials or equipment for which allowance is stated and select on basis of lowest qualified responsible bid. Contractor will then be instructed to purchase "Allowed Materials". If actual price for purchasing "Allowed Materials", including taxes, is more or less than "Cash Allowance", Contract price shall be adjusted accordingly. Adjustment in Contract price shall not contain any cost items excluded from cash allowance.

### 37. ESTIMATES OF QUANTITIES

A. Whenever estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of Construction Documents, they are given for use in comparing bids and right is especially reserved to increase or diminish them as they may be deemed reasonably necessary or desirable by Department to complete the Work included in this Contract, and cost for such increase or diminution shall be adjusted in manner provided for in General Conditions of Contract Article 18 entitled "Changes in the Work".

### 38. LANDS AND RIGHTS-OF-WAY

A. Prior to start of construction, County shall furnish all land and rights-of-way necessary for carrying out and completion of the Work to be performed under this Contract.

### 39. GENERAL GUARANTEE

A. Neither final certificate of payment nor any provision in Construction Documents nor partial or entire occupancy of premises by County shall constitute acceptance of work not done in accordance with Construction Documents or relieve Contractor of liability in respect to any expressed warranties or responsibility for faulty materials or workmanship.

- In no event shall making of any payment required by Contract constitute or be construed
  as waiver by County of any breach of covenants of Contract or waiver of any default of
  Contractor and making of any such payment by County while any such default or breach
  shall exist shall in no way impair or prejudice right of County with respect to recovery of
  damages or other remedy as result of such breach or default.
- B. Contractor shall remedy and make good all defective workmanship and materials and pay for any damage to other work resulting there from, which appear within period of one (1) year from date of substantial completion, providing such defects are not clearly due to abuse or misuse by County. Department will give notice of observed defects with reasonable promptness.
- C. Guarantee on work executed after certified date of substantial completion will begin on date when such work is inspected and approved by Architect / Engineer and Public Works Project Engineer.
- D. Where guarantees or warrantees are required in sections of Specifications for periods in excess of one (1) year, such longer terms shall apply; however, Contractor's Performance and Payment Bonds shall not apply to any guarantee or warranty period in excess of one (1) year.

### 40. CONFLICTING CONDITIONS

- A. Any provision in any of Construction Documents which may be in conflict or inconsistent with any Articles in these General Conditions of Contract or Supplementary Conditions shall be void to extent of such conflict or inconsistency.
- B. In case of ambiguity or conflict between Drawings and Specifications, Specifications shall govern.
- C. Printed dimensions shall be followed in preference to measurements by scale. Large-scale drawings take precedence over small-scale drawings. Dimensions on Drawings and details are subject to field measurements of adjacent work.

### 41. NOTICE AND SERVICE THEREOF

A. Any notice to Contractor from Department relative to any part of this Contract shall be in writing and considered delivered and service thereof completed, when said notice is posted, by certified or registered mail, to Contractor at Contractor's last given address, or delivered in person to said Contractor, or Contractor's authorized representative on the Work.

### 42. PROTECTION OF LIVES AND HEALTH

- A. In order to protect lives and health of Contractor's employees under Contract, Contractor shall comply with all pertinent provisions of Wisconsin Administrative Code, Rules of Department of Commerce, relating to Safety and Health.
- B. Contractor alone shall be responsible for safety, efficiency and adequacy of Contractor's tools, equipment and methods, and for any damage that may result from their failure or their improper construction, maintenance or operation.

### 43. AFFIRMATIVE ACTION PROVISION AND MINORITY / WOMEN / DISADVANTAGED BUSINESS ENTERPRISES

### A. Affirmative Action Provisions.

- 1. During term of their Contract, Contractor agrees not to discriminate on basis of race, religion, color, sex, handicap, age, sexual preference, marital status, physical appearance, or national origin against any person, whether recipient of services (actual or potential), employee, or applicant for employment. Such equal opportunity shall include but not be limited to following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). Contractor agrees to post in conspicuous places, these affirmative action standards so as to be visible to all employees, service recipients and applicants for this paragraph. Listing of prohibited bases for discrimination shall no be construed to amend in any fashion state or federal law setting forth additional bases and exceptions shall be permitted only to extent allowable in state or federal law.
- 2. Contractor is subject to this Article only if Contractor has ten (10) or more employees and receives \$10,000.00 or more in annual aggregate contracts with County. Contractor shall file and Affirmative Action Plan with Dane County Contract Compliance Officer in accord with Chapter 19 of Dane County Code of Ordinances. Such plan must be filed within fifteen (15) days of effective date of this Contract and failure to do so by said date shall constitute ground for immediate termination of Contract by County. Contractor shall also, during term of this Contract, provide copies of all announcements of employment opportunities to County's Contract Compliance Office, and shall report annually number of persons, by race, sex and handicap status, who apply for employment and, similarly classified, number hired and number rejected.
- 3. Contact Dane County Contract Compliance Officer at Dane County Contract Compliance Office, 210 Martin Luther King, Jr. Blvd., Room 421, Madison, WI 53703, 608/266-4114.
- 4. In all solicitations for employment placed on Contractor's behalf during term of this Contract, Contractor shall include statement to effect Contractor is "Equal Opportunity Employer". Contractor agrees to furnish all information and reports required by County's Contract Compliance Officer as same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and provision of this Contract.
- B. Minority / Women / Disadvantaged / Emerging Small Business Enterprises.
  - 1. Chapter 19.508 of Dane County Code of Ordinances is official policy of Dane County regarding utilization of, to fullest extent of, Minority Business Enterprises (MBEs), Women Business Enterprises (WBEs) Disadvantage Business Enterprises (DBEs) and Emerging Small Business Enterprises (ESBEs).
  - 2. Contractor may utilize MBEs / WBEs / DBEs / ESBEs as subcontractors or suppliers. List of subcontractors will be required of low bidder as stated in this Contract. List shall indicate which are MBEs / WBEs / DBEs / ESBEs and percentage of subcontract awarded, shown as percentage of total dollar amount of bid.

### 44. COMPLIANCE WITH FAIR LABOR STANDARDS

A. During term of this Contract, Contractor shall report to County Contract Compliance Officer, within ten (10) days, any allegations to, or findings by National Labor Relations Board (NLRB) or Wisconsin Employment Relations Commission (WERC) that Contractor has violated statute or regulation regarding labor standards or relations. If investigation by

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shall be determined by Wisconsin Department of Workforce Development. Such approved minimum rate shall be retroactive to time of initial employment of such person in such trade or occupation. Contractor shall notify Department of Contractor's intention to employ persons in trades or occupations not so classified in sufficient time for Department to obtain approved rates for such trades or occupations.

- D. Specified wage rates are minimum rates only, and Department will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of applicable rate contained in this Contract. Contractor shall adjust any disputes in regard to payment of wages in excess of those specified in this Contract.
- E. Submit required affidavit(s) to Department of Public Works, Highway & Transportation, as requested and with final application for payment for work under said contract. Affidavit(s) shall clearly indicate name, trade or occupation, and paid wages of every laborer, workman or mechanic employed by Contractor and all subcontractors during billing period including accurate record of number of hours worked by each employee and actual wages paid as stipulated in Wisconsin Statue 66.0903. If Wisconsin Prevailing Wage Rate Determination is required for this Work, use "Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination" and "Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination" (if applicable). If Wisconsin Prevailing Wage Rate Determination is not required for this Work, use "Dane County, Wisconsin Contractor Wage Affidavit". Forms of such affidavits are included in Supplementary Conditions.

### 48. CLAIMS

A. No claim may be made until Department's Associate Public Works Director has reviewed Architect / Engineer's decision as provided for in Article 35 of General Conditions of Contract. If any claim remains unresolved after such review by Department's Associate Public Works Director, claim may be filed under Wisconsin Statute 893.80. Work shall progress during period of any dispute or claim. Unless specifically agreed between parties, venue will be in Dane County, Wisconsin.

### 49. ANTITRUST AGREEMENT

A. Contractor and County recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by County. Therefore, Contractor hereby assigns to County any and all claims for such overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from antitrust violations commencing after price is established under this Contract and any change order thereto.

### **50. INSURANCE**

### A. Contractor Carried Insurance:

- Contractor shall not commence work under this Contract until Contractor has obtained all insurance required under this Article and has provided evidence of such insurance to Risk Manager, 425 City-County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53703. Contractor shall not allow any subcontractor to commence work until insurance required of subcontractor has been so obtained and approved. Company providing insurance must be licensed to do business in Wisconsin.
- 2. Worker's Compensation Insurance:

- a) Contractor shall procure and shall maintain during life of this Contract, Worker's Compensation Insurance as required by statute for all of Contractor's employees engaged in work at site of project under this Contract and, in case of any such work sublet, Contractor shall require subcontractor similarly to provide Worker's Compensation Insurance for all of latter's employees to be engaged in such work unless such employees are covered by protection afforded by Contractor's Worker's Compensation Insurance.
- b) If any claim of employees engaged in hazardous work on project under this Contract is not protected under Worker's Compensation Statute, Contractor shall provide and shall cause each subcontractor to provide adequate Employer's Liability Insurance for protection of such of Contractor's employees as are not otherwise protected.
- 3. Contractor's Public Liability and Property Damage Insurance:
  - a) Contractor shall procure and maintain during life of this Contract, Contractor's Public Liability Insurance and Contractor's Property Damage Insurance in amount not less than \$1,000,000 bodily injury, including accidental death, to any one person, and subject to same limit for each person, in amount not less than \$1,000,000 on account of one accident, and Contractor's Property Damage Insurance in amount not less then \$1,000,000 or combined single limit of at least \$1,000,000 with excess coverage over and above general liability in amount not less than \$5,000,000. Contractor shall add "Dane County" as additional insured for each project.
  - b) Contractor's Public Liability and Property Damage Insurance shall include Products, Completed Operation, and Contractual Liability under Insurance Contract. "Contractor shall in all instances save, defend, indemnify and hold harmless County and Architect / Engineer against all claims, demands, liabilities, damages or any other costs which may accrue in prosecution of the Work and that Contractor will save, defend, indemnify and hold harmless County and Architect / Engineer from all damages caused by or as result of Contractor's operations" and each shall be listed as additional insured on Contractor's and sub-contractors' insurance policies.
  - c) Obligations of Contractor under Article 48.A.2)b) shall not extend to liability of Architect / Engineer, agents or employees thereof, arising out of:
    - 1) Preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or
    - 2) giving of or failure to give directions or instructions by Architect / Engineer, agents or employees thereof provided such giving or failure to give is primary cause of injury or damage.
  - d) Contractor shall procure and shall maintain during life of this Contract, Comprehensive Automobile Liability Insurance covering owned, non-owned and hired automobiles for limits of not less than \$1,000,000 each accident single limit, bodily injury and property damage combined with excess coverage over and above general liability in amount not less than \$5,000,000.
  - e) Contractor shall either:
    - 1) Require each subcontractor to procure and to maintain during life of subcontract, subcontractor's Public Liability Property Damage Insurance, and Comprehensive Automobile Liability Insurance of type and in same amount specified in preceding paragraphs; or
    - 2) Insure activities of subcontractors in Contractor's own policy.
- 4. Scope of Insurance and Special Hazards: Insurance required under Article 48.A.2 hereof shall provide adequate protection for Contractor and subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operation be by insured or by anyone directly or indirectly employed by insured and also against any of special hazards which may be encountered in performance of this Contract as enumerated in Supplementary Conditions.

5. Proof of Carriage of Insurance: Contractor shall furnish Risk Manager with certificates showing type, amount, class of operations covered, effective dates, dates of expiration of policies and "Dane County" listed as additional insured. Such certificates shall also contain (substantially) following statement: "Insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by Risk Manager."

### B. Builder's Risk:

1. County shall provide Builder's Risk policy. Terms of this policy will be made available by County's Risk Manager, upon Contractor's request. By executing this Contract, Contractor warrants it is familiar with terms of said policy.

### C. Indemnification / Hold Harmless:

- 1. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from performance of the Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, and is caused in whole or in part by any act or omission of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by part indemnified hereunder.
- 2. In any and all claims against Dane County, its boards, commissions, agencies, officers, employees and representatives or by any employee of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, indemnification obligation under this Contract shall not be limited in any way by any limitation on amount or type of damages, compensation or benefits payable by or for Contractor or any subcontractor under worker's compensation acts, disability benefits or other employee benefit acts.
- 3. Obligations of Contractor under this Contract shall not extend to liability of Architect / Engineer, its agents or employees arising out of:
  - a) Preparation or approval of maps, drawings, opinion, reports, surveys, change orders, designs or specifications; or
  - b) Giving of or failure to give directions or instruction by Architect / Engineer, its agents or employees provided such giving or failure to give is primary cause of injury or damage.
- 4. Dane County shall not be liable to Contractor for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties.

### 51. WISCONSIN LAW CONTROLLING

A. It is expressly understood and agreed to by parties hereto that in event of any disagreement or controversy between parties, Wisconsin law shall be controlling.

Bid No. 309014 General Conditions rev. 01/09 00 72 14 - 23

### **SECTION 00 73 13**

### SUPPLEMENTAL CONDITIONS

FAIR LABOR PRACTICES CERTIFICATION

SAMPLE BID BOND

SAMPLE PERFORMANCE BOND

SAMPLE PAYMENT BOND

**DWD PREVAILING WAGES** 

SAMPLE PAY REQUEST AND COST BREAKDOWN FORM

### FAIR LABOR PRACTICES CERTIFICATION

The undersigned, for and on behalf of the BIDDER, APPLICANT or PROPOSER named herein, certifies as follows:

A. That he or she is an officer or duly authorized agent of the above-referenced BIDDER,

Print	d or Typed Name and Title	
Offic	er or Authorized Agent Signature	Date
	regarding labor standards or relations in the seven years prior to Certification.  been found by the National Labor Relations Board ("N Employment Relations Commission ("WERC") to have violated regarding labor standards or relations in the seven years prior to Certification.	the signature date of this (LRB") or the Wisconsin d any statute or regulation
	not been found by the National Labor Relations Board Employment Relations Commission ("WERC") to have violate	` ,
B.	That BIDDER, APPLICANT or PROPOSER has (check one):	
	APPLICANT or PROPOSER, which has a submitted a proposa contract with the county of Dane.	l, bid or application for a

**NOTE:** You can find information regarding the violations described above at: <u>www.nlrb.gov</u> and werc.wi.gov.

For reference, Dane County Ordinance 25.11(28)(a) is as follows:

Printed or Typed Business Name

(28) BIDDER RESPONSIBILITY. (a) Any bid, application or proposal for any contract with the county, including public works contracts regulated under chapter 40, shall include a certification indicating whether the bidder has been found by the National Labor Relations Board (NLRB) or the Wisconsin Employment Relations Committee (WERC) to have violated any statute or regulation regarding labor standards or relations within the last seven years. The purchasing manager shall investigate any such finding and make a recommendation to the committee, which shall determine whether the conduct resulting in the finding affects the bidder's responsibility to perform the contract.

If you indicated that the NLRB or WERC have found you to have such a violation, you must include copies of any relevant information regarding such violation with your proposal, bid or application.

### THE AMERICAN INSTITUTE OF ARCHITECTS



### AIA Document A310

### Bid Bond

Bond No.

ATTORNEY-IN-FACT

KNOW ALL MEN BY THESE PRESENTS, that		II name and address or	· legal title of Contractor)
as Principal, hereinafter called the Principal, and	(Here inse	rt full name and addres	ss or legal title of Surety)
a corporation duly organized under the laws of the held and firmly bound unto		•	alled the Surety, are
as Obligee, hereinafter called Obligee, in the sum of			ercent of total amount bid
For the payment of which sum well and truly to ourselves, our heirs, executors, administrators, such presents.  WHEREAS, the Principal has submitted a bid for in accordance with the terms of such bid, and give such bond or good and sufficient surety for the faithful performance of such the prosecution thereof, or in the event of the failure of the Principal shall pay to the Obligee the difference not to exceed larger amount for which the Obligee may in good faith contract obligation shall be null and void, otherwise to remain in full for	Project No.: (Here insert or bonds as may be specific Contract and for the properties of the penalty hereof between the with another party to p	pal shall enter into a Compt payment of labor a Contract and give such the amount specified in the amount specified in the second and the sec	Contract with the Obligee Contract Documents with and material furnished in the bond or bonds, if the fied in said bid and such
Signed and sealed this	day of		, 20 .
		(Principal)	(Seal)
(Witness)		(Title)	
		(Surety)	(Seal)
(Witness)			

### THE AMERICAN INSTITUTE OF ARCHITECTS



Bond No.

### **AIA Document A312**

### **Performance Bond**

Any singular reference to Contractor, Surety, 0	owner or other party shall be considered plural where applicable.	
CONTRACTOR (Name and Address):	SURETY (Name and Principal Place of Business):	
OWNER (Name and Address):		
CONSTRUCTION CONTRACT Date: Amount: \$ Description (Name and Location):		
BOND Date (Not earlier than Construction Contract Date Amount: \$	e):	
Modifications to this Bond:	[ ] None [ ] See Pag	je 3
CONTRACTOR AS PRINCIPAL COMPANY: (Corporate Seal)	SURETY COMPANY: (Corporate Seal	)
Signature:Name and Title:	Signature:Name and Title:	
(Any additional signatures appear on page 3)	Attorney-in-	Fac
FOR INFORMATION ONLY-Name, Address and Tel AGENT OR BROKER:	ephone OWNER'S REPRESENTATIVE (Architect, Engineer or other party):	

- 1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
- 2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
- **3.** If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
  - 3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
  - 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
  - 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
- **4.** When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - **4.1** Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
  - **4.2** Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
  - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default;
  - **4.4** Waive its rights to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
    - 1. After investigation, determine the amount for

- which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
- **2.** Deny liability in whole or in part and notify the Owner citing reasons therefor.
- **5.** If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
- **6.** After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
  - 6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - **6.2** Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
  - **6.3** Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
- **8.** The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
- 9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

- 10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
- 11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

### 12 DEFINITIONS

12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other

claims for damages to which the Contractor is entitled. reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

- 12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 12.3 Contractor Default: Failure of the Contractor. which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
- 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

### **MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:**

|--|

CONTRACTOR AS PRINCIPAL SURETY Company: (Corporate Seal) Company: (Corporate Seal)

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

Signature: Signature: Name and Title: Name and Title: Address: Address:

### THE AMERICAN INSTITUTE OF ARCHITECTS



Bond No.

### **AIA Document A312**

### **Payment Bond**

Any singular reference to Contractor, Surety, C	owner or other party shall be considered plural where applic	able.
CONTRACTOR (Name and Address):	SURETY (Name and Principa	al Place of Business):
OWNER (Name and Address):		
CONSTRUCTION CONTRACT Date: Amount: \$ Description (Name and Location):		
BOND Date (Not earlier than Construction Contract Date Amount: \$	e):	
Modifications to this Bond:	[ ] None	[] See Page 6
CONTRACTOR AS PRINCIPAL COMPANY: (Corporate Seal)	SURETY COMPANY:	(Corporate Seal)
Signature:Name and Title:	_ Signature: Name and Title:	
Name and Thie.	rame and ritte.	Attorney-in-Fact
(Any additional signatures appear on page 6)		
FOR INFORMATION ONLY-Name, Address and Tele	ephone OWNER'S REPRESENTA Engineer or other party):	TIVE (Architect,

- 1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
- 2. With respect to the Owner, this obligation shall be null and void if the Contractor:
  - **2.1** Promptly makes payment, directly, or indirectly, for all sums due Claimants, and
  - 2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
- **3.** With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
- **4.** The Surety shall have no obligation to Claimants under this Bond until:
- 4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- **4.2** Claimants who do not have a direct contract with the Contractor:
  - 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
  - 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
  - 3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
- **5.** If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
- **6.** When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

- **6.1** Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
- **6.2** Pay or arrange for payment of any undisputed amounts.
- 7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
- 8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
- 9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
- 11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- **12.** Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
- **14.** Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor

shall promptly furnish a copy of this Bond or shall permit a copy to be made.

### 15. DEFINITIONS

Address:

15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's

subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

- **15.2** Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- **15.3** Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

### MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

	low for additional signatures of added		pearing on the cover page.)
CONTRACTOR AS Company:	(Corporate Seal)	SURETY Company:	(Corporate Seal)
Signature:Name and Title:		Signature: Name and Title:	

Address:

# Contractor's Application For Payment No.

	Application Period:		Application Date:	
To (Owner):	From (Contractor):		Via (Engineer)	
Project:	Owner's Contract No.:	No.:	Engineer's Project No.:	
Application for Payment Change Order Summary				
Approved Change Orders		1. ORIGINAL CONTRACT PRICE	€	
Number Additions	Deductions			0.00
		3. CURRENT CONTRACT PRICE (Line 1 ± 2) 4. TOTAL COMPLETED AND STORED TO DATE		0.00
			59	0.00
		a. 5 % × \$	Completed	0.00
				0.00
		7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application) 8. AMOUNT DUE THIS APPLICATION	n prior Application) \$	0.00
NET CHANGE BY	1	-		
CHANGE ORDERS	•	By recommending payment, Engineer will not the	By recommending payment, Engineer will not thereby be deemed to have represented that: 1) inspections made to	tions made to
Contractor's Certification  The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work coverect by prior Applications for Payment; (2) title of all Work, materials and equipment	s payments received an applied on account ion with Work covered	of the Work in equality or the quantity of the Work as to of the Work in progress, or involved detailed insp. Engineer in the Contract Documents; or 2) that the entitle Contractor to be paid additionally by Owner Payment of:	crieck ure quanty or trie quantity of trie 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 2) 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.	to to every aspect ifically assigned to parties that might
incorporated in said work of otherwise listed in of covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any clear in the contract of the contractions and (2) at Moch.	Application for Payment scurity interests and to Owner indemnifying	(Line 8 or other size recommended by:	(Line 8 or other - attach explanation of other amount)	
covered by this Application for Payment is in accordance with the Contract Documents and is not defective.	ontract Documents	Payment of:	(Engineer)	(Date)
		(Line 8 or other	(Line 8 or other - attach explanation of other amount)	
		by:	(Owner)	(Date)
		(Line 8 or other	(Line 8 or other - attach explanation of other amount)	
By: Date:		is approved by:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	3
		Un. ↓	Funding Agency (if applicable)	(Date)

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### Contractor's Application

Unit Price Progress Estimate

Sign   Comparison   Compariso	For (contract):	WHAT AND A SECOND SECON	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Application Number:	mber:				
Estimated   Unit   Previous Applications   Cuantity   Amount   Quantity   Amount   Q	eriod:				TO CAMADA AND AND AND AND AND AND AND AND AND		Application Da	ie:			and the second s	
Estimated   Price   Auroin   Completed	A			В	O	٥	Ш	ш	9	I	_	٦
SUBTOTAL OR TOTAL	ltem	Estimated				Quanti	ty Completed			Total Comp	leted & Stored	
Cutantify   Amount   Quantify   Q		Bid		Previous,	Applications	This	Application	Materia	ls Stored	to Date	(C+E+G)	, a
	Description	Quantity		Quantity	Amount	Quantity		Quantity	Amount	Quantity	Amount	
SUBTOTAL OR TOTAL					·			-		,		
	SUBTOI	AL OR TOTA	L									

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## Contractor's Application

### Lump Sum Progress Estimate

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		9	Balance to	Finish (B - F)	
			%	(F) B	
		ш.	Total Completed	and Stored to Date (C + D + E)	:
			├		
		Ш	Materials Presently	stored (not in C or E	
mber:	te:	-			
Application Number:	Application Date:	pleted	D	This Period	
<u>▼</u>	< _	Work Completed		Sr Q +	
		M	ပ	From Previous Application (C + D)	
		В	Scheduled	Value	
		А			
			Item		
				Description	
; <del>;</del> ;	Period				
For (contract):	Application Period			Specification Section No.	
<u> </u>	14				

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### Contractor's Application

### Stored Material Summary

For (contract):	t):				Application Number:	nber:			
Application Period:	Period:				Application Date:	:0			
А	В	O		0	Ш		Щ		Ð
Invoice No.	Shop Drawing	Materials Description	Stored F	ē	7	is Month	Incorporated in Work	d in Work	Materials Remaining
	Transmittal No.		Date (Month/Year)	Amount (\$)	Amount (\$)	Subtotal	Date (Month/Year)	Amount (\$)	in Storage (\$) (D + E_F)

### **SECTION 01 00 00**

### **GENERAL REQUIREMENTS**

### PART 1 GENERAL

### 1.1 SECTION SUMMARY

- A. Section Includes:
  - 1. Section Summary
  - 2. Summary of the Work
  - 3. Contractor Use of Premises
  - 4. Applications for Payment
  - 5. Coordination
  - 6. Conferences
  - 7. Progress Meetings
  - 8. Submittal Procedures
  - 9. Quality Assurance / Quality Control of Installation
  - 10. References
  - 11. Protection of Installed Work
  - 12. Parking
  - 13. Progress Cleaning
  - 14. Products
  - 15. Transportation, Handling, Storage and Protection
  - 16. Product Options
  - 17. Substitutions
  - 18. Contract Closeout Procedures
  - 19. Final Cleaning
  - 20. Operation and Maintenance Data

### 1.2 SUMMARY OF THE WORK

- A. Project Description: Perform the Work as specified and detailed in Construction Documents package. Work includes all Stewart Lake hydraulic dredge, building the elevated dewatering facility and related work.
- B. Work by Owner: As stated in instructions to bidders section.
- C. Permits: By Owner

### 1.3 CONTRACTOR USE OF PREMISES

A. Limit use of premises to allow work by others and work by Owner. Any damage to site or facilities by contractor will have to be restored to pre-job condition.

### 1.4 FOR PAYMENT

- A. Submit two (2) copies of each application on enclosed forms.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment, separate by division.
- C. Payment Period: Monthly.

### 1.5 COORDINATION

- A. Coordinate scheduling, submittals, and work of various sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirement characteristics of operating equipment are compatible with site utilities.

### 1.6 CONFERENCES

- A. Dane County Department Public Works, Highway & Transportation will schedule a preconstruction conference after Award of Contract for all affected parties.
- B. When required in individual Specification section, convene a pre-installation conference at project site prior to commencing work of the section.

### 1.7 PROGRESS MEETINGS

- A. Engineer shall schedule and administer meetings throughout progress of the Work at a minimum of one (1) every two weeks.
- B. Engineer shall preside at meetings, record minutes, and distribute copies within four (4) days to those affected by decisions made. These minutes become part of the contract documents.

### 1.8 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, Subcontractor or supplier, bid number, date, manufacturers data sheet, and pertinent Construction Documents references.
- B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with requirements of the Work and Construction Documents.
- C. Identify variations from Construction Documents and Product or system limitations that may be detrimental to successful performance of completing the Work.
- D. Revise and resubmit submittals as required; identify all changes made since previous submittal.

E. Send to Engineer.

### 1.9 QUALITY ASSURANCE / QUALITY CONTROL OF INSTALLATION

- A. Monitor quality control over site conditions, and workmanship, to produce work of specified quality.
- B. Comply fully with manufacturers' instructions as provided by Owner.
- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

### 1.10 REFERENCES

- A. Conform to reference standard by date of issue current as of date for receiving bids.
- B. Should specified reference standard conflict with Construction Documents, request clarification from Public Works Project Engineer before proceeding.

### 1.11 PROTECTION OF INSTALLED WORK

A. Protect installed work and provide special protection where specified in individual Specification sections.

### 1.12 PARKING

A. Temporary parking areas to accommodate construction personnel will be available at staging area north of the lake. Limited parking and site trailer location will be available at the south parking lot.

### 1.13 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.

### 1.14 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components specifically identified for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically identified or allowed by Construction Documents.

### 1.15 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

### 1.16 PRODUCT OPTIONS

A. Engineer & owner reserves right to approve or reject substitutions based on Specification requirements and intended use for all Contractor supplied miscellaneous materials.

### 1.17 SUBSTITUTIONS

A. Approved substitutions shall not change contract price established at Bid Opening.

### 1.18 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Construction Documents have been reviewed, the Work has been inspected, and the Work is complete in accordance with Construction Documents and ready for Engineer/Owner's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Sum / Price, previous payments, and amount remaining due.

### 1.19 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Remove waste and surplus materials, rubbish, and construction facilities from site.

**END OF SECTION** 

### **SECTION 01 11 00**

### SUMMARY OF WORK

### PART 1 - GENERAL

### 1.1 SUMMARY

### A. Section Includes

- 1. References
- 2. Specification Formats and Conventions
- 3. Work Covered by the Contract Documents
- 4. Work Sequence
- 5. Use of Premises
- 6. Work By Others
- 7. Future Work
- 8. Owner-Furnished Products
- 9. Partial Owner Occupancy
- 10. Project Utility Sources
- 11. Miscellaneous Provisions

### 1.2 SUBMITTALS

- A. The Contractor shall provide the following plans for Engineer/Owner review and approval prior to dredging.
  - 1. Equipment selection and facilities sizing information per Section 01 70 00.
  - 2. Dewatering facility development plan and a process flow description per Section 02 16 00.
  - 3. Dredging Plan per Section 02 32 50.
  - 4. Spill prevention/response plan per Section 02 32 50.
  - 5. Plans will be prepared and submitted as separate documents. Provide Engineer two (2) copies of each plan for review and approval.

### B. Operating Submittals

- 1. Weekly work summary report per Section 01 31 00.
- 2. Test reports per Section 01 40 00.
- 3. Operational, Sampling and Analysis Plan per Section 01 40 00.
- 4. QC Bathymetric Survey data per Section 02 32 50.

### 1.3 REFERENCES

### A. Definitions

1. Basic Contract definitions and terminology are included in the General Conditions of the Contract.

- 2. The term "approved," when used to convey Engineer's action on Contractor's submittals, applications, and requests, is limited to Engineer's duties and responsibilities as stated in the General Conditions of the Contract.
- 3. The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

### B. Industry Standards

- 1. Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- 2. Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- 3. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
- 4. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.
- 5. Each section of the specifications generally includes a list of reference standards normally referred to in that respective section. The purpose of this list is to furnish the Contractor with a list of standards normally used for outlining the quality control desired on the project. The lists are not intended to be complete or all inclusive, but only a general reference of standards that are regularly referred to.
- 6. Each entity engaged in construction on the Project shall be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

### 1.4 SPECIFICATION FORMATS AND CONVENTIONS

- A. The Specifications are organized into Divisions and Sections using the 50-division format and CSI's "MasterFormat" numbering system.
- B. The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.

### 1.5 WORK COVERED BY THE CONTRACT DOCUMENTS

### A. Project Identification

- 1. Project Location: 3106 CTY. HWY. JG, Mount Horeb, WI 53572
- 2. Owner: Dane County, Wisconsin

### B. The Work includes:

- 1. Dredging approximately 21,480 (in-situ, including 6-inch overdredge allowance) sediments by hydraulic process. Estimated quantities are noted in the Unit Price/Lump Sum Bid Schedules.
- 2. Performing all required Quality Control and Quality Assurance hydrographic surveys as required by the contract documents.
- 3. Constructing all necessary pipelines and pumps to transport dredge slurry to the dewatering site.
- 4. Development of shoreline staging and debris staging areas as needed for dredging support activities.
- 5. Development of dredge dewatering site for sediment dewatering.
- 6. Providing passive cells or geotextile tubes to dewater dredged sediment.
- 7. Perform pre-dredge dewatering tests as necessary with WDNR agreed flocculate, coagulants, polymers, etc. (dewatering agents) to enhance dewatering efficiency, minimize the need to remove dewatering sediments from the dewatering cells, and stockpile outside of the cell, and ensure compliance with WPDES Discharge Permit.
- 8. Utilize coagulants, flocculants, polymers, etc., as dictated by dewatering tests, only to the extent necessary to obtain dewatering objectives.
- 9. Remove sediments from dewatering cell, as necessary, for efficient dewatering operation.
- 10. Install temporary berms, as necessary, to control flow of stockpiled dewatering sediment outside of dewatering cell boundaries and to keep all sediment within the allowable limits shown on the plans.
- 11. Stockpile dewatered sediments, as necessary, at designated areas on the County's property.
- 12. Provide orange safety fencing and appropriate safety signage (Drawing 11 Details) to encompass the dewatering site settling ponds.
- 13. Provide piping and any required water treatment to return decant water to Stewart Lake in accordance with permit conditions.
- 14. Restore all disturbed shoreline areas, pipeline corridors, and other properties to pre-project condition. Repair and replace all bituminous and/or concrete drives and roads to pre-project conditions.
- 15. Disposal of all waste products including but not limited to trash and construction debris at an approved shoreline site.

### 1.6 WORK SEQUENCE

- A. Work shall be conducted in the following general sequence and within the specified schedule.
  - 1. All dredging will be completed by October 15, 2009.
  - 2. Provide required submittals to the Engineer for approval.
    - a. Preconstruction submittal approvals shall be issued by the Engineer subject to timely reviews by outside parties (i.e., Owner and its contractors as well as assistance with regulatory permits).
  - 3. Mobilization and Site Preparation:
    - a. August 3 through August 14, 2009 or earlier if DNR permits & County approval is obtained.
  - 4. Build dewatering facility.
  - 5. Dredging:
    - a. August 17 through October 15, 2009 or earlier if DNR permits & County approval is obtained.
  - 6. Dewatering and Water Treatment: August 7 through completion of dredging and dewatering of dredged material, except as otherwise agreed to by Owner and Contractor.
  - 7. Restoration of the booster pump station, shoreline, and debris staging areas, pipeline corridors, roadways and driveways and private properties by December 31, 2009. Restoration of dewatering berms and adjacent area is by owner.
  - 8. Sediment management and stockpiling, as required for efficient dewatering operations and effluent monitoring to meet permit requirements, to be completed by December 31, 2009.

### 1.7 USE OF PREMISES

- A. Contractor shall have full use of the premises for construction operations (except: south parking lot, dam, and stop log access), including use of the Project Site, as allowed by law, ordinances, permits, easement agreements and the Contract Documents.
- B. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of the Project.
- C. The Project Site is limited to property boundaries, rights-of-way, and other areas designated in the Contract Documents.
- D. Provide protection and safekeeping of material and products stored on or off the premises as purchased by the Contractor or its subcontractors and vendors.
- E. Move any stored material or products which interfere with operations of Owner or other Contractors as purchased by the Contractor or its subcontractors and vendors.
- F. Public access to Stewart Lake shall be restricted by Owner during dredging operations.

G. Contractor shall have full use of North Parking Lot (staging area).

### 1.8 PROJECT UTILITY SOURCES

A. Contractor will assume all utility costs for the booster pump station and dewatering site operations.

### 1.9 MISCELLANEOUS PROVISIONS

- A. Contractor shall abide to project WPDES Permit standards for discharge of decant water to Stewart Lake.
- B. Contractor shall demonstrate to the WDNR's satisfaction that the dewatering agent dosage rate(s) is effective at controlling discharge water quality and is at a dosage that will meet WDNR requirements and standards.
  - 1. Contractor must use dewatering agent(s) approved by the WDNR for compliance with the discharge permit for this project.
  - 2. Testing Protocol:
    - a. Contractor shall provide a testing protocol for WDNR approval prior to implementation.
    - b. Testing protocol shall be as follows:
      - i. Determined via general WPDES Permit conditions.
- C. Contractor shall apply noise abatement for all dredging and dewatering operations such that noise does not exceed 85 db at 50 meters from the source for all areas during operations.
- D. Contractor is responsible for installation of security fencing and signage surrounding the entire dewatering facility. The fencing and signage shall remain in-place and turned over to owner for use by the Owner after Contractor's work is complete.
- E. Contractor is responsible to protect from damage, erosion, and sediment control features installed by Owner at all project areas. Repairing Contractor-related damage to these features shall be the responsibility of the Contractor.
- F. Contractor is responsible to install and maintain stone tracking pad at the dewatering facility as indicated on the Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION** 

### **SECTION 01 15 08**

### **RECYCLING**

### PART 1 GENERAL

### 1.1 SUMMARY

- A. Section Includes:
  - 1. Waste Management Goals
  - 2. Waste Management Plan
  - 3. Reuse
  - 4. Recycling
  - 5. Materials Sorting and Storage On Site
  - 6. Lists of Recycling Facilities Processors and Haulers
  - 7. Waste Management Plan Form

### B. Related Sections:

- 1. Section 01 10 00 Basic Requirements
- 2. Section 01 15 00 Temporary Facilities and Controls

### 1.2 WASTE MANAGEMENT GOALS

- A. Dane County requires that as many waste materials as possible produced as result of this project be salvaged, reused or recycled in order to minimize impact of construction waste on landfills and to minimize expenditure of energy and cost in fabricating new materials. Additional information may be found in The Dane County Green Building Policy, Resolution 299, 1999-2000.
- B. Contractor shall develop, with assistance of Public Works Project Engineer and Architect / Engineer, Waste Management Plan (WMP) for this project. Outlined in RECYCLING section of this specification are examples of materials that can be recycled or reused as well as recommendations for waste sorting methods.

### 1.3 WASTE MANAGEMENT PLAN

- A. Contractor shall complete WMP and include cost of recycling / reuse in Bid. WMP will be submitted to Public Works Project Engineer within fifteen (15) days of Notice to Proceed date. Copy of blank WMP form is in this Section. Submittal shall include cover letter and WMP form with:
  - 1. Information on:
    - a. Types of waste materials produced as result of work performed on site;
    - b. Estimated quantities of waste produced;
    - c. Identification of materials with potential to be recycled or reused;
    - d. How materials will be recycled or reused;
    - e. On-site storage and separation requirements (on site containers);

- f. Transportation methods; and
- g. Destinations.

### 1.4 REUSE

A. Contractors and subcontractors are encouraged to reuse as many waste materials as possible. Salvage should be investigated for materials not reusable on site.

### 1.5 RECYCLING

- A. These materials can be recycled in Dane County area:
  - 1. Wood.
  - 2. Wood Pallets.
  - 3. Fluorescent Lamps.
  - 4. Foam Insulation & Packaging (extruded and expanded).
  - 5. PVC Plastic (pipe, siding, etc.).
  - 6. Asphalt & Concrete.
  - 7. Bricks & Masonry
  - 8. Corrugated Cardboard.
  - 9. Metal.
  - 10. Carpet Padding.
  - 11. Gypsum Drywall.
  - 12. Shingles.
  - 13. Barrels & Drums.
  - 14. Solvents.

### 1.6 MATERIALS SORTING AND STORAGE ON SITE

- A. Contractor shall provide separate containers for recyclable materials. Number of containers will be dependent upon project and site conditions.
- B. Contractor shall provide on-site locations for subcontractors supplied recycling containers to help facilitate recycling.

### 1.7 LISTS OF RECYCLING FACILITIES PROCESSORS AND HAULERS

A. Web site <a href="https://www.countyofdane.com">www.countyofdane.com</a> has recycling symbol (link) near top of page that lists current information for Dane County Recycling Markets. Contractors can also contact Dane County's Recycling Manager at 608/267-8815, or local city, village, town recycling staff listed in above referenced web site. Statewide listings of recycling / reuse markets at available from Wisconsin Department of Natural Resources, <a href="https://www.dnr.state.wi.us/org/aw/wm/markets">www.dnr.state.wi.us/org/aw/wm/markets</a>.

Recycling 01 15 08 - 2

### 1.8 WASTE MANAGEMENT PLAN FORM

A.	Contractor Information:		
	Name:		
	Address:		
	Phone No.:	Recycling Coordinator:	

MATERIAL	ESTIMATED QUANTITY	DISPOSAL METHOD (CHECK ONE)	RECYCLING / REUSE COMPANY OR DISPOSAL SITE
Salvaged &	cu. yds.	Recycled Reused	
reused building materials	tons	Landfilled Other	Name:
Glass	cu. yds.	Recycled Reused	
Glass	tons	Landfilled Other	Name:
Wood	cu. yds.	RecycledReused	
wood	tons	Landfilled Other	Name:
Wood Pallets		RecycledReused	
wood Pallets	units	Landfilled Other	Name:
Fluorescent	cu. ft.	Recycled Reused	
Lamps	lbs.	Landfilled Other	Name:
Francisco Insulation	cu. ft.	Recycled Reused	
Foam Insulation	lbs.	Landfilled Other	Name:
Asphalt &	cu. ft.	Recycled Reused	
Concrete	lbs.	Landfilled Other	Name:
Bricks &	cu. ft.	RecycledReused	
Masonry	1bs.	Landfilled Other	Name:
PVC Plastic	cu. ft.	Recycled Reused	
PVCFlastic	lbs.	Landfilled Other	Name:
Corrugated	cu. ft.	Recycled Reused	
Cardboard	lbs.	Landfilled Other	Name:
Metals	cu. yds.	Recycled Reused	
IVICIAIS	tons	Landfilled Other	Name:
Carpet Padding	cu. ft.	Recycled Reused	
Carpet r adding	lbs.	Landfilled Other	Name:
Gypsum /	cu. yds.	Recycled Reused	
Drywall	tons	Landfilled Other	Name:

Shingles	cu. yds.		Reused Other	Name:
Barrels & Drums	units		Reused Other	Name:
Solvents	gallons		Reused Other	Name:
Other		Recycled Landfilled	Reused Other	Name:
Other			Reused Other	Name:
Other		Recycled Landfilled	Reused Other	Name:
Other		Recycled Landfilled	Reused Other	Name:
Other		Recycled Landfilled L	Reused Other	Name:

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

**END OF SECTION** 

## **SECTION 01 22 01**

# MEASUREMENT AND PAYMENT

#### PART 1 - GENERAL

#### 1.1 SUMMARY

## A. Section Includes

- 1. Project Operation and Implementation
  - a. Mobilization and Demobilization
  - b. Site Preparation Stewart Lake Access and Dewatering Facility
  - c. Project Management
  - d. Site Health and Safety
  - e. Insurance
  - f. Dewatering Site Development
  - g. Dredging and Dewatering of Sediment
  - h. Dewatered Sediment Management

# B. Prices to Include Complete Project

- 1. Prices include defined Work for each payment method and payment item which will provide a functionally complete Project when combined with all payment items and payment methods.
- 2. If there are specific work items that the Contractor believes are not identified in any payment method and payment item, but are required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate payment item and payment method.
- 3. The project shall be bid as follows:
  - a. Bid Schedule "A" Dredging and Dewatering of 21,480 CY of Stewart Lake sediment and dewater in dewatering cell.
  - b. Deductive Bid Item The Owner may elect to self perform work described under Bid Alternate A, Dewatering Site Topsoil Removal and Stockpiling.
  - c. Deductive Bid Item The Owner may elect to perform less dredging as described under Bid Alternate B, Dredging Sediments.
  - d. Deductive Bid Item the Owner may elect to have Engineer perform pre- and post-dredge QA hydrographic surveys as described under BidAlternate C.
- 4. Where unit prices are specified, unit prices in Bid shall remain valid for actual quantities dredged, dewatered, and managed (Bid Items 5, 6 and 8), that are +/-20% of the estimated quantity.

# 1.2 PROJECT OPERATION AND IMPLEMENTATION

# A. Mobilization and Demobilization (Item 1)

- 1. The lump sum price for Mobilization work includes:
  - a. Moving equipment, materials and personnel to the Site.

- b. Documentation of equipment decontamination for control of VHS and other waterborne invasives.
- c. Set up of equipment for operation.
- d. Performance of all pre- and post-dredge QA hydrographic survey work as required by the contract documents.
- e. Ingress and egress of dredge to Stewart Lake.
- f. Payment for mobilization will be made in one 50% lump sum when all equipment, materials and personnel are in place and ready for operation.
- 2. The lump sum price for Demobilization work includes:
  - a. Removal of all Contractor-supplied equipment and materials from the Site.
  - b. Cleaning of the Site, including the dewatering pad, access roads, and any other surfaces, unless such cleaning is otherwise limited by agreement with Owner.
  - c. Removal and proper disposal of any decontamination fluids and chemicals, silt curtain debris, and spilled sediment from the completed dredging.
  - d. Washing of sediment from external surfaces of equipment and facilities not normally in contact with sediment.
  - e. Decontamination of water utilized equipment and documentation of equipment decontamination for control of VHS and other waterborne invasives.
  - f. Repair of pavements and other surfaces (e.g. turf at staging areas) damaged by the Contractor during this work.
  - g. Payment for demobilization will be made in one 50% lump sum when all equipment, materials and personnel are removed from the site and the aforementioned items have been completed.
- B. Stewart Lake Access Site Preparation (Item 2)
  - 1. The lump sum price for Stewart Lake Access Site Preparation includes:
    - a. Examination of existing conditions.
    - b. Temporary Facilities and Controls as necessary
    - c. Providing as necessary and maintaining on-site facilities including, but not limited to, clearing and grubbing, topsoil stripping and stockpiling, fencing, temporary dock, and sanitary facilities for employees. Shoreline and debris staging areas development shall be limited to areas as shown on Drawings.
    - d. Site Coordination
      - 1) Coordinate Site preparation work with other contractors, if any, retained by Owner.
  - 2. Payment will be made in one lump sum when the Stewart Lake Access Site Preparation work is complete and accepted by Owner and Engineer.
- C. Dewatering Site Topsoil Removal and Stockpiling (Item 3)
  - 1. The lump sum price for topsoil removal and stockpiling at the dewatering facility includes but is not limited to:
    - a. Clearing, grubbing, and topsoil removal of dewatering facility and topsoil stockpile location.
    - b. Protection from damage of existing permanent stormwater controls located at the site.

- 2. Payment will be a lump sum when topsoil removal and stockpiling at dewatering facility is complete and accepted by Engineer, and the site is ready for construction of the dewatering facility.
- D. Dewatering Site Development Dewatering Site/Effluent Discharge System Construction (Item 4)
  - 1. The lump sum price for dewatering site and effluent discharge system construction at the dewatering facility includes but is not limited to:
    - a. Site inspection.
    - b. Construction of a dewatering facility of adequate proportion to provide sediment removal to achieve WPDES discharge standards and sediment dewatering to meet requirements of the contract documents.
    - c. Pipeline route determination and construction of pipeline from Stewart Lake to dewatering site (influent line). Location of influent pipeline route shall be approved by Owner and Engineer prior to installation.
    - d. Protection of existing permanent stormwater controls located at the site from damage.
    - e. Installation and maintenance of temporary security fencing and warning signage surrounding the dewatering facility.
    - f. Construction of dewatering facility decant water collection and discharge system.
    - g. Pipeline route determination and construction of pipeline from dewatering site to Stewart Lake (effluent line). Location of effluent pipeline route shall be approved by Owner and Engineer prior to installation.
    - h. Installation of anchored effluent discharge structure as indicated on the Drawings.
    - i. Supply and installation of all valves and appurtenances needed for slurry and decant water management required for the dewatering facility development.
  - 2. Construction of Dewatering Facility shall not occur outside of the hours of 6:00 a.m. to 4:30 p.m., Monday through Friday, and 6:00 a.m. to 12:00 p.m., on Saturday, without prior consent of the Owner.
  - 3. Payment will be a lump sum when dewatering facility is accepted by Owner and Engineer and the site is ready for operation.
- E. Dredging Sediments (Item 5)
  - 1. The unit price for Dredging Sediments work includes:
    - a. Marking the lateral extent of planned dredge areas with buoys.
    - b. Acquisition, operation and maintenance of hydraulic dredge equipment, booster pump, and adequate pipelines to pump slurry to dewatering site.
    - c. Incidental removal of debris, cobbles, wood and other rubble prior to dredging as required to perform hydraulic sediment removal.
    - d. Environmental protection.
    - e. Safety equipment including lights and other facilities, as necessary. This includes, but is not limited to, the placement and maintenance of buoys that identify where the work is progressing.
    - f. Standby equipment as required to maintain continuous operation.
    - g. Suspension of operations due to inclement weather.

- h. Minimum of weekly post-dredge quality control (QC) bathymetric surveys to verify and inform Owner that dredging operation is achieving planned target elevations.
- i. Provide access and facilities for Owner to perform field quality assurance sampling and testing.
- j. Re-dredging areas found to not meet the planned target elevations in the QC and/or QA bathymetric surveys.
- k. Overdredge allowance of 6-inches will be permitted.
- 1. Dredging operations may be conducted 24 hours/day, Monday through Saturday.
- m. Perform project administrative activities in accordance with Sections 01 31 00 and 01 31 19, including but not limited to, cooperation with regulatory and Owner/Engineer requests for information, participation in project meetings, and providing and implementing a Health & Safety Plan for site workers.

# 2. Dredging Requirements:

- a. Contractor shall in good faith attempt to dredge 100% of the areas shown on the Project Drawings to the lateral extent and depths shown.
- b. Contractor understands that the retainage may be forfeited and other penalties may apply under this Contract for a failure to attain removal to the targeted lateral extent and elevation over at least 90% of the project area as determined by the Engineer.
- 3. General Payment Requirements
  - a. Contractor shall be paid for dredging sediments at the unit price set forth in the Agreement.
  - b. Progress payments shall be based on the corresponding quantity for sediments removed in any given area at the time of payment request, as set forth in the Agreement.
  - c. Contractor shall not be compensated for overdredge exceeding the stated allowance as measured by dividing the total overdredge volume by the total area dredged, as determined by the Engineer.
  - d. Payment for all OC hydrographic surveys shall be incidental to this bid item.
- 4. The Contractor will perform a pre-dredge QA survey to verify existing conditions and use as the basis for dredge quantities determination when dredging is complete. All QA hydrographic surveys shall be conducted using RTK GPS equipment. Owner/Engineer will witness all QA surveys performed by the Contractor by being aboard the survey vessel during the conduct of each QA survey.
- 5. A post-dredge QA bathymetric survey is required to confirm attainment of the target elevations as required for payment purposes. This survey will be performed at the completion of dredging by the Contractor and witnessed by the Owner/Engineer to document both attainment of target elevation in at least 90% of the design dredge area, and to determine the dredge volume for payment. Determination of target elevation attainment and volume computations will be prepared by the Owner/Engineer using unedited pre- and post-dredge QA hydrographic survey data provided by the Contractor. Contractor will use Engineer-approved volume computations for payment quantities. Target elevations will be measured to one-tenth of one foot for evaluation by Engineer that the target elevations have been achieved. Contractor will be compensated for

the actual sediment volume removed at the unit price set forth in the Unit Price Bid Schedule. However, Contractor shall not be compensated for dredge volumes in excess of the value stated in Bid Item 5 (or deductive Alternate 5 if selected by the Owner).

- F. Sediment Dewatering Operations (Item 6).
  - 1. The unit rate for Sediment Dewatering Operations work includes;
    - a. Operation and maintenance of dewatering facilities.
    - b. Discharge of effluent back to the Lake.
    - c. Any required dewatering agent addition and associated metering and pumping equipment to achieve WPDES discharge standards.
    - d. Geotextile tubes and appurtenances (if utilized).
  - 2. Dewatering is to be performed on a "means and methods" basis, meaning that Contractor has ultimate responsibility to perform, to the best of its abilities and based upon its knowledge and experience, the dredging and dewatering actions to achieve efficient and effective dewatering of sediments; to maximize the workability, dryness, and strength of the dredged sediments; and at all times, remain in compliance with permit requirements. Contractor, however, must provide recommendations to, and consult with Owner regarding the following items, and Owner retains the right to direct Contractor, in good faith, as to the following items.
    - a. Dewatering chemistry.
    - b. Sediment dewatering operations and maintenance of discharge structures to optimize dewatering and minimize stockpiling of sediments outside of the dewatering cells.
  - 3. Dewatering operations may be conducted continuously over the dredging and dewatering time frames.
  - 4. If geotextile tubes are the proposed dewatering method, stacking of the tubes will not be allowed.
  - 5. Monitoring of effluent for adherence to permit conditions and providing data to regulatory agencies during the active dredging period.
  - 6. General Payment Requirements
    - a. Dewatering payment schedule shall be the same time period as Dredging sediments.
    - b. Payment shall be paid for dewatering sediments at the unit price set forth in the Agreement.
    - c. Quantities for payment shall be the same as for Dredging Sediments.
- G. Mobilization and Demobilization of Debris Removal Equipment (Item 7A)
  - 1. The lump sum price for Mobilization work includes:
    - a. Moving debris removal equipment, materials and personnel to the Site.
    - b. Documentation of equipment decontamination for control of VHS and other waterborne invasives.
    - c. Set up of equipment for operation.
    - d. Payment for mobilization will be made in one 50% lump sum when all debris removal equipment, materials and personnel are in place and ready for operation.
  - 2. The lump sum price for Demobilization work includes:

- a. Removal of all Contractor-supplied debris removal equipment and materials from the Site.
- b. Cleaning of the Site, including the debris staging area, access roads, and any other surfaces, unless such cleaning is otherwise limited by agreement with Owner.
- c. Removal and proper disposal of any decontamination fluids and chemicals.
- d. Washing of sediment from external surfaces of equipment and facilities not normally in contact with sediment.
- e. Decontamination of water utilized equipment and documentation of equipment decontamination for control of VHS and other waterborne invasives.
- f. Repair of pavements and other surfaces damaged by the Contractor during this
- g. Payment for demobilization will be made in one 50% lump sum when all debris removal equipment, materials and personnel are removed from the site and the aforementioned items have been completed.

#### Oversize Material Removal (Item 7B) H.

- The tonnage price for Oversize Material (Debris) Removal work includes:
  - a. Locating and removing major debris from the dredge areas and staging at the area shown on the Drawings, as necessary. Owner will load and transport from the staging area to a proper disposal site and pay the tipping fee.
  - b. Debris may include, but is not limited to, trees/wood, metal, concrete, etc, that cannot be removed by hydraulic dredging.
  - c. Owner agrees to pay Contractor for debris removal totaling no more than the total price set forth in the Unit Price Bid Schedule for this bid item. If the debris removal reaches this upper limit, Owner may direct the Contractor to leave additional debris in-place and dredge around it, or may opt to negotiate a change order for additional debris removal. Tonnage shall be verified by Engineer through review of certified scale tickets received from the approved disposal facility.
  - d. Transportation and disposal of removed debris shall be the responsibility of the Owner.
- I. Sediment Management and Stockpiling of Sediment (Item 8)
  - The unit price for sediment management and stockpiling, based upon the Dredge Sediments quantity includes:
    - Removal of sediments from the dewatering cell (as needed) to promote drying and maintain sediment removal efficiency of the dewatering cell for WPDES compliance, and stockpiling of the sediment in the areas shown on the Drawings.
    - b. Install temporary berms as necessary to control flow of stockpiled dewatering sediment outside of dewatering cell boundaries.
    - c. Maintaining adequate access into the dewatering cell and to the stockpile area to perform sediment management.
    - d. Replacing any stone from the dewatering cell lost during sediment management activities or adversely impacted that would reduce its drainage capacity.

- e. Monitoring, managing, and staggering of geotextile fill sequence (if utilized) to optimize tube filling and dewatering.
- f. Cleaning up and restoring dewatering pad in the event of geotextile to be rupture, and moving released sediment to confined area for continued dewatering in compliance with permit conditions and the contract documents.
- g. Monitoring of effluent for adherence to permit conditions and providing data to regulatory agencies from the completion of dredging through December 31, 2009.
- 2. Stockpiling operations shall not occur outside of the hours of 6:00 a.m. to 4:30 p.m. Monday through Friday and 6:00 a.m. to 12:00 p.m., on Saturday, without prior consent of the Owner.
- 3. Stockpiling will be conducted on County's property adjacent to the dewatering facility as shown on the Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

#### **SECTION 01 29 00**

## PAYMENT PROCEDURES

# PART 1 - GENERAL

## 1.1 SUMMARY

- A. This section includes:
  - 1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

## 1.2 SCHEDULE OF VALUES

- A. Unit price work will be the Schedule of Values used as the basis for reviewing Applications for Payment.
- B. Format and Content
  - 1. Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each specification section.
  - 2. Include the following project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of Engineer.
    - c. Engineer's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  - 3. Arrange the Schedule of Values per specification section with the following subdivisions, description of work and dollar values for each:
    - a. Subcontractor work.
    - b. Manufacturer or fabricator.
    - c. Supplier.
    - d. Contractor work.
  - 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
  - 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
  - 6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - 7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
  - 8. Provide a separate line item in the Schedule of Values for each allowance. Show line item value of unit cost allowances as a product of the unit cost multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

- 9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense at Contractor's option.

## 1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as recommended by the Engineer and approved by Owner.
- B. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 10 days before the date for each progress payment.
- C. Requests for progress payments shall be at least 10 days before the date established for each progress payment, but not more often than once a month.
- D. Use form, EJCDC C-620 Contractors Application for Payment, to apply for Progress and Field Payments.
- E. Application Preparation Procedures
  - 1. When requested by the Contractor, the Engineer will determine the actual quantities and classifications of Unit Price Work performed.
    - a. Preliminary determinations will be reviewed with the Contractor before completing Application for Payment.
    - b. Engineer will complete the Application for Payment based on Engineer's decision on actual quantities and classifications.
    - c. Engineer will submit three (3) original copies of Application for Payment to Contractor for certification of all three (3) original copies.
    - d. Contractor shall submit signed Application for payment to Owner for approval within time frame agreed to at the Preconstruction Conference.
  - 2. For a lump sum price contract, the Contractor shall prepare a preliminary determination for payment based on the approved Schedule of Values and review with Engineer before completing Application for Payment.
    - a. Submit all three (3) original signed copies of Application for Payment to Engineer with signed certification within time frame agreed to at the Preconstruction Conference.
    - b. Engineer will submit all three (3) original copies of the Application for Payment with recommendation to Owner.
  - 3. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
    - a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.
    - b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.

- c. Evidence that the materials and equipment are covered by property insurance.
- 4. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- F. With each Application for Payment, submit waivers of liens from subcontractors and suppliers for the construction period covered by the previous application.
  - 1. Submit partial waivers on each item for amount requested before deduction for retainage on each item.
  - 2. When an application shows completion for an item, submit final or full waivers.
  - 3. Owner reserves the right to designate which entities involved in the Work shall submit waivers.
  - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application.
  - 5. Submit waivers of lien on forms executed in a manner acceptable to Owner.
- G. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's construction schedule.
  - 4. Copies of building and other permits.
  - 5. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- H. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including, but not limited, to the following:
  - 1. Evidence of completion of Project closeout requirements.
  - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees and similar obligations were paid.
  - 3. Updated final statement, accounting for final changes to the Contract Sum.
  - 4. Consent of Surety to Final Payment.
  - 5. Final lien waivers as evidence that claims have been settled.
  - 6. Final liquidated damages settlement statement.
  - 7. Payrolls to show compliance with prevailing wage rates. The Owner will provide prevailing wage rates in an addendum to this specification.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

#### **SECTION 01 31 00**

# PROJECT ADMINISTRATION AND COORDINATION

#### PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on the Project including, but not limited to, the following:
  - 1. Administrative and Supervisory Personnel
  - 2. Quality Control Construction Progress Documentation
  - 3. Attendance at Project Meetings

## 1.2 COORDINATION

- A. Coordinate construction operations included in different Sections of the Specifications to allow efficient and orderly completion of each part of the Work.
- B. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection and operation.
- C. Coordinate installation of different components to allow maximum performance and accessibility for required maintenance, service, and repair of all components.

# D. Administrative Procedures

- 1. Provide and implement administrative procedures to include, but are not limited to, the following activities:
  - a. Preparation of Contractor's Construction Schedule.
  - b. Installation and removal of temporary facilities and controls.
  - c. Delivery and processing of submittals.
  - d. Progress meetings.
  - e. Project closeout activities.

## 1.3 CONSTRUCTION PROGRESS DOCUMENTATION

- A. Prepare and maintain a work activity report for each day on which Work is performed by any personnel or entity for which the Contractor is responsible for their activities. Report shall include, but not be limited to, the following:
  - 1. All relevant data and information concerning the progress of work activities including those of Subcontractors, suppliers and other Owner contractors.
  - 2. Document the effect of that activities have on the time of performance of the Contract and/or the cost thereof.
  - 3. Document relevant data and information concerning measurement and payment of the completed Work.

- 4. Document data and information required to be maintained concerning dredging, dewatering, water treatment and erosion control (see Section 01 40 00, "Quality Requirements").
- 5. The Contractor's project superintendent or other on-site authorized representative shall complete and sign the daily work activity reports.
  - a. Maintain the daily activity report to assure that the information is current, accurate and complete.
  - b. The signature of the Contractor's authorized representative shall constitute a warranty to Owner that, after suitable inquiry, to the best of their knowledge and belief, that all such data is current, accurate and complete as of the date of the report.
- B. Maintain schedules of quantities, costs, progress schedules, wage rates, reports, estimates, invoices, records and other information concerning work performed or to be performed that is needed to substantiate Change Order proposals, claims, or to resolve disputes.

# 1.4 SUBMITTALS

A. Submit documents as outlined in the following table:

Document	Owner/Engineer	Contractor
Daily Work Activity Report <sup>1</sup>		X

1. Daily Work Activity Reports shall be submitted weekly to the Engineer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

## **SECTION 01 31 19**

#### **PROJECT MEETINGS**

#### PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project meetings including, but not limited to, the following:
  - 1. Preconstruction conferences.
  - 2. Progress meetings

# 1.2 PRECONSTRUCTION CONFERENCE

- A. Engineer will schedule a preconstruction conference within 20 days after the Contract Times start to run and before Work at the site is started.
- B. Authorized representatives of the Owner, Engineer, the Contractor and its superintendent; major subcontractors; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to make binding decisions of matters relating to the Work.
- C. The purpose of the Preconstruction Conference is to:
  - 1. Establish a working understanding among the parties as to the Work.
  - 2. Discuss the following preliminary schedules prepared by the Contractor.
    - a. Progress schedule.
    - b. Shop drawing and sample submittals.
    - c. Schedule of values for all of the Work.
  - 3. Processing Applications for Payment.
  - 4. Maintaining required records.
  - 5. Other Project requirements.

## 1.3 PROGRESS MEETINGS

- A. Progress meetings at the Project site will be scheduled by the Engineer at regular intervals.
- B. In addition to representatives of the Owner, the Engineer and the Contractor, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to make binding decisions on matters relating to the Work.
- C. Items of significance will be reviewed that could affect progress.

GEV PROJECT MEETINGS

- 1. Review progress since the last meeting. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether scheduled revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
- 2. Review the present and future needs of each entity present, including the following:
  - a. Interface requirements.
  - b. Time.
  - c. Sequences.
  - d. Status of submittals.
  - e. Deliveries.
  - f. Off-site fabrication problems.
  - g. Access.
  - h. Site utilization.
  - i. Temporary facilities and services.
  - i. Hours of work.
  - k. Hazards and risks.
  - 1. Housekeeping.
  - m. Quality and work standards.
  - n. Change orders.
  - o. Documentation of information for payment requests.

Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule within 5 days after each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION** 

GEV PROJECT MEETINGS

## **SECTION 01 40 00**

# **QUALITY REQUIREMENTS**

# PART 1 - GENERAL

## 1.1 SUMMARY

# A. Section Includes

- 1. Administrative and procedural requirements for quality assurance and quality control.
- 2. Regulatory Requirements
- 3. References

# 1.2 QUALITY CONTROL

## A. General

- 1. Specific quality assurance and quality control requirements for individual construction activities are specified in the Sections that specify those activities.
- 2. Specific tests, inspections, and related actions do not limit Contractor's other quality control procedures that facilitate compliance with the Contract Document requirements.
- 3. Quality control is generally defined as being provided by Contractor, quality assurance is generally provided by Engineer.

# B. Conflicting Requirements

- 1. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
- 2. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
- 3. The quantity or quality level shown or specified shall be the minimum provided or performed.
  - a. The actual performance may comply with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits.
  - b. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.
  - c. Refer uncertainties to the Engineer for a decision before proceeding.

# C. Submittals

- 1. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
  - a. Specification Section number and title.
  - b. Description of test and inspection.
  - c. Identification of applicable standards.
  - d. Identification of test and inspection methods.

- e. Number of tests and inspections required.
- f. Time schedule or time span for tests and inspections.
- g. Entity responsible for performing tests and inspections.
- h. Requirements for obtaining samples.
- 2. Reports: Prepare and submit certified written reports that include the following:
  - a. Date of issue.
  - b. Project title and number.
  - c. Name, address, and telephone number of testing agency.
  - d. Dates and locations of samples and tests or inspections.
  - e. Names of individuals making tests and inspections.
  - f. Description of the Work and test and inspection method.
  - g. Identification of Specification Section.
  - h. Complete test or inspection data.
  - i. Test and inspection results and an interpretation of test results.
  - j. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  - k. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 1. Name and signature of laboratory inspector.
  - m. Recommendations on retesting and reinspecting.
- 3. Submit to Owner copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- 4. Tests and inspections not explicitly assigned to Owner/Engineer are Contractor's responsibility.
- 5. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction.
- 6. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
- 7. Notify Engineer for required testing at least 24 hours in advance of time when Work that requires testing or inspecting by the Engineer will be performed.
- 8. Coordinate sequence of activities to accommodate required quality assurance and quality control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

# 1.3 OPERATIONAL, SAMPLING AND, ANALYSIS PLAN

- A. Contractor shall prepare an Operational, Sampling, and Analysis Plan.
- B. Specific elements of the Operational, Sampling and Analysis Plan that shall be maintained, recorded and reported include, but not be limited to, the following:
  - 1. Dredging Operation Record Daily:
    - a. A log of the dates and times that dredging takes place and the approximate hours of actual dredging each day.
    - b. A description of the location of the dredging work each day and a site plan drawing showing the location of dredging work.

- c. An estimate of in-situ volume of sediment dredged with daily estimates rectified on a weekly basis based on weekly QC post-dredge surveys conducted by Contractor.
- d. A list of the equipment on the site with a notation as to the approximate hours of use for each dredge, scow, barge, tug or other operating equipment.
- e. A description of any large debris encountered and the procedure used to remove and dispose of it as approved by Owner.
- f. A description of any accidents, pipe breaks, equipment failures or spills which occur and a description of corrective measures taken.
- g. At a minimum, weekly QC bathymetric surveys of the sediment dredging area performed by the Contractor with the data transmitted weekly to the Engineer.
- h. Upon completion of dredging, provide one copy of all records to the Engineer.
- 2. Sediment Dewatering and Water Treatment:
  - a. Comply with the sediment dewatering specification and WDPES permit requirements.
  - b. As a minimum, maintain, record and report the following information of dewatering operations and make available to the Engineer within 24 hours of work, if possible:
    - i. Estimate of cubic yards delivered to dewatering facility each day;
    - ii. Estimate of cubic yards dewatered sediments at dewatering facility.
    - iii. Estimate of gallons or pounds of polymer, coagulants, flocculants, etc. used daily to aid settling and meet TSS discharge standards.
    - iv. Estimate of cubic yards of dewatered sediment removed from the dewatering cells and stockpiled adjacent in areas indicated on drawings.
    - v. Reports describing all spills, accidents, equipment failures or other unforeseen events and corrective actions taken;
    - vi. Observations and test results of decant water discharge TSS and any other effluent monitoring per permit conditions.
  - c. Make all records available for review by Owner at any reasonable time during the Work.
  - d. One bound copy of all records shall be delivered to Engineer upon completion of dewatering work.
- 3. Erosion Control:
  - a. Erosion control performed by Owner, except as otherwise stated in the Contract Documents.
  - b. Comply with Best Management Practices.
  - c. Provide erosion control inspection summaries and repair records.
  - d. Make all records available for review by Owner at any reasonable time during the Work.
  - e. One bound copy of all records shall be delivered to Engineer upon completion of dewatering work.
  - f. Procedures for protecting all dewatering area internal berms where water flow occurs against erosion.
- 4. Effluent Record daily the following:
  - a. Estimated decant water volumes discharged to the lake.
  - b. Operation and maintenance activities.
  - c. Water quality standards compliance per WPDES Permit.

## 1.4 REFERENCES

A. The following standards or organizations referenced in his specification are as follows:

AASHTO American Association of State Highway and Transportation Officials

ABMA American Boiler Manufacturers Association

ACPA American Concrete Pipe Association

AGA American Gas Association

AMCA Air Movement and Control Association
ANSI American National Standards Institute

ARI Air Conditioning and Refrigeration Institute
ASME American Society of Mechanical Engineers
ASPE American society of Plumbing Engineers
ASSE American Society of Sanitary Engineering
ASTM American Society for Testing and Materials

AWWA American Water Works Association

AWS American Welding Society
CISPI Cast Iron Soil Pipe Institute

CS Commercial Standards, Products Standards Sections, Office of Eng.

Standards Service, NBS

EPA Environmental Protection Agency

FS Federal Specifications, Superintendent of Documents, U.S. Government

**Printing Office** 

IAPMO International Association of Plumbing & Mechanical Officials

IEEE Institute of Electrical and Electronics Engineers

ISA Instrument Society of America

MSS Reference is made to the "standard specifications", it shall be construed to

mean the pertinent Manufacturer's Standardization Society of the Valve &

Fitting Industry, Inc.

NBS National Bureau of Standards

NEC National Electric Code

NEMA National Electrical Manufacturers Association

NFPA National Fire Protection Association NSF National Sanitation Foundation

PDI Plumbing and Drainage Institute

STI Steel Tank Institute

UL Underwriters Laboratories Inc.

# 1.5 SUBMITTALS

# A. Quality Control Submittals

- 1. Submit Operational, Sampling and Analysis Plan (Plan)
- 2. Provide data and information generated as required by the Plan to Owner and Engineer at each weekly progress meeting.

## **SECTION 01 41 00**

# **REGULATORY REQUIREMENTS**

#### PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes
  - 1. Underground Utilities
  - 2. Dewatering
  - 3. Property Monuments

# 1.2 UNDERGROUND UTILITIES

A. Under the provisions of Wisconsin Statutes, Section 182.0175, all contractors, subcontractors, and any firm or individual intending to do work on this contract shall contact all utility firms in the affected area of construction a minimum of three (3) working days prior to beginning construction so that affected utilities will be located and marked.

# 1.3 DREDGING

- A. WDNR Dredging Permits have been applied for by the Owner. The application is included as Appendix A. Appendix A also includes a copy of the Dredging Permit issued by the U.S. Army Corps of Engineers.
- B. When issued, the WDNR Dredging Permit shall be issued by addendum. Dredging Permits shall be posted on the dredge barge, at the shoreline staging area (visible from the road), at the pier of the staging area, and at the dewatering site.

#### 1.4 DEWATERING

- A. WPDES General Permit for discharge of decant water has been applied for by the Owner (Appendix B). The Contractor shall meet all requirements of the WPDES Permit. When issued, the WPDES permit shall be issued by addendum.
- B. The governing agency in Wisconsin is:

Wisconsin Department of Natural Resources (WDNR) 3911 Fish Hatchery Road Madison, WI 53711 Contact: Cami Petersen

## 1.5 PROPERTY MONUMENTS

- A. Protect survey monuments from damage or movement.
- B. The cost of replacement of any monuments moved or destroyed during construction shall be the Contractor's responsibility.
- C. Perpetuation of destroyed or moved monuments shall be performed in accordance with state statutes by a registered land surveyor.

# 1.6 CONSTRUCTION EROSION CONTROL

A. The Contractor shall comply with all regulatory permits for surface water and erosion control.

## **SECTION 01 50 00**

#### TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes
  - 1. Temporary utilities including:
    - a. Temporary electric power.
    - b. Temporary sanitary facilities, including drinking water.
  - 2. Support facilities including:
    - a. Dewatering facilities.
    - b. Project identification and other temporary signs.
    - c. Other construction aids and miscellaneous services and facilities.
    - d. Shoreline and debris staging area, including temporary dock.
  - 3. Protection including:
    - a. Barricades, warning signs, and lights.
    - b. Environmental protection.
- B. Provide temporary facilities and controls required for construction activities except, if any, for facilities and controls indicated as provided by the Owner
  - 1. Access to dewatering site
  - 2. Access to water.
  - 3. Portable sanitation facilities at dewatering site

# 1.2 UTILITY USE CHARGES

- A. Cost or use charges for utilities will be paid by Contractor. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
  - 1. Engineer.
  - 2. Testing agencies.
- B. Contractor will pay water service use charges whether metered or otherwise, for water used by all entities engaged in construction activities at Project site.
- C. Contractor will pay electric power service use charges, whether metered or otherwise, for electricity used by all entities engaged in construction activities at Project site.

# 1.3 QUALITY CONTROL

- A. Comply with industry standards and with applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
  - 1. Health and safety regulations.

- 2. Utility company regulations.
- 3. Police, fire department and rescue squad rules.
- 4. Environmental protection regulations.
- 5. NFPA 241 "Standards for Safeguarding Construction, Alterations and Demolition Operations".
- 6. ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
- 7. NECA Electrical Design Library "Temporary Electrical Facilities", NFPA 70, and NEMA, NECA and UL standards and regulations for temporary electric service.
- B. Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

## 1.4 PROJECT CONDITIONS

- A. The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
  - 1. Keep temporary services and facilities clean and neat.
  - 2. Relocate temporary services and facilities as required by progress of the Work.

# PART 2 - PRODUCTS

# 2.1 MATERIALS

A. Provide undamaged materials in serviceable conditions and suitable for use intended.

# 2.2 EQUIPMENT

- A. Provide undamaged equipment in serviceable conditions and suitable for use intended.
- B. Provide temporary self-contained toilet units of temporary single-occupant toilet units of the chemical, aerated recirculation, or combustion type for use by all construction personnel. Units shall be properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- C. Only one temporary dock will be permitted for use at the shoreline staging area.
- D. Provide orange security fencing and durable high visibility warning signs around dewatering facility settling ponds

## PART 3 - EXECUTION

# 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

# C. Temporary Lighting

- 1. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system.
- 2. Provide lighting that provides adequate illumination for construction operations and traffic conditions.

# D. Temporary Heat and Ventilation

- 1. Provide temporary heat and ventilation required for the construction activities, including but not limited to curing or drying completed installations and protecting construction from adverse effects of low temperatures and high humidity.
- 2. Use safe equipment that will not have a harmful effect on elements being installed and on completed installations.
- 3. Coordinate ventilation requirements to produce the ambient condition required for the work and to minimize energy consumption, and to protect personnel from fumes and other harmful effects.

# E. Heating Facilities

- 1. Provide vented self-contained heaters with individual space thermostatic control.
- 2. Do not use gasoline-burning space heaters, open flame or salamander-type heating units.

# F. Temporary Telephone Service

1. Minimally provide a separate telephone line for each temporary office and firstaid station, and provide a dedicated telephone line for a fax machine in the Contractor's field office.

# G. Temporary Sanitary Facilities

- 1. Provide for toilets, wash facilities and drinking water fixtures in compliance with regulations and health codes for type, number, location, operation and maintenance of fixtures and facilities.
- 2. Provide toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each facility, and provide covered waste containers for used materials.
- 3. Install separate self-contained toilet units for male and female personnel shielded to ensure privacy.

- 4. Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition.
  - a. Dispose of drainage properly.
  - b. Supply cleaning compounds appropriate for each condition.
  - c. Include safety showers, eyewash fountains and similar facilities for the convenience, safety and sanitation of personnel, as required by applicable codes and regulations.
- 5. Provide drinking water fountains or containerized tap-dispenser bottled-drinking water units, complete with paper cup supplies. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55°F (7 to 13°C).

## 3.2 TEMPORARY SUPPORT FACILITIES

- A. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.
- B. Provide incombustible construction for offices, shops and sheds located within the construction area or within 30 feet (9 m) of building lines. Comply with NFPA 241. Provide project identification signs as necessary.
- C. Storage Sheds and Fabrication Shops
  - 1. Provide sheds and shops that are sized, furnished and equipped to accommodate materials and equipment involved.
  - 2. Include complete temporary utility services for intended use.
  - 3. Sheds and shops may be open shelters or fully enclosed spaces, as appropriate for use.
- D. Collection and Disposal of Waste
  - 1. Collect waste from construction areas and elsewhere daily. Enforce requirements strictly and dispose of material lawfully.
  - 2. Comply with NFPA 241 for removal of combustible waste material and debris.
  - 3. Do not hold waste materials more than 7 days during periods when the ambient temperature remains continuously less than 80°F (27°C), or more than 3 days when the temperature exceeds or is expected to rise above 80°F (27°C).

Handle and properly containerize hazardous, dangerous or unsanitary waste materials separately from other waste.

## 3.3 TEMPORARY PROTECTION FACILITIES

- A. Barricades, Warning Signs, and Lights
  - 1. Comply with standards and code requirements for erecting structurally adequate barricades.
  - 2. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard involved.
  - 3. Where appropriate and needed, provide lighting, including flashing red or amber lights.

4. Install and maintain orange security fencing and warning signs completely surrounding the dewatering facility as described in the Contract Documents.

# B. Environmental Protection

- 1. Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result.
- 2. Avoid using tools and equipment that produce harmful noise.
- 3. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons near the site.

# 3.4 OPERATION, TERMINATION, AND REMOVAL

# A. Supervision

- 1. Enforce strict discipline in use of temporary facilities.
- 2. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

# B. Maintenance

- 1. Maintain facilities in good operating condition until removal.
- 2. Protect from damage by freezing temperatures and similar elements.
- 3. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- 4. Prevent water-filled piping from freezing.
- 5. Maintain markers for underground lines.
- 6. Protect underground lines from damage during excavation operations.

## C. Termination and Removal

- 1. Unless the Owner requests that a temporary facility be maintained longer, each temporary facility shall be removed when the need for its service has ended and can be replaced by authorized use of a permanent facility, if appropriate.
- 2. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility.
- 3. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
- 4. Remove temporary paving not intended for or acceptable for integration into permanent paving.
  - a. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for subsoil or fill in the area.
  - b. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns.
  - c. Repair or replace street paving, curbs, and sidewalks at temporary entrances, in accordance with the requirements of the governing authority.

Stewart Lake Dredging Dane County, Wisconsin

#### **SECTION 01 70 00**

# **EXECUTION REQUIREMENTS**

# PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes
  - 1. Examination
  - 2. Preparation
  - 3. Equipment and facilities design
  - 4. Installation
  - 5. Demobilization
  - 6. Site Restoration

# 1.2 SUBMITTALS

- A. At least 14 days prior to planned commencement of dredging activities, provide Engineer layouts of all project elements listed in Section 01 70 00, 3.3 and notify Engineer of such dredging commencement.
- B. Engineer shall review and take action on each submittal prior to commencement of dredging activities.

# PART 2 - PRODUCTS (Not Used)

## **PART 3 - EXECUTION**

# 3.1 EXAMINATION

# A. Existing Conditions

- 1. The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
- 2. The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground and underwater utilities and other construction affecting the Work.
- 3. Before construction, verify that the facilities provided are adequate, safe, operational and ready for use.
- Examine Contract Documents for reports of field conditions (Appendices C and D). Such reports are for informational purposes only. Contractor is responsible

to verify all field conditions prior to commencing the work.

# B. Acceptance of Conditions

- 1. Examine and record observations of sediment, substrates, project areas, site conditions, and water treatment conditions for compliance with requirements and conditions affecting performance.
- 2. Verify compatibility and suitability of the existing facilities with proposed facilities.
- 3. Correct unsatisfactory conditions before the dredging or dewatering process begins.
- 4. Proceeding with the Work indicates acceptance of surfaces and conditions.

## 3.2 PREPARATION

A. Furnish information to local utilities that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

## B. Field Measurements

- 1. Take field measurements as required to fit the Work properly.
- 2. Where portions of the Work are required to fit to other facilities, verify dimensions of other facilities by field measurements before progressing with the Work to avoid delaying the Work.
- 3. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

# C. Review of Contract Documents and Field Conditions

- 1. Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer.
- 2. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

# 3.3 EQUIPMENT AND FACILITIES SIZING

- A. Contractor is responsible for laying out and preparing the site, the dredge process and dewatering facilities and any other facilities required to complete the Work to meet the design parameters of the processes.
- B. Prior to the start of construction prepare site layout diagrams showing the location and construction details of dredging and dewatering processes and other temporary facilities including, but not limited to, the following:
  - 1. Dredging pipeline layout and sizing.
  - 2. Booster pump facility and sizing.
  - 3. Effluent pipeline layout and effluent discharge pipe structure and sizing.
  - 4. Dewatering facility layout, berm height and storage volume calculations, and support facilities locations.
  - 5. Geotextile tube layout plan.

- 6. Details of temporary facilities locations (e.g. debris storage/staging area).
- C. Site layout and detail drawings shall show the location, size, dimensions, layout, materials, piping, and all other facilities required to complete the Work.
- D. Facilities that will handle, process, transport, and contain sediment, and convey decant water and other temporary facilities shall be located on land approved by the Owner.
- E. Protect and maintain existing public roadways. Dredge pipes will be either installed through existing culverts at driveways or trenched below grade.
- F. Owner will provide the property for the staging areas, dewatering facilities, and sediment stockpiling (if required).
- G. Contractor is responsible to prepare dewatering area including but not limited to clearing, grubbing, and construction of berms, access roads, and dewatering areas, grading and necessary appurtenances (discharge structure, etc.) to convey decant water and precipitation from dewatering area to Stewart Lake

## H. Stormwater Facilities

- 1. Provide facilities such as berms, curbs drainage ditches or other approved means which will protect the areas that handle, process, store and transport sediment against stormwater run-on or run-off.
- 2. Design stormwater run-on and run-off facilities to handle, at a minimum, the run-on and run-off from a 24 hour storm with 25 year recurrence interval.
- Provide the means necessary including providing pumps and related equipment to manage stormwater from the time period prior to start of dredging and until dredging is complete.

## I. Dewatered Sediment Facilities

- 1. Provide means and equipment for the management of stockpiling (if required) and dewatered sediments at the dewatering facility site.
- Provide access roads to bottom of dewatering cells to manage sediment and clear or repair discharge structures, as necessary.
- J. Noise abatement: Noise abatement measures shall be provided by the contract to limit noise to no more than 85 db at 50 meters from its source. The Contractor shall take all reasonable measures to further reduce noise levels if specified noise levels still result in noise complaints.

## 3.4 INSTALLATION

- A. Maintain conditions required for system performance.
- B. Conduct operations so no part of the Work is subjected to damaging operations or process loading in excess of that expected during normal conditions.

# 3.5 DEMOBILIZATION

- A. Remove equipment, building materials, temporary facilities and all other materials brought to the Site to complete the Work, except where noted in the Contract Documents.
- B. Remove temporary piling, silt curtain anchors, tie downs, cables and buoys and any other facility items located in the lake or on shore to complete the Work.
- C. Remove debris and place on the shore in areas designated by the Engineer.
- D. Sawcut and remove all damaged pavements to the nearest existing joints, or with prior approval, to straight and neat lines and repair with like materials to the full depth of the pavement as existed prior to the Work.
- E. Upon completion of all dewatering operations, remove equipment and salvageable materials from Site.
- F. Remove all temporary structures, unless directed to keep in place by the Engineer.
- G. Do not remove access road and tracking pad at dewatering site.
- H. Do not remove security fencing and signage at dewatering site.

## 3.6 RESTORATION

- A. Unless otherwise specified or noted on the Drawings, completely restore the Site to a condition present prior to the start of the Work except any items the Owner requests to be left in-place.
- B. Restore the surface of all disturbed areas to a like condition of that prior to the Work.
- C. Grade and shape sediment stockpile if located outside of dewatering basin to promote effective surface water runoff control.
- D. Restore paved surfaces and damaged turf in kind.

#### **SECTION 02 16 00**

#### SEDIMENT DEWATERING

#### PART 1 - GENERAL

#### 1.1 SUMMARY

## A. Section Includes

- 1. Dewatering requirements.
- 2. Decant water treatment requirements.

#### 1.2 SYSTEM DESCRIPTION

## A. Current Requirements

- 1. The Contractor shall determine whether polymer, coagulant and /or flocculant (dewatering agents) addition are required for the dewatering process, based on sediment characteristics. Recent sediment characterization data is included in Appendix C. (Note: Contractor is responsible to verify field conditions. Characterization data is provided for informational purposes only.)
- Contractor acceptance of sediment dewatering facility conceptual design (or contractor alternative design approved by Engineer) for operation of the dewatering work.
- 3. Maintain facilities for the dewatering of hydraulically dredged sediment, collection of decant water from dewatering sediments, removing solids from the decant water to acceptable levels and conveying these waters for discharge to Stewart Lake.

# B. Performance Requirements for Dewatering

Selected dewatering equipment and methods shall dewater dredged sediments to the degree required to achieve a target minimum of 35% solids within 8 months of completion of dredging activities to achieve the efficient and effective dewatering of sediments, and to maximize the workability, dryness, and strength of the dredged sediments. The targeted percent solids is intended to result in a dewatered sediment that can be handled with standard earth moving equipment when the Owner restores the dewatering basin area during summer 2010.

- C. Total storage volume of the dewatering cell as shown in the Contract Documents is approximately 17,000 cubic yards.
- D. Owner/Engineer and Contractor will work together on a cooperative basis so that dewatered material can be handled in the optimal fashion at the dewatering facility site.
- E. Contractor shall endeavor to minimize any stockpiling of sediment outside of dewatering cell footprint, through addition of dewatering cells, use of geotextile tubes,

appropriate use of dewatering agents, sediment management, and dewatering cell operation, or other methods as acceptable to owner and approved by the engineer.

# 1.3 SUBMITTALS

- A. Ouality Control Submittals
  - 1. Submit for approval to the Owner and Engineer 14 days prior to dewatering cell construction a dewatering site layout plan including sizing calculations, berm location and height (if different than the conceptual design provided in the Contract Documents), berm construction methods, suspended solids control measures, and discharge and overflow structure details.
  - 2. Submit a description of and specifications for geotextile dewatering tubes (if planned for deployment) and a layout diagram indicating the geotextile tube arrangement within the dewatering area.
  - 3. Submit a description of the dewatered sediment handling and stockpiling operations.
  - 4. Prepare a process flow diagram showing the proposed method of dredging, dewatering, and water treatment of decant water complete with information on the volumes of sediments and water to be handled by each unit process, including dewatering agent (polymer, flocculant, coagulant, etc.) type (if any), application location and anticipated amount (rate). The calculations provided shall demonstrate attainment of the 35% solids dewatered sediment target within 8 months of cessation of dredging activities.
  - 5. Proposed dewatering agent, MSDS sheet(s), and regulatory approval for use in Wisconsin
- B. Submit manufacturer's literature describing physical size, capacity, and other pertinent data for each major piece of equipment and/or material proposed for use in the dewatering systems.
- C. Provide shop drawings or cut sheets of dewatering system equipment including, but not limited to, the following:
  - 1. Screening equipment
  - 2. Piping and valves
  - 3. Overflow and discharge structures with erosion control measures identified.
  - 4. Dewatering agent storage tanks and feed systems
  - 5. Other proposed equipment associated with dewatering.
- D. Prepare a mass balance chart and calculations that estimates the daily production of dewatered sediment and decant water
- E. Prepare a submittal describing procedures and methods as to how the Contractor will meet all discharge requirements and provisions of the WPDES Permit.

#### PART 2 - PRODUCTS

# 2.1 SOIL

A. Soil used to construct containment berms shall be on-site soils compacted to a minimum of 90 percent of the maximum dry density as determined by ASTM D1557, modified Proctor test.

## 2.2 ADDITIVES/DEWATERING AGENTS

A. Additives or Dewatering Agents (including polymers, flocculants, coagulants, etc.) shall be used at minimum dosages to allow for successful treatment to meet water discharge standards and not be toxic to fish or other fauna or flora when discharged to the lake in the effluent. Only state-approved additives shall be used. Care shall be taken when selecting additives so as not to negatively impact the ability of the dewatered sediment to maintain the characteristics (i.e. workability) of the natural soil structure.

## 2.3 SEDIMENT DEWATERING BASIN

- A. The sediment dewatering basin (or cell) shall be constructed in the area as shown in the project drawings. Test pits were excavated in the northern portion of the dewatering site. Results of the test pits are included in Appendix C. This information is provided for information purposes only. Contractor is responsible to verify field conditions.
- B. As shown on the drawings due to physical site limitations total storage volume in the conceptual dewatering basin is approximately 17,000 cubic yards.
- C. Contractor may propose alternate basin configuration for approval by Engineer. Basin berm sideslopes, maximum water depth, and required freeboard shall not be modified from that shown on the Drawings, unless Contractor provides soil amendments or other engineered materials and accepts responsibility for their use on the project.

## PART 3 - EXECUTION

## 3.1 **DEWATERING OPERATIONS**

- A. Conduct dewatering Operations as required to complete the Work within the project schedule and meet applicable WPDES discharge standards.
- B. Provide continuous operation of the dewatering process.
- C. Remove sediment from dewatering cell, as necessary, for efficient dewatering operation and stockpile sediments, as necessary, at designated areas as shown on Drawings.
- D. Install temporary berms, as necessary, to control flow of stockpiled dewatering sediments outside of dewatering cell boundaries.

- E. Route surface water away from any stockpiled sediment to minimize surface runoff from precipitation or snow melt from contacting the dewatered sediment..
- F. Provide additional facilities and maintain existing facilities to prevent any leaks, spills, or other losses of sediment, decant water or other contaminated substances on the site.
- G. Clean up any contamination caused by leaks, spills or other losses, including those otherwise associated with dewatering activities performed and kept on the dewatering pad that interface with proper operation of the dewatering pad, but excluding those caused by other contractors retained by the Owner.
- H. If geotextile tubes are utilized, maintain, manage, and stagger filling operations to optimize use of the tubes and sediment dewatering.

# 3.2 EQUIPMENT INSTALLATION AND INITIAL TESTING

- A. Install dewatering equipment and facilities in general conformance with approved site layout plans and shop drawings.
- B. Test all equipment, piping and fittings for leaks prior to beginning dredging. Repair all leaks found.

# 3.3 REMOVAL OF DEWATERING EQUIPMENT

- A. Upon completion of all dewatering operations, remove equipment from site.
- B. Upon removal of dewatering equipment, remove any remaining sediment from stockpile pads, truck loading areas, and other operating areas with power sweeping or other approved equipment.

#### **SECTION 02 23 00**

## SITE CLEARING

# PART 1 - GENERAL

## 1.1 SUMMARY

## A. Section includes:

- 1. Clearing, grubbing, and disposal.
- 2. Stripping and stockpiling topsoil.

## **PART 2 - PRODUCTS**

## 2.1 MATERIALS

## A. Topsoil

1. Topsoil is defined as the upper soil horizon consisting of mineral layers of maximum humus (organic) accumulation.

## **PART 3 - EXECUTION**

# 3.1 CLEARING, GRUBBING, AND DISPOSAL

## A. General

1. Clear and grub the area of construction as identified on final Contractor submittal drawings.

# B. Clearing

1. Cut all brush, shrubs, stumps and trees to within 4 inches of the existing ground surface.

# C. Grubbing

- 1. Remove all stumps, roots, logs, and timber.
- 2. Grubbing shall be carried to a minimum depth of 12 inches.

## D. Disposal

- 1. Owner is responsible for the following:
  - a. Disposal of all material removed under clearing and grubbing.
  - b. Furnishing of a disposal site.
  - c. Obtain and conform to all necessary, federal, state, and local permits for land disturbance.
  - d. Conform to all requirements for disposal of diseased trees.
  - e. Burning of debris.

- f. Contractor will be responsible for pushing any trees, stumps or such debris off to the side for Owner's future disposal.
- E. Clearing operations shall be completed in a manner so as to prevent obstruction of traffic and to protect all remaining trees, shrubs, and other vegetation from injury.

## 3,2 STRIPPING AND STOCKPILING TOPSOIL

# A. Stripping

- 1. Remove all topsoil to beneath:
  - a. Structures.
  - b. Roadways.
  - c. Dewatering facility.
- 2. Remove topsoil to a depth of 6 inches in:
  - a. Areas disturbed by utility construction.
  - b. Areas requiring cuts or significant fills (significant fills are fills which cannot be obtained by the addition of topsoil only).

# B. Stockpiling

- 1. Contractor shall stockpile topsoil obtained in the stripping operation, in areas shown on the Drawings, for replacement in the future by Owner
  - a. For areas where topsoil is to be replaced after underground utility construction.
  - b. For areas involving site grading where topsoil is to be replaced in order to sustain vegetative growth.
- 2. In areas where topsoil will not be required as specified above, Contractor shall leave excess material stockpiled onsite as defined in other sections.

#### **SECTION 02 32 50**

#### **DREDGING**

# PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Dredging.
  - 2. Debris Removal.
  - 3. Post-Dredge Sampling and Testing.

# 1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
  - 1. Chapter 30 Permit/Dredging Permit

# 1.3 SUBMITTALS

- A. Quality Control Submittals
  - 1. Submit Dredging Plan within 14 days prior to dredging to Owner and Engineer. Acceptance by the Engineer is required prior to dredging work commencing.
  - 2. Submit results of Contractor's QC bathymetric surveys weekly.
  - 3. Contractor shall submit a spill preventions/response plan to the Owner and regulatory agency within 14 days of the date of the Notice to Proceed. This plan will include a separate section on equipment refueling and management of backwashing fines from pipelines.

# 1.4 QUALITY CONTROL

- A. Prepare a Dredging Plan to include:
  - 1. The dredge types, number of dredges and manufacturer;
  - 2. Pump size and capacity.
  - 3. Size, material, joint details, pressure rating and location of slurry pipeline.
  - 4. Equipment and procedure for controlling depth of cut and location of dredge.
  - 5. Procedure to minimize re-suspension of sediments.
  - 6. Sequence of dredging including dredge progression plan and proper slope dredging without causing unstable slopes.
  - 7. Procedure for removing debris and removing or relocating debris and rubble too large for the dredge to pump.
  - 8. Dredge booster pump(s) size, location, and capacity.
  - 9. Values assumed for in-place density of sediment to be dredged.
  - 10. Values assumed for percent solids of the dredged slurry piped from the lake to the sediment dewatering facility.

GEV DREDGING 02 32 50 - 1

- 11. Noise abatement measures.
- B. Comply with conditions and substantive requirements of all applicable permits and permit requirements.

# 1.5 PERFORMANCE REQUIREMENTS

- A. Volume of Material to be Removed in Dredge Locations
  - 1. 21.480 cubic vards of in-situ sediment, including overdredge allowance.
  - 2. Attain target elevation in at least 90% of the project area.
  - 3. Average no more that 6 inches overdredge over the project area.
- B. Dredge Area Schedule
  - 1. Contractor shall complete dredging in one season.
- C. Work Completion Time and Work Hours
  - 1. Remove designated sediments during the following time periods:
    - a. To limit potential impacts to specific aquatic species, no dredging may occur after October 15 of the calendar year.
  - 2. Provide equipment and personnel to dredge 24 hours per day, 6 days per week.
  - 3. Dredge to target elevations or to hard pan.
    - a. Target dredge vertical and horizontal extent as shown on drawings.
  - 4. Contractor shall dredge to target elevations but not below hard pan where encountered.
  - 5. Where hardpan is encountered prior to attaining target elevation, such areas will be documented by the Contractor, and, after verification by the Engineer, be considered as having achieved target elevation for the purposes of achieving target elevation in at least 90% of the project area.

# 1.6 PROJECT CONDITIONS

- A. The Project is located at Stewart Lake, Mount Horeb, Wisconsin.
- B. Characteristics of Sediment Material to be Removed
  - 1. Samples have been taken by the Owner to assist the Contractor in identifying the character of materials to be removed. Although the results of such explorations are representative of subsurface conditions near the sediment surface at their respective locations, local minor variations in the subsurface materials are to be expected and, if encountered, will not be considered materially different within the purview of the contract. Grain size curves of samples taken from the areas to be dredged, and a map of the locations where the samples were taken are provided in Appendix C. The material to be removed to accomplish the specified dredging work is anticipated to be generally highly organic silt or silty organics. The native lakebed is primarily clay underlain by weathered bedrock (hardpan). Appendix C presents a summary of the physical characteristics for the sediment samples obtained. The Contractor is expected to examine the site of the work and confirm the character of the material.

- C. Utilities may be located within the Work Site.
  - 1. Locate all utilities in the area of the Work prior to beginning dredging.
  - 2. Protect all utilities and structures from damage.
  - 3. All power required for pumps, lighting and communication is the responsibility of the Contractor.
- D. Selected Contractor shall be provided dredge prism control information from Engineer 15 days after Notice of Award. Dredge prism data (x,y,z files) will be available in text format or 3D model to allow the Contractor to establish vertical and horizontal control for the dredge areas.

#### E. Noise Abatement

1. **Contractor shall** employ necessary noise abatement methods to maintain not more than 85 db at 100 meters from the noise source in all areas during operations.

#### 1.7 WORK AREA

#### A. Access.

1. The Contractor shall be responsible for providing and maintaining access necessary for his equipment to and from the work site, mooring area, staging areas, booster pump area and dredge pipe and effluent water return lines. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies.

# B. Protection of Existing Waterways.

1. The Contractor shall conduct his operations in such a manner that material or other debris are not pushed outside of dredging limits or otherwise deposited in existing side channels, basins, docking areas, or other areas being utilized by vessels. The Contractor will be required to change his method of operations as may be required to comply with the above requirements. Should any bottom material or other debris be pushed into areas described above, as a result of the Contractor's operations, Contractor shall remove the material promptly.

# C. Adjacent Property and Structures.

- 1. The Contractor shall conduct the dredging operation such that it does not undermine, weaken or otherwise impair existing structures located in or near the areas to be dredged. The Contractor shall investigate the existing structures at the site and plan the dredging work accordingly. Contractor shall take special care so as not to impact the integrity of the dam located at the north end of Stewart Lake.
- D. Damage to private or public property or structures resulting from the dredging or dewatering operations shall be repaired promptly by the Contractor at his expense. Damage to structures resulting from the Contractor's negligence will result in suspension of dredging and require prompt repair at the Contractor's expense as a prerequisite to the resumption of dredging.
- E. Artificial Obstructions (Oversized Material/Debris).

1. The Contractor may encounter bottom debris such as, but not limited to, pieces of wood, trees, broken cable, rope, miscellaneous metal, and broken and derelict moorings. The Owner has no knowledge of existing wrecks, wreckage, or other artificial obstructions of such size or character as to require the use of explosives for its removal. During dredging operations, the Contractor shall remove all debris encountered unless otherwise directed by the Owner. Floating debris removed from the dredging area shall also be separated and stockpiled for disposal. Disposal in accordance with local, Federal, and state laws and regulations shall be the responsibility of the Contractor.

# F. Existing Utilities.

1. There are no known utility lines in the areas to be dredged. Contractor is responsible for contacting Diggers Hotline prior to any work.

# 1.8 OVERCUT AND SIDE SLOPES

### A. Allowable Overcut.

1. To cover unavoidable inaccuracies of dredging processes, material may be removed to a maximum overcut of six inches below target elevations. The allowable overcut dredge volume within the dredging limits will be measured and paid for at full contract price.

# B. Side Slopes.

- 1. Material dredged to provide for final indicated side slopes will be measured and paid for at the applicable unit price. The material may be dredged from the original position or by dredging the space below the pay slope plane at the bottom of the slope for upslope material capable of falling into the cut. Payment will not be made for material in excess of the amount originally lying above the pay slope plane. The limiting amount of side-slope overcut will be measured vertically.
- 2. Dredging on side slopes shall follow, as closely as practicable, the cross sections indicated on the drawings.

# C. Excessive Dredging.

1. Material taken from beyond the allowable overcut depth (greater than 6" overdredge on average) or outside of the approved horizontal dredge limits will be considered excessive and will be deducted from the total amount dredged.

#### 1.9 INSPECTION

A. Inspect the work, keep records of work performed, and ensure that gages, targets, ranges, and other markers are in-place and useable for the intended purpose.

#### B. Method of Communication.

1. Provide a system of communication between the dredge crew, dewatering crew, and the Engineer's Construction Representative. Portable two-way marine radios are acceptable.

# C. Transportation.

1. The Contractor shall furnish, at the request of the Engineer, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew as may be reasonably necessary in inspecting and monitoring the work.

#### PART 2 - PRODUCTS

# 2.1 DREDGING SYSTEMS

- A. Provide hydraulic dredging equipment which is capable of removing sediments from undisturbed deposits.
- B. Provide equipment redundancy necessary to provide continuous dredging operation.
- C. Dredge Slurry Pipelines
  - 1. Provide floating pipelines unless otherwise approved by the Engineer. Submerge at locations (if any) identified by Owner.
  - 2. Provide single walled HDPE pipe.
  - 3. Provide influent/effluent piping to/from dewatering facility and associated valves, fittings, etc., as necessary.

# D. Booster Pump Stations

- 1. Provide booster pump station(s), as necessary.
- 2. Design pump/piping to manage slurry based on operational criteria and carry the slurry to the dewatering facility via route determined by the Contractor and approved by the Owner and Engineer.
- 3. Provide equipment redundancy necessary to provide continuous dredging operation.

#### **PART 3 - EXECUTION**

# 3.1 PREPARATION

- A. Mark the location and width of all dredge areas 7 days prior to dredging for Owner and regulatory acceptance of dredge areas.
- B. Provide facilities as necessary to protect structures from damage during the dredging operation.
- C. Provide facilities necessary to control the re-suspension of sediments in the lake.
- D. Debris, Wood, Cobbles, and Other Rubble
  - 1. As is necessary, remove debris and rubble too large to be removed by the hydraulic dredge prior to hydraulic dredging and place in debris staging area

#### E. Environmental Protection

- 1. Protect against fuel or oil spills when refueling or servicing equipment. Immediately correct any fuel or oil leaks in waterborne equipment.
- 2. Deploy oil absorption booms when refueling equipment in the water
- 3. Wherever possible, use biodegradable hydraulic oil.
- 4. Protect oil or other petroleum products released from the sediments during dredging
  - a. Provide an oil adsorbent boom around the area being dredged to control the movement.
  - b. Use care in handling of any floating petroleum products released from the sediments during dredging.
- 5. Floating Debris:
  - a. Remove floating debris from the area daily.
  - b. Prevent floating debris from damaging silt curtains (if required) and escaping from the dredging area.
- 6. Provide necessary facilities to comply with Federal, State and local requirements concerning air, noise and water pollution.
- 7. Notify the city and the WDNR of fuel or oil spills immediately.
- F. All equipment used for the project but not limited to tracked vehicles, barges, boats, silt or silt curtains, hoses, sheet pile, pumps, temporary docks and piers shall be decontaminated for invasive and exotic viruses and species prior to and after use. Contractor shall document decontamination procedures.

### 3.2 DREDGING

# A. Dredging Limits

- 1. Remove sediment to the target dredge elevations from designated areas.
- 2. Preserve stable side slopes and avoid leaving residual sediment above the target elevations in any areas where dredging has been performed. In shoreline areas and at the termination of dredge cuts to other adjacent sediments, the maximum slope of the finished dredge cut shall not be steeper then 3 horizontal to 1 vertical (3H:1V).
- 3. Dredge shall not extend into native hardpan.

# B. Dredge Slurry Pipeline

- 1. Pressure test all pipeline sections prior to putting them into service to ensure connections, welds, and piping are free from leaks. Pressure testing shall be conducted weekly prior to initiating dredging for any given week. Pressure test logs will be maintained by the Contractor at the project trailer.
- 2. Maintain pipelines in good condition free from leaks at all times during use.
  - a. Suspend dredging operation immediately upon any pipeline leak or break.
  - b. Repair breaks or leaks immediately upon identification.
  - c. Record pipeline breaks on daily reports.
  - d. Remove any material spilled during a pipeline break.

**Dredging Operations** C.

Provide dredging using hydraulic dredging equipment and techniques.

- a. Provide sufficient safe and efficient equipment to meet the requirements of the Work.
- b. Maintain equipment in satisfactory operating condition.

c. Make equipment available for inspection by Owner at any time.

Unless otherwise directed, dredge in a manner that prevents sloughing of sediments into dredged areas.

Minimize re-suspension of sediment

- Control dredge speed and operations of cutterheads or other devices employed to loosen sediments as required to minimize the re-suspension of sediment into the water and to minimize the settling out of re-suspended solids in areas previously dredged.
- b. Provide shrouds or other approved devices to reduce re-suspension over cutterheads or horizontal augers.
- Overlap dredge cuts to avoid leaving ridges or windrows of sediments between adjacent cuts.
  - a. Use dredging procedures to remove sediment to target elevations while avoiding redistributing sediments from areas which are being dredged into areas where dredging has been completed.
  - b. Any material pushed, deposited or moved into areas outside the limits of dredging, as shown on the Drawings, or into areas previously dredged shall be removed at no additional cost to Owner.
- Dredge to target elevations.
  - a. Minimize overcut necessary to achieve dredging to the target elevations.
  - b. Any areas determined by the post-dredge QA bathymetric survey to be above the target elevation (if target elevation has not been achieved in at least 90% of the project area) shall either be redredged to achieve the target elevations in at least 90% of the project area, or be determined by Contractor and verified by Engineer to be high subgrade areas.
  - High subgrade areas are so designated when the proposed dredge area has hard clay or rock subgrade (hardpan) exposed above the target elevation.
    - 1) In order to determine the existence of a "high subgrade area" Engineer and Contractor will work together to perform high subgrade poling, and/or coring.
    - 2) Locations indicating less than 4" of soft, targeted sediment existing above the underlying hard subgrade will be considered to have met target elevation.
    - 3) Areas containing 4 inches or more of soft sediment shall be re-dredged to the targeted elevation at no additional cost to the Owner.
    - 4) Only the actual amount of sediment removed will be included in volume for payment.

#### D. Suspending Dredging Operations

- 1. Suspend dredging operations whenever weather, water stage or other conditions exist which might reasonably be expected to endanger the work or result in an environmental impact.
- 2. Dredging will be suspended if exceedances to the WPDES Permit conditions are exceeded.
- 3. Dredging will be immediately suspended if a leak is detected in any hose/pipe. All leaks and repairs shall be recorded in a log which is kept at the project site. Any leak or spill of dredge material shall be reported to the WDNR within 24-hours of the occurrence.
- E. Dredging will be considered complete when sediments have been removed to target elevations in at least 90% of the project area and there are no contiguous areas remaining above target elevation that are an impairment to navigation as determined by the Owner. Note that the areas of 1 ft cut (east and west shoreline dredge areas) will be separated from the sedimentation basin and center channel dredging areas for assessment of the 90% metric.
- F. Upon completion of the Work, promptly remove dredging platforms including ranges, markers, buoys and other equipment.
- G. Debris Management.
  - 1. Debris encountered during dredging that is too large to be removed by the hydraulic dredge shall be collected and placed at the debris staging area as indicated on Drawings. Debris may include large items such as timbers, pilings, sections of piers, and metallic objects. A debris management plan shall be developed by the Contractor, reviewed by the Owner, and followed by the Contractor. As necessary, but at least weekly, the Contractor shall use a boat to collect and remove floating debris resulting from project activities. Floating debris shall also be removed from within scows or barges. Containers for temporary storage of the collected debris shall be maintained on the dredge or a support barge.

# 3.3 FIELD QUALITY CONTROL/QUALITY ASSURANCE

- A. Contractor QC Bathymetric Surveys
  - 1. Provide, at a minimum, weekly QC bathymetric surveys to track progress in achieving target elevations. The QC bathymetric surveys shall be completed every Monday across those areas dredged the prior week (6 days).
  - 2. Inform Engineer when target elevations have been reached and the areas or subareas are ready for QA bathymetric survey.
  - 3. Submit QC bathymetric survey information to the Owner/Engineer upon request.
- B. QA Bathymetric Surveys
  - 1. Upon Contractor indicating that target elevation has been attained for the Project area, Contractor shall perform a QA bathymetric survey of the completed area. Contractor shall be accompanied by the Engineer during each QA bathymetric survey. The raw unedited survey data will be provided to the Engineer, and

- Engineer will process the survey data to determine pay volumes and attainment of target elevation.
- 2. QA bathymetric surveys shall be conducted using acoustical methods following the standards established in the U.S. Army Corps of Engineers "Engineering and Design Hydrographic Surveying Manual No. 1110-2-1003", current version (see Attachment 1 for additional hydrographic survey requirements). Echo sounder shall be single beam with 200 khz transducer. The same transects used for the pre-dredge survey shall be reoccupied for performance of the post-dredge QA surveys. Engineer may direct additional transects be performed for the post-dredge QA surveys and may also require poling be conducted to collect data in areas too confined to perform surveys with standard acoustical equipment.

#### 3.4 FINAL CLEANUP

- A. Final cleanup shall include the removal of all of the Contractor's equipment either for disposal or reuse. Equipment and materials to be disposed of shall only be disposed in a manner and at locations approved by the Engineer. Unless otherwise approved by the Engineer, the Contractor will not be permitted to abandon any equipment in the dewatering area or other areas adjacent to the work site.
- B. Failure to promptly remove all equipment and materials upon completion of the dredging will be considered a delay in the completion of the final cleanup and demobilization work. In such case, the Owner will exercise its right to remove any equipment and materials at the Contractor's expense.
- C. All equipment used for the project but not limited to tracked vehicles, barges, boats, silt or turbidity curtain, hoses, docks, sheet pipe and pumps shall be decontaminated for invasive and exotic viruses after use following WDNR decontamination protocols.

END OF SECTION

#### **SECTION 31 05 10**

#### SOILS AND AGGREGATES FOR EARTHWORK

#### PART 1 - GENERAL

#### 1.1 SUMMARY

#### A. Section Includes

- 1. Engineered soils and aggregates materials (materials for tracking PAD)
- 2. Bank run soils materials (topsoil specifications for turf damage)
- 3. Manufactured and special soils

#### 1.2 REFERENCES

A. American Society for	Testing and Materials (ASTM)
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1.	ASTM C33	Spec. fo	r Concrete	Aggregates.

- 2. ASTM C88 Test for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
- 3. ASTM C117 Test for Material Finer than No. 200 Sieve in Mineral Aggregates by Washing.
- 4. ASTM C131 Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- 5. ASTM C136 Sieve Analysis of Fine and Coarse Aggregates.
- 6. ASTM C144 Spec. for Aggregate for Masonry Mortar.
- 7. ASTM C207 Spec. for Hydrated Lime for Masonry Purposes.
- 8. ASTM C535 Test for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- 9. ASTM C602 Spec. for Agricultural Liming Materials.
- 10. ASTM D75 Sampling Aggregates.
- 11. ASTM D422 Particle Size Analysis of Soils.
- 12. ASTM D448 Spec. for Standard Sizes of Coarse Aggregate for Highway Construction.
- 13. ASTM D1140 Test for Amount of Material in Soils Finer than the No. 200 Sieve.
- 14. ASTM D1241 Spec. for Materials for Soil-Aggregate Subbase, Base, and Surface Courses.
- 15. ASTM D2216 Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil Aggregate Mixtures.
- 16. ASTM D2487 Classification of Soils for Engineering Purposes.
- 17. ASTM D4318 Test Method for Liquid Limit, Plastic Limit, and Plasticity of Soils.
- 18. ASTM D5268 Standard Specification for Topsoil Used for Landscaping Purposes.

# 1.3 SUBMITTALS

- A. Provide test reports showing the results of required material testing.
- B. Provide topsoil analysis performed in accordance with ASTM D5268 and demonstrating the topsoil meets Soil Conservation Service specified soil types. Also, submit results of test for nutrient levels and provide recommendations for fertilizer type and application.
- C. Daily delivery tickets for each load of material delivered to the site.

# 1.4 QUALITY ASSURANCE

A. An independent testing laboratory approved by the Owner shall be obtained by the Contractor and provide quality control testing.

#### PART 2 - PRODUCTS

# 2.1 ENGINEERED SOILS AND AGGREGATES (SOIL CLASS A)

#### A. General

- 1. **Ma**terial shall be clean, sound, hard, dense, durable, field or quarry stone which is free from seams, cracks, or other structural defects. It shall be angular material from shot rock (blasted) or crushed rock having substantially all face of which have resulted from artificial crushing.
- 2. Loss due to sulfate soundness test shall not exceed 10 percent.
- 3. Loss due to abrasion test shall not exceed 40 percent.
- 4. Material shall not be frozen.

#### B. Gradation

1. Soil Class A-1 (Heavy Riprap Rock)

	% Total Weight Smaller
Size of Stone	Than the Given Size
500 lbs.	100
400 lbs.	90
150 lbs.	50
40 lbs.	20

2. Soil Class A-MR (Medium Riprap Rock)

Size of Stone	% Total Weight Smaller Than the Given Size
400 lbs.	100
200 lbs.	90
80 lbs.	50
15 lbs.	20

3. Soil Class A-2 (Light Riprap Rock)

	% Total Weight Smaller
Size of Stone	Than the Given Size
150 lbs.	100
60 lbs.	80
20 lbs.	20
2 lbs.	10

4. Soil Class A-3 (Breaker Run Rock or 6" Crushed Rock)

Sieve Size	% Passing by Weight
7-inch	100
6-inch	90
4-inch	75
3-inch	10

5. Soil Class A-4 (3½-inch Crushed Rock - ASTM D448-No. 1)

Sieve Size	% Passing by Weight
4-inch	100
3½-inch	90-100
2½-inch	25-60
1½-inch	0-15
<sup>3</sup> / <sub>4</sub> -inch	0-5

6. Soil Class A-5 (21/2-inch Crushed Rock - ASTM D448-No. 2)

Sieve Size	% Passing by Weight
3-inch	100
2 ½ inch	90-100
2-inch	35-70
1 ½-inch	0-15
3/4-inch	0-5

7. Soil Class A-6 (1½-inch Crushed Rock - ASTM D448-No. 4)

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Sieve Size	% Passing by Weight	
2-inch	100	
1 1/2 inch	90-100	
1-inch	20-55	
¾ inch	0-15	
3/8 inch	0-5	

8. Soil Class A-7 (3/4-inch Crushed Rock - ASTM D448-No. 67)

Sieve Size	% Passing by Weight
1-inch	100
3/4-inch	90-100
3/8-inch	20-55
No. 4	0-10
No. 8	0-5

9. Soil Class A-8 (%-inch Crushed Rock Chips - ASTM D448-No. 8)

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Sieve Size	% Passing by Weight	
1/2-inch	100	
3/8-inch	85-100	
No. 4	10-30	
No. 8	0-10	
No. 16	0-5	

#### 2.2 ENGINEERED SOILS AND AGGREGATES (SOIL CLASS B)

#### A. General

- 1. Aggregate shall be hard, strong, durable particles free from seams, cracks, and other structural defects.
- 2. Rounded to subangular.
- 3. Free from organic impurities and debris.4. Material shall not be frozen.

#### B. Gradation

1. Soils Class B-1 (Coarse Aggregate - ASTM C33 - No. 3)

Sieve Size	% Passing by Weight
2 ½-inch	100
2-inch	90-100
1 ½-inch	35-70
1-inch	0-15
½-inch	0-5

2. Soil Class B-2 (Coarse Aggregate - ASTM C33 - No. 7)

Sieve Size	% Passing by Weight
<sup>3</sup> / <sub>4</sub> -inch	100
½-inch	90-100
3/8-inch	40-70
No. 4	0-15
No. 8	0-5

3. Soil Class B-3 (Fine Aggregate - ASTM C33)

Sieve Size	% Passing by Weight
3/8-inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10

4. Soil Class B-4 (Masonry Sand - ASTM C144)

Sieve Size	Percent Passing Natural Sand	Manufactured Sand
No. 4	100	100
No. 8	95 to 100	95 to 100
No. 16	70 to 100	70 to 100
No. 30	40 to 75	40 to 75
No. 50	10 to 35	20 to 40
No. 100	2 to 15	10 to 25
No. 200		0 to 10

# 2.3 ENGINEERED SOILS AND AGGREGATES (Soil Class C)

#### A. General

- 1. Stone shall be hard, durable, granular material of uniform quality resulting from crushed rock or crushed bank run sand and gravel.
- 2. Material shall be free from clay lump, organic matter, shale, excess, elongated or flat pieces, and other deleterious substances.
- 3. Forty-five percent of the particles retained on a No. 4 sieve shall have at least one fractured face.
- 4. Wear shall not exceed 50 percent.
- 5. Loss due to sulfate soundness test shall not exceed 18 percent by weight.
- 6. Total moisture content shall not exceed 7 percent.
- 7. Filler for blending shall have a maximum liquid limit of 25 percent and a maximum plasticity index of 6.
- 8. Material shall not be frozen.

# B. Gradation

1. Soil Class C-1 (Crushed Stone)

Sieve Size	% Passing by Weight
1 ½-inch	100
3/8-inch	30-65
No. 4	25-55
No. 10	15-40
No. 200	2-12

2. Soil Class C-2 (Crushed Stone)

Sieve Size	% Passing by Weight
1-inch	100
3/8-inch	40-75
No. 4	25-60
No. 10	15-45
No. 200	3-12

3. Soil Class C-4 (Crushed Gravel)

Sieve Size	% Passing by Weight
1 1/2-inch	100
1-inch	75-100
3/8-inch	40-75
No. 4	30-60
No. 10	20-45
No. 40	10-30
No. 200	3-10
Soil Class C-5 (Crushed Gravel)	

# 4. Soil Class C-5 (Crushed Gravel)

Sieve Size	% Passing by Weight
1-inch	100
3/8-inch	50-85
No. 4	35-65
No. 10	25-50
No. 40	10-30
No. 200	3-10

# 5. Soil Class C-6 (Crushed Gravel)

Sieve Size	% Passing by Weight
1-inch	100
<sup>3</sup> / <sub>4</sub> -inch	95-100
3/8-inch	50-90
No. 4	35-70
No. 10	20-55
No. 200	8-15

# 2.4 BANK RUN SOILS

# A. Soil Class D-1 and D-2

- 1. Materials shall be rounded or subangular material resulting from pit run or crushed material.
- 2. Materials shall be free from clay lumps, organic matter, and deleterious substances.
- 3. One hundred percent by weight shall pass a 3-inch sieve.
- 4. Maximum liquid limit shall be 25 percent and maximum plasticity index shall be 6.
- 5. Material shall not be frozen.

6. The portion of material which passes a No. 4 sieve shall conform to the following gradation:

	Maximum % By Weight Passing		
Sieve Size	Grade D-1	Grade D-2	
No. 4	100	100	
No. 40	75		
No. 100	15	30	
No. 200	8	15	

# B. Soil Class D-3 (Sand)

1. Well graded, unwashed bank run or crushed bank run which is free from clay lumps, organic matter, and other deleterious substances with gradation as follows:

Sieve Size	% Passing by Weight
³⁄₄-inch	100
No. 4	90-100
No. 10	45-90
No. 40	15-45
No. 200	0-10

# C. Soil Class E-1 (Clay Soil)

- 1. Minimum 50 percent by weight passing the No. 200 sieve.
- 2. For the fraction passing the No. 40 sieve, the minimum plasticity index shall be 15.
- 3. Minimum Atterberg liquid limit of 30.
- 4. Free from organic material, boulders, cobbles, excessive amounts of gravel (greater than ¾-inch), and other deleterious substances.

# D. Soil Class F-1 (Topsoil)

- 1. Topsoil shall meet the definition and specification stated in ASTM D5268 and meets one of the following SCS (Soil Conservation Service) soil textures:
  - a. Loam.
  - b. Sandy loam.
  - c. Silt loam.
  - d. Silty clay loam.
  - e. Clay loam.
- 2. The topsoil shall consist of adequate mineral content to support the growth of the intended vegetation and shall not contain herbicides which would be detrimental for the intended use.
- 3. The topsoil shall have adequate fertility for quick establishment of vegetation.
- 4. The pH of the topsoil shall be between 6.0 and 7.0.
- 5. Topsoil shall be free from deleterious substances.
- 6. Pulverize and screen the topsoil such that 100 percent passes the 1-inch (25 mm) sieve and at least 90 percent passes the No. 10 (2.00 mm).

- E. Soils Class F-2 (Compost/Topsoil)
  - 1. Same as F-1 above except topsoil shall be defined as a mixture of topsoil and soil that is a byproduct of composting (compost).
- F. Soil Class G-1 (Clean Earth Fill)
  - 1. Soil Class G-1 shall be any soil material excavated on the project site or obtained from borrow areas.
  - 2. Soil materials unsuitable and, therefore, not approved for this classification are:
    - a. Soils with high organic contents such as: topsoil, peat, muck, organic silts, and clays, marls, etc.
    - b. Manmade or rubble filled soils containing such materials as: foundry sand, fly ash cinders, asphalt, and concrete rubble, etc.
    - c. Silty soils such as: rock flour, loess, etc.
    - d. Soils with gravel larger than 3-inch.
    - e. Silty clay or clays with a high plasticity (CH soils as defined in ASTM D2487).
    - f. All soil contaminated with hazardous waste materials as defined by the EPA.
- G. Soils Class G-2 (Clean Earth Fill)
  - 1. Same as G-1 above except shall not contain gravel larger than 1½-inch.

#### 2.5 MANUFACTURED AND SPECIAL SOILS

- A. Soil Class H-1 (Polymer Treated and Chemically Treated Bentonite)
  - 1. Bentonite shall be defined as being largely composed of sodium montmorillonite (a clay mineral).
  - 2. Contain an optimum level of anionic or non-ionic or organic polymer to maximize wetting, expansion, and dispersing action in all types of soils.
  - 3. Shall be high swelling which is defined as the ability of 2 grams of the base bentonite, when mechanically reduced to -100 sieve, to swell in water to an apparent volume of 16.0 cc's, or more when added a little at a time to 100 cc's of distilled water in a graduate. Swelling action shall be indefinitely reversible.
  - 4. Shall have a colloid content exceeding 85 percent as measured by evaporating the suspended portion of a 2 percent solution after 24 hours of sedimentation in a graduated beaker.
  - 5. Shall have a mineralogical composition of 90 percent minimum montmorillonite with 10 percent maximum sediments of feldspar, micas, and unaltered volcanic ash.
  - 6. Material shall not be frozen.
- B. Soil Class H-1 (Polymer Treated Bentonite)
  - 1. Have properties equal to American Colloid Company Volcloy SG-40 Federal Bentonite Fluid Stop 610, or equal.
- C. Soil Class H-2 (Chemically Treated Bentonite)
  - 1. Be chemical treated to resist reaction and degradation from contact with the contaminant being stored.

- 2. Have properties and composition equal to America Colloid Company Volcloy Saline Seal 100, Federal Bentonite Marine Seal 123, or equal.
- D. Soil Class J-1 (Agricultural Limestone)
  - 1. Conform to ASTM C602.
  - 2. Ground or crushed limestone.
  - 3. Neutralization index of not less than 40 or more than 109.
  - 4. Meet the following gradation:
    - a. Passing a No. 4 sieve 100 percent.
    - b. Passing a No. 10 sieve 90 to 100 percent.
    - c. Passing a No. 50 sieve 50 to 100 percent.
- E. Soil Class J-2 (Hydrated Lime)
  - 1. Shall consist of essentially calcium, hydroxide or a mixture of calcium hydroxide, magnesium oxide, and magnesium hydroxide.
  - 2. Dry powder obtained by treating quick lime with enough water to satisfy its chemical affinity for water under the conditions of its hydration.
  - 3. Hydrated lime shall conform to the requirements of ASTM C207, Type N or S.

# 2.6 SOURCE QUALITY CONTROL

- A. To establish acceptability of material, perform tests for each soils class in accordance to the following standards:
  - 1. Soils Class A and C:
    - a. ASTM C88.
    - b. ASTM C131 (for coarse aggregates smaller than 1½ inches).
    - c. ASTM C136.
    - d. ASTM C535 (for coarse aggregates 1½ inches and larger).
    - e. ASTM C117 (use when aggregate contains materials finer than No. 200 sieve).
  - 2. Soils Class B:
    - a. ASTM C88.
    - b. ASTM C117.
    - c. ASTM C136.
  - 3. Soils Class D:
    - a. ASTM C117.
    - b. ASTM C136.
    - c. ASTM D1241.
    - d. ASTM D2487.
  - 4. Soils Class E:
    - a. ASTM C136 (test when gravel content is present).
    - b. ASTM D422.
    - c. ASTM D1140.
    - d. ASTM D2216.
    - e. ASTM D4318
  - 5. Soils Class F:
    - a. ASTM D2487.
  - 6. Soils Class G:

# a. ASTM D2487.

- B. In addition to the above, furnish a soil analysis of Soil Class F:
  - 1. Analyze for the following:
    - a. pH
    - b. Phosphorus
    - c. Potassium
    - d. Soluble Salts
    - e. Calcium
    - f. Magnesium
- C. Source sample all soils and aggregates in accordance with ASTM D75.
- D. Perform one (1) acceptable test for each type of material at each source.

#### **PART 3 - EXECUTION**

#### 3.1 APPLICATION

- A. Use the soil classification as specified or stated on Drawings.
- B. Place material in accordance with the Drawings and appropriate Specification Sections for the type of work being performed.

# **END OF SECTION**

### **SECTION 31 22 00**

# **EARTHWORK**

#### PART 1 - GENERAL

#### 1.1 SUMMARY

#### A. Section Includes

- 1. Excavation.
- 2. Test rolling.
- 3. Filling and compacting.
- 4. Backfilling around structures.
- 5. Disposal of surplus materials.
- 6. Finish grading.

# B. Allowances

1. Testing costs shall be included in the cost for earthwork.

# 1.2 REFERENCES

A. American Society for Testing and Materials (ASTM)

1.	D1556	Test for Density of Soil in Place by the Sand-Cone Method
2.	D1557	Test Methods for Moisture-Density Relations of Soils and Soil-
		Aggregate Mixtures Using 10-Lb (4.54 kg) Rammer and 18 in.
		(457 mm) Drop
3.	D2216	Laboratory Determination of Water (Moisture) Content of Soil,
		Rock, and Soil-Aggregate Mixtures
4.	D2922	Test for Density of Soil and Soil-Aggregate in Place by Nuclear
		Methods (Shallow Depth)
5.	D3017	Test for Moisture Content of Soil and Soil-Aggregate by Nuclear
		Method (Shallow Depth)

#### 1.3 SUBMITTALS

A. Submit two (2) copies of the results of quality control testing (include location where test was done):

# 1.4 QUALITY CONTROL

- A. An independent testing laboratory approved by the Owner shall be obtained by the Contractor and provide quality control testing.
- B. Material Testing Requirements
  - 1. Source Testing of Aggregate:

- a. Test all select soils and aggregates for acceptance as required by Section 31 05 10 "Soils and Aggregates for Earthwork".
- 2. Installation Testing:
  - a. Determine maximum density and optimum moisture content for compaction in accordance with ASTM D1557 (one test for each type of material for each source).
  - b. Conduct field density tests in accordance with ASTM D6938.
  - c. Minimum frequency for field density testing shall be two (2) acceptable tests per project or as follows, whichever number is greater:

Fill Utilized For	Number of Acceptable Tests
Embankments, dikes or berms	1 test per 600 cubic yards
Structural or controlled fills	1 test per 200 cubic yards
Trench backfill under paved or surfaced areas	1 test per 100 feet of trench
Non-structural fills	1 test per 2,000 cubic yards

- 3. Provide Additional Density and Gradation Testing:
  - a. Change in method of compaction.
  - b. Change in source or quality of soil or aggregate.
  - c. Disturbed cut areas.
- C. When the testing results show that the work is of an acceptable nature, the acceptance of the work shall not relieve the Contractor from making corrections to the tested work during the warranty period.

#### PART 2 - PRODUCTS

# 2.1 SOIL MATERIALS

A. Soil used for borrow, fill, and backfilling shall meet the requirements of soil class as stated in the drawings or in the Specifications.

#### PART 3 - EXECUTION

#### 3.1 EXCAVATION

- A. Excavation to Correct Grade
  - 1. Excavate site for structures and pavements as follows:
    - a. To elevation shown on the plans.
    - b. To such additional width as necessary for erections and removal of forms, shoring or sheeting, and finishing of walls.
  - 2. Excavation of unsuitable materials.
    - a. Excavate unsuitable soil materials under a proposed structure.
    - b. Extend excavation laterally a minimum of 5 feet beyond the building limits plus 1 foot for each foot of cut below the foundation.

GEV EARTHWORK

c. Notify the Owner's project representative prior to proceeding with the removal of unsuitable material.

#### B. Borrow Excavation

- 1. Clear site as defined in Section 02 23 00 "Site Clearing."
- 2. Strip and stockpile topsoil.
- 3. Excavate, haul, place, and compact borrow soil material.
- 4. Regrade borrow areas as shown on the plans or in an acceptable manner to facilitate proper site drainage.
- 5. Replace stockpiled topsoil.
- 6. Surplus topsoil may be utilized in borrow area regrading.

#### C. Excavation Precautions

- 1. Excavation Slope Stability:
  - a. Maintain excavation slope to ensure a stable excavation and prevent caving.
  - b. Provide and erect all timber work, shoring, sheeting, bracing, etc. necessary to prevent caving and displacement of adjacent property.
    - 1) Shoring shall be placed so as not to interfere with building work.
    - 2) Shoring shall be independent of footings.

# 3.2 TEST ROLLING

- A. Test roll finished cut or fill subgrades by rolling with a pneumatic-tire roller or a heavy weight loader rubber tire vehicle.
  - 1. Method and equipment used shall be suitable for intended use.
  - 2. Take necessary precautions to protect existing structures from damage during test rolling.
  - 3. Test roll an area equal to the area of the proposed construction plus a minimum of 3 feet on each side.
- B. Treat areas showing yielding or rutting under test rolling as follows:
  - 1. Replace and/or recompact as necessary to stabilize the area.
  - 2. Retest soil areas replaced or recompacted.

# 3.3 FILLING AND COMPACTING

- A. Layer thickness for fill soil shall be as follows:
  - 1. Layer thickness shall be dependent on the soil classification type, weight, and soil contact pressure of compaction equipment being used.
  - 2. Layer thickness shall not exceed 8 inches.

## B. Compaction

- 1. Compaction method for fill soils shall be appropriate for soil material being compacted and provide sufficient soil contact pressure to thoroughly compact entire lift thickness.
- C. Compaction requirements for all fill soils unless specified elsewhere shall be as follows:

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Class 1	- Fills supporting	structures.
	- Subgrade under	pavements or floors.
	- Backfill under p	iping and conduits.
Class 2	- Fills which do n	ot support structures.
	- Embankments, o	likes, or berms.
	COMPACTION RE	EQUIREMENTS FOR
	VARIOUS S	OIL CLASSES
	Required Compacti Proctor Density	on (%) of modified
	Class 1	Class 2
	95	90

D. Soil classes not requiring compaction by the above schedule will be proof rolled when requested by the Engineer.

# 3.4 FINISH GRADING

- A. Grade, trim, and shape subgrade to required grade and section.
  - 1. Adjust slopes by grading so that transition is smooth and gradual.
  - 2. The crests of cut banks shall be rounded and shaped.
  - 3. Refill, regrade and compact washouts and ruts.
- B. Vertical Grading Tolerances
  - 1. Rough grading tolerance.
    - a. Areas to be topsoiled rough grade to within 0.2 foot of finish grades.

**END OF SECTION** 

### **SECTION 31 32 19**

### **GEOTEXTILE FABRICS**

#### PART 1 - GENERAL

### 1.1 SUMMARY

## A. Section Includes

- 1. Geotextile fabrics for geotextile dewatering tubes
- 2. Geotextile fabrics for dewatering pad geomembrane protection
- 3. Geotextile fabrics for erosion control

#### 1.2 REFERENCES

# A. American Society for Testing and Materials (ASTM)

- 1. ASTM D4355 Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water.
- 2. ASTM D4533 Test Method for Trapezoid Tearing Strength of Geotextiles.
- 3. ASTM D4491 Test Methods for Water Permeability of Geotextiles by Permittivity.
- 4. ASTM D4595 Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method.
- 5. ASTM D4632 Test Method for Grab Breaking Load and Elongation of Geotextiles.
- 6. ASTM D4751 Test Method for Determining the Apparent Opening Size of a Geotextile.
- 7. ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products.
- 8. ASTM D4884 Standard Test Method for Strength of Sewn or Thermally Bonded Seams of Geotextiles.
- 9. ASTM D5261 Standard Test Method for Measuring Mass per Unit Area of Geotextiles.

#### 1.3 SUBMITTALS

A. Provide, at the time of delivery of the geotextile fabric, a manufacturer's Certificate of Compliance that the geotextile fabric meets the requirements of this Section.

# 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver geotextile fabric in a wrapping which will protect the fabric from ultraviolet radiation and from abrasion due to shipping and hauling.
- B. Store geotextile fabric in a dry location until installed.

#### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. Provide geotextile fabric consisting of either woven or non-woven polyester, polypropylene, stabilized nylon, polyethylene or polyvinylidene chloride. All fabric shall have the minimum strength values in the weakest principle direction. Non-woven fabric may be needle punched, heat bonded, resin bonded or combinations thereof.
- B. The geotextile fabric shall be insect, rodent, mildew and rot resistant.
- C. Clearly mark the geotextile fabric rolls showing the type of fabric.
- D. Where sewn seams are used, provide a field sewn seam sample produced from the geotextile fabric and thread and with the equipment to be used on the project, prior to its incorporation into the work.

### 2.2 MATERIALS

- A. Non-Woven Geotextile Fabric
  - 1. Non-woven geotextile fabric shall be used beneath any stone used within the dewatering basin.
  - 2. The fabric shall comply with the following physical properties:

Test	Method	Value <sup>1</sup>
Grab Tensile Strength (lbs.)	ASTM D4632	160 min.
Puncture Strength (lbs.)	<b>ASTM D4833</b>	85 min.
Apparent Breaking Elongation (%)	<b>ASTM D4632</b>	50 min.
Apparent Opening Size (U.S. Standard Sieve)	<b>ASTM D4751</b>	70
Permittivity, sec. <sup>-1</sup>	<b>ASTM D4491</b>	1.30 min.

All numerical values represent minimum/maximum average roll values (i.e., the average of minimum test results on any roll in a lot should meet or exceed the minimum specified values).

- 3. The following fabrics are approved:
  - a. Propex Geotex 601
  - b. GSE NW6
  - c. Mirafi-160N
  - d. Approved equal.
- B. Woven Geotextile Fabric for Geotextile Dewatering Tubes
  - 1. Geotextile dewatering tube material shall be fabricated from polypropylene multifilament and monofilament yarns, which are woven into a stable network such that the yarns retain their relative position. The geotextile dewatering tube material shall be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

- 2. The geotextile dewatering tube material shall be fabricated by sewing together mill widths of geotextile to form a tubular shape.
- 3. Geotextile dewatering tubes fabricated 45 feet or greater in circumference must be fabricated with the mill roll length of the geotextile and the adjacent seams being in the circumferential direction with the closure of the tube having a longitudinal seam on the bottom of the container. Each tube shall be fabricated with at least three PVC filling ports located along the top centerline. The filling port is comprised of 1.5 inch thick inside and outside flange rings that sandwich the geotextile surface between 1/8-inch thick rubber gaskets secured with ¾-inch bolts. Additionally, the fill ports shall include a fabric sleeve that clamps around the feed line to prevent leakage.
- 4. PVC fill ports for the attachment of the dredge to the tube shall be located at intervals of no more than 40 feet, or as recommended by the manufacturer. Fill ports shall be ridged PVC with an inner port body and outer port body each comprising one or more cellular surfaces capable of distributing a force caused by the clamping of the inner port body and outer port body together with steel bolts and nuts. Fill ports shall be either 4-inch or 8-inch in diameter with a 48-inch long, flexible non-woven 8 oz/sy geotextile sleeve.
- 5. The fabric shall comply with the following minimum physical requirements:

Parameter	Method	Value <sup>1</sup>	
1 drameter	Method	MD	XD
Wide Width Tensile Strength (ppi at ultimate)	ASTM D4595	400	550
Wide Width Tensile Elongation (percent)	<b>ASTM D4595</b>	20 r	nax
Apparent Opening Size (U.S. sieve size)	<b>ASTM D4751</b>	4	0
UV Degradation (% strength retained after 500 hr)	<b>ASTM D4355</b>	8	0
Water Flow Rate (gpm/sq ft)	ASTM D4491	2	0
Mass/Unit Area (oz/sq yd)	<b>ASTM D5261</b>	17.3 (typi	cal value)
Factory Seam Strength (ppi)	<b>ASTM D4884</b>	40	00

All numerical values represent minimum/maximum average roll values (i.e., the average of test results on any roll in a lot should meet or exceed the minimum values in the table.

- 6. The fabric shall be insect, rodent, mildew and rot resistant.
- 7. The following woven fabrics are approved:
  - a. Ten Cate Nicolon GT 500
  - b. Approved Equal
- 8. Geotextile dewatering tubes shall be 60-foot circumference by 120 feet long.
- 9. Contractor shall provide dewatering tube geotextile with a factor of safety of at least 3 for failure of seams and material failure.

# **PART 3 - EXECUTION**

# 3.1 SEWING

- A. Sew factory and field seams with a thread having the same or greater durability as the material in the fabric. The seams shall be parallel stitch lines with 1.4 inch spacing. The sewing thread shall be multi-ply polyester filament yarn.
- B. Seams shall develop a tensile strength equal to or greater than 80 percent of the specified grab tensile strength of the fabric, unless otherwise specified.

- END OF SECTION -

#### **SECTION 32 92 00**

#### TURF AND GRASSES

# PART 1 - GENERAL

#### 1.1 **SUMMARY**

- Section includes: Α.
  - Topsoiling.
  - 2. Fertilizing.
  - Seeding. 3.
  - Mulching.

#### 1.2 REFERENCES

- Association of Official Seed Analysis (AOSA) Α.
  - 1. Rules for testing seed.
- American Association of State Highway and Transportation Officials (AASHTO) В.
  - 1. AASHTO M140 Emulsified Asphalt.

#### 1.3 **SUBMITTALS**

- A. **Topsoil** 
  - Provide topsoil analysis performed in accordance with ASTM D5268 and demonstrating the topsoil meets Soil Conservation Service specified soil types.
  - Submit results of tests for nutrient levels and provide recommendations for fertilizer type and application.
- B. Fertilizer
  - Furnish certification from supplier attesting to:
    - a. Brand name, chemical analysis, and guarantee of analysis.
- C.
  - Furnish certification of conformance with AOSA "Rules for Testing Seed" and attest to:
    - a. Mix, age, weed content, purity, and germination.

**TURF AND GRASSES** 

- D. Mulch Material
  - 1. Furnish sample of mulch material when requested by Engineer.
- E. Erosion Mat
  - 1. Furnish sample of erosion mat material along with a certification of its physical properties.

### **PART 2 - PRODUCTS**

#### 2.1 TOPSOIL

- A. Consists of adequate mineral content to support the growth of the intended vegetation, consists of Soils Class F-1 or F-2 (Soils and Aggregates) as required, shall meet the definition and specification stated in ASTM D5268, and meets one of the following SCS (Soil Conservation Service) soil textures:
  - 1. Loam.
  - 2. Sandy loam.
  - 3. Silt loam.
  - 4. Silty clay loam.
  - 5. Clay loam.
- B. The topsoil shall consist of adequate mineral content to support the growth of the intended vegetation and shall not contain herbicides which would be detrimental for the intended use.
- C. The topsoil shall have adequate fertility for quick establishment of vegetation.
- D. The pH of the topsoil shall be between 6.0 and 7.0.
- E. Topsoil shall be free from deleterious substances.
- F. Topsoil shall be free from roots, sticks, weeds, brush, stones or other litter and waste products.
- G. Pulverize and screen the topsoil such that 100 percent passes the 1-inch (25 mm) sieve and at least 90 percent passes the No. 10 (2.00 mm).

# 2.2 FERTILIZER

A. Fertilizer shall meet the recommendations of the soil analysis report required by Section 31 05 10 "Soils and Aggregates".

GEV TURF AND GRASSES

# 2.3 SEED

- A. Conform with the requirements of the governing authority for seeding and for restrictions on noxious weed seed.
- B. Seed mixture shall be composed of seeds of the purity, germination, and proportion by weight as follows:

Seed Mix #1 Ditches - Inslope Areas - Heavy Soil

Percent	Variety	Min. % Purity	Min. % Germination
35	85/80 KY Bluegrass	85	80
20	Creeping Red Fescue	97	85
20	Perennial Ryegrass .	97	90
20	Tall Fescue (varieties below)	95	90
5	Redtop	92	85
100% Total			

Tall Fescue Varieties: Choose one or both:

Fawn Tall Fescue KY31 Tall Fescue

Seeding rate of 3 to 4 lbs per 1M sq. ft.

Seed Mix #2 Ditches - Inslope Areas - Light Soil

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Percent	Variety	Min. % Purity	Min. % Germination
10	85/80 KY Bluegrass	85	80
25	Creeping Red Fescue	97	85
25	Hard Fescue (varieties below)	97	85
20	Turf Type Tall Fescue (varieties below)	98	85
20	Perennial Ryegrass	97	90
100% Total			

Hard Fescue Varieties: Choose one or both:

Scaldis Hard Fescue SR3100 Hard Fescue

Turf type tall fescue varieties: choose two of the five:

Tulsa turf type tall fescue Regiment turf type tall fescue Crossfire turf type tall fescue Shortstop turf type tall fescue SR8200 turf type tall fescue

Seeding rate of 5 to 6 lbs per 1M sq. ft.

**GEV** 

Seed Mix #3 Rural Areas - Cut & Fill Slopes >6/8'

Percent	Variety	Min. % Purity	Min. % Germination
20	85/80 KY Bluegrass	85	80
25	Creeping Red Fescue	97	85
25	Tall Fescue (varieties below)	95	90
20	Perennial Ryegrass	97	90
10	Empire Trefoil	95	80
100% Total			

Tall Fescue Varieties: Choose one or both:

Fawn Tall Fescue KY31 Tall Fescue

Seeding rate of 5 to 6 lbs per 1M sq. ft.

Seed Mix #4 Urban Areas - Lawn Turf

Percent	Variety	Min. % Purity	Min. % Germination
30	Elite Bluegrass (varieties below)	98	85
20	98/85 KY Bluegrass	98	85
25	Creeping Red Fescue	97	85
25	Turf Type Perennial Ryegrass	96	85
100% Total			

Bluegrass Varieties: Include a maximum of 4 and a minimum of 2.

Adelphi Geronimo SR2100

Banff Gnome Cynthia Merit Cannan Parade

Seeding rate of 3 to 4 lbs per 1M sq. ft.

Seed Mix #5 Critical Area Stabilization

	Seed Mix #5 Critical Area	Seed Mix #5 Critical Area Stabilization		
Percent	Variety	Min. % Purity	Min. % Germination	
20	Improved Hard Fescue	97	85	
20	Turf Type Tall Fescue (varieties below)	98	85	
15	Little Bluestem	Pure live seed		
15	Side Oats Grama	Pure live seed		
5	Canada Wild Rye	Pure live seed		
25	Turf Type Perennial Ryegrass	95	85	
100% Total				

Turf Type Tall Fescue Varieties: Choose two of the five:

Tulsa Regiment Crossfire Shortstop

SR8200

Seeding rate of 2 to 3 lbs per 1M sq. ft.

Seed Mix #6 Critical Area - Poorly Drained Soils

Percent	Variety	Min. % Purity	Min. % Germination
20	85/80 KY Bluegrass	85	80
25	Tall Fescue (varieties below)	95	90
25	Perennial Ryegrass	96	85
10	Redtop	92	851
5	Climax Timothy	98	90
5	Alsike Clover	97	90
5	Mammoth Red Clover	98	90
5	Canada Wild Rye	Pure live seed	
100% Total			

Tall Fescue Varieties: Choose one or both:

Fawn Tall Fescue KY31 Tall Fescue

Seeding rate of 2 to 3 lbs per 1M sq. ft.

Seed Mix #7 Low Maintenance - Light or Sandy Soils/Shade Areas

Percent	Variety	Min. % Purity	Min. % Germination
15	SR 3100 Hard Fescue	98	85
15	Scaldis Hard Fescue	98	85
10	Moxie Red Fescue	98	85
10	Dawson Red Fescue	98	85
20	SR 5100 Chewings Fescue	98	85
20	Azay Sheep Fescue	98	85
10	SR 4200 Dwarf Rye Grass	98	90
100% Total			

Seeding rate of 5 lbs per 1M sq. ft.

# C. Temporary Nurse Crop

1. When required the Contractor shall furnish one of the following seed mixtures:

Species	Min. % Purity	Min. % Germ	Lbs. per Acre
Oats	98	90	80
Rye	98	85	100

#### 2.4 MULCH

- A. Mulch shall consist of straw, hay, marsh hay, or wood chips which are free of noxious weeds and other objectionable foreign matter.
  - 1. If wood chips are used, the mulch area shall be treated with one (1) pound of available nitrogen per 1,000 square feet.
- B. Mulch binder shall conform to one of the following:
  - 1. Emulsified asphalt shall meet the requirements for Type SS-1 AASHTO M140.
  - 2. Terra Tack I, or equal.

### 2.5 EROSION MATS

- A. Jute fabric shall meet the following general requirements:
  - 1. Uniform, open weave of single jute yarn.
  - 2. Twisted construction having an average twist of not less than one and one-half turns per inch.
  - 3. Furnished in rolled strips 48 inches wide with a minimum of 78 wrapped ends.
  - 4. Fabric shall have a minimum of 41 west yarns per linear yard of length.
  - 5. Weight of fabric shall be a minimum of 92 pounds per 100 square yards.
  - 6. Non-toxic to vegetation.
  - 7. Smolder resistant.
- B. Wood fiber blanket shall meet the following general requirements:
  - 1. Uniform web of interlocking wood excelsior fibers.
  - 2. Uniform thickness.
  - 3. Weight 78 pounds per 80 square yards.
  - 4. Have net backing on one side as follows:
    - a. Mesh size not exceeding 1½ inches by 3 inches.
      - b. Woven of twisted paper, cotton cord, or biodegradable plastic.
  - 5. Non-toxic to vegetation.

#### C. Permanent Geomats

- 1. Consist of a tough, flexible matting made of a high density polyethylene or similar material.
- 2. Ultra-violet resistant.
- 3. Have a minimum thickness of 0.4 inch (1.0 cm).
- 4. Non-toxic to vegetation.
- 5. Contain no petroleum solvents or other agents toxic to plant or animal life.

#### D. Staples

- 1. Staples for anchoring erosion mat shall meet the following minimum requirements:
  - a. U-shaped.
  - b. No. 11 gage or larger diameter steel wire.
  - c. Width of 1 to 2 inches.
  - d. Length.

- 1) Not less than 6 inches for firm soil.
- 2) Not less than 12 inches for soft or loose soils.

# **PART 3 - EXECUTION**

# 3.1 TOPSOILING

- A. Topsoil all areas which are required to be seeded. Place topsoil to the following depth:
  - 1. Seeded Areas: 4 inches when settled.
- B. Topsoil placement in rural areas:
  - 1. Place to required depth.
  - 2. Remove all cobbles larger than 3 inches.
  - 3. Remove all debris.
  - 4. Mechanically break down all clods and lumps.
  - 5. Mechanically level and rake prior to applying seed.

# 3.2 FERTILIZING

- A. Fertilize all areas to be seeded.
- B. Application rate shall conform to soil analysis report.
- C. Incorporation shall be performed by mechanical means during seeding operation.

### 3.3 SEEDING

A. Selection of seed mixtures, rate of seeding and intended use of the mixtures shall be as follows:

Seed Mixture	Rate of Seeding (Lbs. per 1,000 sq. ft.)	Intended Use
No. 1	3-4	Average loam or heavy clay soils.
No. 2	5-6	Light, sandy or gravelly soils. All ditches, inslopes.
No. 3	5-6	In rural areas on cut and fill slopes exceeding 6 to 8 feet.
No. 4	3-4	In urban area or other areas where a lawn type turf is desired.
No. 5	2-3	Critical area stabilization. May be used in conjunction with mixture No. 1 and No. 2 on steep slopes.
No. 6	2-3	Poorly drained soils. Critical area stabilization (usually not mowed).
No. 7	5	Low maintenance, light or sandy soils, shade areas.

B. Seeding period shall be as recommended by the seed supplier.

# C. Seeding

- 1. Utilize a machine or combination of machinery which will produce the following:
  - a. Apply seed uniformly at the rate specified.
  - b. Cover seed with approximately ¼ inch of topsoil.
  - c. Roll lightly.
  - d. Apply seed at right angles to surface drainage.

# 3.4 MULCHING

- A. Complete mulching as follows:
  - 1. Within 48 hours after seeding has been completed.
  - 2. Place all mulch uniformly to a loose depth of 1 to 1½ inches (2 to 3 tons per acre).
  - 3. Mulching operation shall begin at the top of slopes and proceed downward.
- B. Mulching shall be secured using one of the following methods:
  - 1. Method "A"
    - a. Secure mulch with heavy twine or netting.
      - i. Twine to be fastened with pegs or staples to form a grid of 6- to 10-foot spacing.
  - 2. Method "B"
    - a. Apply emulsified asphalt at the rate of 200 to 300 gallons per acre.
    - b. Machinery used for placing mulch and emulsified asphalt shall produce a spotty tack sufficient to hold together and retain in-place the deposited mulch material.
  - 3. Method "C"
    - a. Anchor mulch in soil by means of a mulch tiller.
    - b. Mulch shall be impressed in the topsoil to a depth of  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches in one pass of the tiller.

# 3.5 EROSION MAT

- A. Erosion Mat Installation
  - 1. Install erosion mat at locations designated on the plans within 48 hours after completion of seeding.
  - 2. All stones, soil clods, roots, sticks, and other foreign material shall be removed prior to placing the mat.
- B. Installation of Jute Fabric Wood Fiber Blanket (Excelsior):
  - 1. Matting strips to be laid in the direction of surface water flow.
  - 2. Adjacent strips shall overlap at least 4 inches.
  - 3. Mat strip ends shall overlap at least 10 inches.
  - 4. Wood fiber blanket shall be installed with netting on top.
  - 5. Bury the upgrade end of each strip of fabric at least 8 inches in a vertical slot cut in the soil and firmly tamping soil against fabric as follows:
    - a. For ditch grades of 4 percent or less, construct vertical slots every 50 feet.
    - b. For ditch grades of 4 percent or more, construct vertical slots every 25 feet.

- 6. Form terminal fold at the bottom end of the erosion mat by folding under approximately 4 inches of mat and stapling it to the ground.
- 7. Install staples as follows:
  - a. Vertically until tops are flush with the soil.
  - b. Space staples at 3-foot centers along overlap at mat edges and alternate at 3-foot centers through mat centers.
  - c. Space staples at 10-inch centers at mat ends and junction slots.

# C. Installation of Permanent Geomats

1. Geomats shall be installed in accordance with the procedure recommended by the manufacturer and be suitable for the intended use.

# 3.6 APPLICATION

- A. Apply landscaping and turf establishment procedures as follows:
  - 1. Rural and unmowed areas with less than 4 to 1 slope:
    - a. Topsoil.
    - b. Seed.
    - c. Fertilize.
    - d. Mulch and mulch binder.
  - 2. Rural and unmoved areas with 4 to 1 slopes to 3 to 1:
    - a. Topsoil.
    - b. Seed.
    - c. Fertilize.
    - d. Stabilize with wood fiber erosion mat.
  - 3. Rural and unmowed areas with 3 to 1 slopes or greater:
    - a. Topsoil.
    - b. Seed.
    - c. Fertilize.
    - d. Stabilize with permanent geomat.

#### 3.7 MAINTENANCE

- A. Maintain all seeded areas until all the following conditions are met.
  - 1. Seeding: Establish a good stand of grass (uniform in density and color) satisfactory to Owner.
  - 2. Capable of resisting erosion.
- B. Watering of turf shall be included in maintenance.

# **END OF SECTION**

### **Attachment 1**

# **Bathymetric Survey Requirements**

### **Bathymetric Survey Verification**

This section describes the survey procedures to be used in support of the bathymetric survey verification activities for all pre-dredge and post-dredge Quality Assurance (QA) surveys. Survey control points shown on the drawings shall be used as the horizontal and vertical datums for the survey work.

### **Bathymetric Survey Methods and Equipment**

A baseline existing conditions or pre-dredge QA bathymetric survey will be conducted in areas anticipated for dredging in 2009, prior to dredging in those areas. This survey will be the basis from which all volume computations for 2009 dredging work will be made.

Following completion of dredging, a post-dredge QA bathymetric survey of the lake bottom surface will be performed for final confirmation that the design target elevations have been achieved. This survey, in conjunction with the baseline existing conditions survey, will also be used to document the post-dredge sediment bed elevation and to calculate the sediment volumes removed for payment during dredging activities.

QA bathymetric surveys will be performed following the general procedures described by Engineering and Design – Hydrographic Surveying (USACE Manual No. 1110-2-1003, 2004). Upon Contract Award, the Contractor and Engineer will review and integrate this procedure with the Contractor's proposed dredging process. Table 1 summarized the minimum bathymetric survey requirements.

# Table 1 Bathymetric Survey Requirements

Survey Classification	Special Order
Survey Equipment	<ul> <li>Real-Time Kinematic (RTK) Global Positioning System (GPS)</li> </ul>
	<ul> <li>Single beam 200 kHZ transducer</li> </ul>
	<ul> <li>Laptop computer with sounding and navigation software</li> </ul>
	<ul> <li>Survey boat with maximum 18 inch draft</li> </ul>
Survey Coverage	<ul> <li>Full coverage, entire length and width of each dredged area</li> </ul>
	• 50-ft. line spacing, longitudinal to flow
	<ul> <li>Cross lines at 50-ft. spacing, perpendicular to flow</li> </ul>
Equivalent Target Map Scale	1 in. = 50 ft. (Note: The mapping may also be used at various smaller scales for different purposes on the project, but the accuracy of the bathymetric survey shall be based on the map scale no smaller than 1 in. = 50 ft.)
Resultant Horizontal Accuracy	+/- 10% of water column depth
Resultant Elevation/Depth Accuracy	≤0.25 ft.
Map Contour Interval	0.5 ft.
Coordinate System	NAD 83, Dane County Coordinate System
Vertical Datum	NAVD 88
Unit of Measure	U.S. survey ft.
Output Electronic Format	Compatible with ArcGIS and Microstation
Output Hard Copy Format	ANSI D-size sheets (22 x 34 in.; to allow half-scale plotting directly to 11 x 17 in. when needed)

Prepared by: REM Checked by: DMR

# Appendix A Dredge Permit



## DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS SIBLEY SQUARE AT MEARS PARK 190 FIFTH STREET EAST, SUITE 401 ST. PAUL MN 55101-1638

April 29, 2009

Operations Regulatory (2009-01589-ADJ)

Dane County Land and Water Resources Department Attn: Jeremy Balousek 1 Fen Oak Court, Room 208 Madison, Wisconsin 53718

Dear Mr. Balousek:

We have completed our review of your permit application to dredge approximately 20,000 cubic feet of sediment from Stewart Lake using hydraulic dredging methods and return water from dredged material to Stewart Lake for the purpose lake restoration. The project site is in SE ¼, SE ¼ Sec. 2, T. 6N., R. 6E Dane County, Wisconsin.

This work is authorized by Department of the Army General Permit (GP-002-WI) PROVIDED THE ENCLOSED CONDITIONS ARE FOLLOWED AND YOU OBTAIN CONFIRMATION THAT SECTION 401 WATER QUALITY CERTIFICATION HAS BEEN GRANTED OR WAIVED FOR THE PROJECT from the Wisconsin Department of Natural Resources (WDNR). Your project <u>IS NOT</u> authorized by this general permit until you obtain this confirmation of water quality certification from WDNR.

You should contact Cami Peterson of the WDNR office in Fitchburg (608) 275-3208, concerning water quality certification for your project.

If your project will require off-site fill material that is **not** obtained from a licensed commercial facility, you must notify us at least five working days before start of work. A cultural resources survey may be required if a licensed commercial facility is not used.

This General Permit is valid until April 16, 2011, unless reissued, or revoked. The time limit for completing the work described above ends on that date or two years from the date of this letter, whichever is later. It is the permittee's responsibility to remain informed of changes to the General Permit program. If this authorized work is not undertaken within the above time period, or the project specifications have changed, our office must be contacted to determine the need for further approval or re-verification.

It is your responsibility to ensure that the work complies with the terms of this letter and the enclosures AND TO OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS AND APPROVALS BEFORE YOU PROCEED WITH YOUR PROJECT.

A preliminary jurisdictional determination (JD) has been prepared for the site of your project. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps representative identified in the final paragraph of this letter. You also may provide new information for further consideration by the Corps to reevaluate the JD. If this JD is acceptable, please sign and date both copies of the Preliminary Jurisdictional Determination Form and return one copy to the address below within 15 days from the date of this letter.

U.S. Army Corps of Engineers St. Paul District 190 5<sup>th</sup> Street East, Suite 401 St. Paul, Minnesota 55101-1638 Attn: Anthony Jernigan

If you have any questions, contact Anthony Jernigan in our Waukesha office at (262) 547-7623. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

Tamara E. Cameron Chief, Regulatory Branch

**Enclosures** 

Copy furnished to (email): WDNR, Cami Peterson (IP-SC-2009-13-01681)

#### GENERAL INFORMATION

Persons proposing to do work should especially note that, in ALL cases, GP-002-WI requires that adverse impacts on water and wetland resources be avoided and minimized to the maximum extent practicable. Also, activities that would adversely affect Federal or State endangered plant or animal species or certain cultural or archaeological resources, or that would impair reserved Native American tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights, are not eligible for authorization under GP-002-WI.

#### <u>Department of the Army Permit</u> <u>General Conditions:</u>

- 1. This General Permit (GP) expires on April 16, 2011. The time limit for completing work authorized by the provisions of GP-002-WI ends upon the expiration date of GP-002-WI or two years from the date of the Corps letter confirming the project complies with the requirements for the GP.
- 2. You must maintain the activity authorized by GP-002-WI in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity. Should you wish to cease to maintain an activity authorized by the provisional GP under GP-002-WI, or should you desire to abandon it without a good faith transfer, you must obtain a modification of the authorization from this office, which may require restoration of the area.
- 3. If you discover any previously unknown historic or archaeological remains while accomplishing any activity authorized by GP-002-WI, you must immediately stop work and notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

#### **GP-002-WI CONDITIONS**

- 4. You must allow representatives from this office and/or the WDNR to inspect the proposed project site and the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of GP-002-WI.
- 5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification will be attached to your authorization letter if it contains such conditions.
- 6. Refer to the other GP-002-WI terms and conditions specified below.

#### Further Information:

- 1. Congressional Authorities:
  Authorization to undertake the activities described above is pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), only. Work that also requires authorization under Section 10 of the Rivers and Harbors Act must be authorized separately through other general permits or individual reviews.
- Limits of this authorization.
- a. GP-002-WI does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. GP-002-WI does not grant any property rights or exclusive privileges.
- c. GP-002-WI does not authorize any injury to the property or rights of others.
- d. GP-002-WI does not authorize interference with any existing or proposed Federal project.
- 3. Limits of Federal Liability. In authorizing work, the Federal Government does not assume any liability, including for the following:
- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on

behalf of the United States in the publi interest.

- c. Damages to persons, property, or to ther permitted or unpermitted activition structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
- 4. Reliance on Applicant's Data: The determination by this office that a confirmation of authorization is not contrary to the public interest will be made in reliance on the information provided by the applicant.
- 5. Reevaluation of Decision. This office may reevaluate its decision on an authorization at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. The applicant fails to comply with the terms and conditions of this general permit.
- b. The information provided by the applicant in support of the permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring the permittee to comply with the terms and conditions of the permit and for the initiation of legal action where appropriate. The permittee will be required to pay for any corrective measures ordered by this office, and upon failure to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill the

permittee for the cost.

6. This office may also reevaluate its decision to issue General Permit 002 - WI at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following: significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7.

# GP-002-WI STANDARD CONDITIONS

- 1. <u>Discretionary Authority</u>. The Corps retains discretionary authority to require an individual permit review of any activity eligible for authorization under GP-002-WI based on concern for the aquatic environment or for any public interest factor.
- 2. Federal Trust Responsibility to Indian Tribes. Projects the District finds to have potential to affect tribal interests will be coordinated with the appropriate Indian Tribal governments. The Tribe's views and the Federal trust responsibility will be considered in the District's evaluation. Throughout the state, including the treaty-ceded territories, the District review of all GP projects which impact more than 10,000 square feet of wetland/water area will include coordination with any potentially affected tribe(s). The District will provide, by facsimile transmission, project notifications to the concerned tribe(s) for a 30-day review period. The views of the tribe(s) will be considered in the District's evaluation of the activity and in the District's determination of whether the activity is in compliance with the general

Based on treaty rights, no activity or its operation may impinge or abrogate reserved treaty rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

3. Form and confirmation of authorization. Every GP-002-WI

#### **GP-002-WI CONDITIONS**

authorization that requires submission of an application will be confirmed in writing by the St. Paul District sending the project proponent a letter confirming authorization. The letter will identify any required special conditions.

- 4. Federal and State Endangered Species and Cultural Resources.
  GP-002-WI does not affect the Corps responsibility to insure that all Section 404 authorizations comply with Section 7 of the Federal Endangered Species Act, s. 29.604, Wisconsin Statutes and Section 106 of the National Historic Preservation Act. No Corps GP will be granted for projects found not to comply with these
- 5. Grandfather Provision. Regulated work for commenced activities that were authorized under the GP/LOP-98-WI, and for activities previously confirmed by the District in writing to be authorized under GP/LOP-98-WI, continues to be authorized under the terms of the permits that existed at the time of original confirmation of authorization for two years after the issuance date of GP-002-WI.
- 6. <u>Case-by-case conditions</u>. The authorized activity must comply with any special conditions that may have been added by the District or by a state, tribe, or the U.S. Environmental Protection Agency in its section 401 water quality certification or consistency determination under the Coastal Zone Management Act. Such conditions will be specifically identified in any Corps authorization.
- 7. <u>Mitigation/Sequencing</u>. Discharges of dredged or fill material into waters of the United States must be avoided and minimized to the maximum extent practicable.
- 8. State/Tribal Water quality certification and Coastal zone management (CZM) consistency determination. Some GP-002-WI authorizations may not be valid unless and until the WDNR has confirmed that the activity complies with state water quality certification and/or CZM consistency determination is obtained from or waived by the Wisconsin Coastal

Management Program. If such a condition applies, it will be so noted in the Corps authorization letter for the project. See conditions 29 and 30 at the end of this document.

- 9. <u>Proper maintenance</u>. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.
- 10. Erosion and siltation controls.. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark must be permanently stabilized at the earliest practicable date. Work should be done in accordance with state-approved published practices.

Upon completion of earthwork operations, all exposed slopes, fills, and disturbed areas must be given sufficient protection by appropriate means such as landscaping, or planting and maintaining vegetative cover, to prevent subsequent erosion. Coffer dams shall be constructed and maintained so as to prevent erosion into the water. If earthen material is used for coffer dam construction, sheet piling, riprap or a synthetic cover must be used to prevent dam erosion.

- 11. Removal of temporary fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.
- 12. Federal and State threatened and endangered Species. a. No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act and/ or State law or which is likely to destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District if any listed species or critical habitat might be affected or is in the vicinity of the project, and shall not begin work on the activity until notified by the District that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.

b. Authorization of an activity under GP002-WI does not authorize the take of a threatened or endangered species as defined under the Federal Endangered Species Act or State law. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with incidental take provisions, etc.) from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, both lethal and non-lethal takes of protected species are in violation of the Endangered Species Act. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. Fish and Wildlife Service and National Marine Fisheries Service, WDNR or their World Wide Web pages on the Internet.

### 13. Historic properties, cultural resources. No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District has complied with the provisions of 33 CFR Part 325, Appendix C. The prospective permittee must include notification to the District in the permit application if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places.

If cultural, archaeological, or historical resources are unearthed during activities authorized by this permit, work must be stopped immediately and the State Historic Preservation Officer must be contacted for further instruction.

- 14. <u>Spawning areas</u>. Discharges in spawning areas during spawning seasons must be avoided to the maximum extent practicable.
- 15. Obstruction of high flows. To the maximum extent practicable, discharges

#### **GP-002-WI CONDITIONS**

must not permanently restrict or impede the passage of normal or expected high flows or cause the relocation of the water (unless the primary purpose of the fill is to impound waters).

### 16. Adverse effects from

impoundments. If the discharge creates an impoundment of water, adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow shall be minimized to the maximum extent practicable.

# 17. Waterfowl breeding areas. Discharges into breeding areas for

Discharges into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

- 18. <u>Navigation</u>. No activity may cause more than a minimal adverse effect on navigation.
- 19. Aquatic life movements. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water.
- 20. <u>Equipment</u>. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.
- 21. Water quality standards. All work or discharges to a watercourse resulting from permitted construction activities, particularly hydraulic dredging, must meet applicable Federal, State, and local water quality and effluent standards on a continuing basis.
- 22. <u>Preventive measures</u>. Measures must be adopted to prevent potential pollutants from entering the watercourse. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter the watercourse as a result of spillage, natural runoff, or flooding.
- 23. <u>Disposal sites</u>. If dredged or excavated material is placed on an upland disposal site (above the ordinary highwater mark), the site must be securely diked or contained by an acceptable

method that prevents the return of potentially polluting materials to the watercourse by surface runoff or by leaching. The containment area, whether bulkhead or upland disposal site, must be fully completed prior to the placement of any dredged material.

- 24. Suitable fill material All fill (including riprap), if authorized under this permit, must consist of suitable material(e.g.,no trash, debris, car bodies, asphalt, etc.,) free from toxic pollutants in other than trace quantities(see Section 307 of the Clean Water Act).. In addition, rock or fill material used for activities dependent upon this permit and obtained by excavation must either be obtained from existing quarries or, if a new borrow site is opened up to obtain fill material, the State Historic Preservation Officer (SHPO) must be notified prior to the use of the new site. Evidence of this consultation with the SHPO will be forwarded to the St. Paul District Office.
- 25. Water intakes/activities. An investigation must be made to identify water intakes or other activities that may be affected by suspended solids and turbidity increases caused by work in the watercourse. Sufficient notice must be given to the owners of property where the activities would take place to allow them to prepare for any changes in water quality.
- 26. Spill contingency plan. A contingency plan must be formulated that would be effective in the event of a spill. This requirement is particularly applicable in operations involving the handling of petroleum products. If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1-800-943-0003 and the U.S. Coast Guard at telephone number 1-800-424-8802.
- 27. Other permit requirements. No Corps GP-002-WI authorization eliminates the need for other local, state or Federal authorizations, including but not limited to National Pollutant

Discharge Elimination System (NPDES) or State Disposal System (SDS) permits.

#### 28. State Section 401 Certification Conditions and Limitations of Section 401 Certification for GP-002-WI:

#### I. GENERAL CONDITIONS:

- 1. The applicant shall allow the WDNR reasonable entry and access to the discharge site to inspect the proposed discharge for compliance with this certification and applicable laws and to inspect permitted discharges for compliance with this certification and applicable laws.
- 2. If any conditions of this certification are found to be invalid or unenforceable, certification for all activities to which that condition applies is denied.
- 3. The following activities are not eligible for certification under this water quality certification action for GP-002-WI.
- A. Activities likely to jeopardize the continued existence of a state designated threatened or endangered species or a species proposed for such designation or which is likely to destroy or adversely modify the habitat of such species.
- B. Activities that result in adverse impacts to fishery spawning habitat or adversely affect avifauna breeding areas or substantially disrupt the movement of those species that normally migrate from open water to upland or vice versa (i.e. amphibians, reptiles and mammals).
- C. Activities detrimental to waters of the state, including wetlands, that would adversely affect designated areas of special natural resource interest as defined in NR 103.04, Wis. Adm. Code.
- D. Activities, individually or cumulatively, detrimental to waters of the state, including wetlands, that would further the substantial degradation of designated impaired waters of the state.
- 4. Applicants seeking authorization under this regional general permit (except the non-reporting general permit) shall complete a Joint State/Federal Permit

#### **GP-002-WI CONDITIONS**

Application and submit two copies of each to the appropriate local COE office and the local WDNR Water Management Specialist. Applications for water quality certification must be complete as determined by the WDNR. Please note an application fee is required for state water quality certification activities identified under Section II below.

# II. WATER QUALITY CERTIFICATION

- 1. The WDNR grants water quality certification for the <u>Non-Reporting GP</u> subject to compliance with all applicable conditions in GP-002-WI and compliance with conditions 1., 2., 3., and 4, above.
- 2. The WDNR grants water quality certification for projects that satisfy all applicable conditions of GP-002-WI under the <u>Provisional GP</u> subject to the <u>General Conditions</u> above, and:
- 3. The applicant receives written confirmation from the department that their proposed activity(s) is consistent with the requirements of NR 299 Water Quality Certification, Wis. Adm. Code, and the Department confirms that the applicant has adequately demonstrated that no other practicable alternative exists which would not adversely impact wetlands and would not result in other significant adverse environmental consequences and the Department confirms that the activity is consistent with the requirements of NR 103.08, Wis. Adm. Code.

NOTE: If additional information is needed, or if heavy snow or ice cover prevents WDNR from completing their review, the normal processing time for confirming activities eligible for authorization under this certification may be extended (by written notice from WDNR to the applicant.)

29. Wisconsin Coastal Management Program (WCMP) Conditions. The WCMP's Federal consistency determination for GP-002-WI provides that no GP-002-WI authorization for an activity taking place in coastal wetlands identified as ridge and swale complexes and/or wetlands adjacent to the Mink

River, Door County, and the Kakagon and Bad Rivers, Ashland County will be valid unless and until a Federal consistency determination is granted or waived by the WCMP. This requirement therefore is incorporated as a permit condition of GP-002-WI. Applicants will be notified of this condition in the District's GP provisional authorization for projects in these areas.

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office St. Paul District File/ORM#	2009-01589-ADJ PJD Date: Apr 29, 2009
State WI City/County Dane  Nearest Waterbody: Stewart Lake	Name/ Address of  Dane County Land and Water Resources Department
Location: TRS, LatLong or UTM: 43 01 12 N, 89 44 27 W	Person Requesting PJD  Attn: Jeremy Balousek 1 Fen Oak Court, Room 2008 Madison, Wisconsin 53718
Identify (Estimate) Amount of Waters in the Review Area:  Non-Wetland Waters:  Stream Flow:  Perennial  Perennial	Name of Any Water Bodies Tidal: on the Site Identified as Section 10 Waters: Non-Tidal:
Wetlands: acre(s) Cowardin Class: Lacustrine	Office (Desk) Determination Field Determination: Date of Field Trip:
SUPPORTING DATA: Data reviewed for preliminary JD and requested, appropriately reference sources below):  Maps, plans, plots or plat submitted by or on behalf of the Data sheets prepared/submitted by or on behalf of the Coffice concurs with data sheets/delineation of Office does not concur with data sheets/deline Data sheets prepared by the Corps Corps navigable waters' study:  U.S. Geological Survey Hydrologic Atlas:  CUSGS NHD data.	e applicant/consultant. report.
USGS 8 and 12 digit HUC maps.	
U.S. Geological Survey map(s). Cite quad name: USDA Natural Resources Conservation Service Soil S	Survey Citation: USDA NRCS
National wetlands inventory map(s). Cite name:  State/Local wetland inventory map(s): wwi  FEMA/FIRM maps:  100-year Floodplain Elevation is:  Photographs: Aerial (Name & Date):  Other (Name & Date):	
Previous determination(s). File no. and date of respon	se letter:
Other information (please specify):	
April 29, 2009	een verified by the Corps and should not be relied upon for later jurisdictional determinations.
Signature and Date of Regulatory Project Manager (REQUIRED)	Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DET	ERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN). or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary ID, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Office	St. Paul District	File/ORM	# 2009-001589-ADJ	nem i i describis distributado e a servir deservir servir a servicione de la compansión de	PJD Date:	Apr 29, 2009
WI	City/County Dane	County	P	erson Requestinq P	JD Jeremy Balo	usek
Site Numbe	r Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resour in Review Area	ce Class	
Lake	43 01 12N	89 44 27W	Lacustrine	6 ac.	WOL	S No. 2 hallocation reference of
			n/a			
			n/a			
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This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office St. Paul District File/ORM #	2009-01589-ADJ		PJD Date:	Apr 29, 2009	
State WI City/County Dane		Dane C	Dane County Land and Water Resources		
Nearest Waterbody: Stewart Lake	Marie Committee of the	ress of Attn: Ie	Department Attn: Jeremy Balousek 1 Fen Oak Court, Room 2008 Madison, Wisconsin 53718		
Location: TRS, LatLong or UTM: 43 01 12 N, 89 44 27 W	Pers Req PJD	uesting 1 Fen C			
Identify (Estimate) Amount of Waters in the Review Area:  Non-Wetland Waters: Stream Flow: Perennial	Name of Any Water on the Site Identifi Section 10 Wate	ed as			
Wetlands: Cowardin Class: Lacustrine	Office (Desk) Field Determin		te of Field Trip:		
SUPPORTING DATA: Data reviewed for preliminary JD and requested, appropriately reference sources below):	(check all that apply -	checked items shou	ld be included in cas	e file and, where checked	
Maps, plans, plots or plat submitted by or on behalf of th Data sheets prepared/submitted by or on behalf of th Office concurs with data sheets/delineation Office does not concur with data sheets/delineation Data sheets prepared by the Corps Corps navigable waters' study:  U.S. Geological Survey Hydrologic Atlas:  USGS NHD data.  USGS 8 and 12 digit HUC maps.  U.S. Geological Survey map(s). Cite quad name:  USDA Natural Resources Conservation Service Soil  National wetlands inventory map(s). Cite name:  State/Local wetland inventory map(s): wwi  FEMA/FIRM maps:  100-year Floodplain Elevation is:  Photographs:  Aerial (Name & Date):  Previous determination(s). File no. and date of respoin Other information (please specify):	e applicant/consultareport. ineation report.  Survey. Citation:	JSDA, NRCS	Lake Dredge Project,		
April 29, 2009			the state of the s		
Signature and Date of Regulatory Project Manager (REQUIRED)			uesting Preliminary Jl e signature is impracti		
EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DE		and the nermit applica	nt or other affected parts	who requested this preliminary ID	

hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

# Appendix A - Sites File/ORM # 2009-001589-ADJ Apr 29, 2009 District Office St. Paul District PJD Date: State WI Person Requesting PJD | Jeremy Balousek City/County Dane County Est. Amount of Site Aquatic Resource Class of **Cowardin Class** Number Latitude Longitude in Review Area **Aquatic Resource** WOL 6 ac. Lake 43 01 12N 89 44 27W Lacustrine n/a n/a n/a n/a n/a Notes:

State of Wisconsin
Department of Natural Resources
(Return to appropriate DNR Regional/Service Center Office)

# State / Federal Application for Water Regulatory Permits and Approvals

Form 3500-053 (R 4/01)

Page 1 of 2

PLEASE COMPLETE BOTH PAGES 1 & 2 OF THIS APPLICATION. PRINT OR TYPE. The Department requires use of this form for any application filed pursuant to Chapter 30, Wis. Stats. The Department will not consider your application unless you complete and submit this application form. Personally identifiable information on this form will not be used for any other purpose, but it must be made available to requesters under Wisconsin's open records law [s. 19.31-19.39, Wis. Stats.].

Applicant (Individual or corporate name)	2. Agent/Contractor (firm name)
Dane County Land and Water Resources Do	t. <u>Jeremy Balousek</u> (Dane County LWRD
Address	Address
1 Fen Oak Coust Rm. 208	
City, State, Zip Code Fire Number	City, State, Zip Code
Madison WI 53718	
Telephone No. (Include area code)  Tax Parcel Number	Telephone No. (Include area code)
608-224-3730	608-224-3747 (direct)
<ol> <li>If applicant is not owner of the property where the proposed activity of authorization from owner. Owner must be the applicant or co-appl</li> </ol>	
Owner's Name Address	City, State, Zip Code
4. Is the applicant a business? Yes No	5. Project Location
If YES, is the permit or approval you are applying for necessary for	Address 3106 CTH 3G
you to conduct this business in the State of Wisconsin?	Village/City/Town Blue Mounds/ Village of Mt. Hore
☐ Yes     No	Fire Number Tax Parcel Number <u>0606-024-9500-5</u>
If YES, please explain why (attach additional sheets if necessary):	Waterway Stewart Lake
	County Dans
	Govt. Lot OR SE 1/4, SE 1/4, of Section 2 .
	Township 6 North, Range 6 (East) (West)
( Adiabata Disease Obsishlada Water fort Descrite Ossay) Inform	
6. Adjoining Riparian (Neighboring Waterfront Property Owner) Inform	
Name of Riparian #1 Address	City, State, Zip Code
Dane Lounty Parks   Fen Oak C	
The state of the s	City, State, Zip Code
7. Project Information (Attach additional sheets if necessary)	ity Dr. #211 West Bend WI 53095
	N
(a) Describe proposed activity (include how this project will be const	
Hydraulic dredging of lake sed	Iment. Sediment disposal/dewatering on adjacent upland.
(b) Purpose, need and intended use of project	on adjacent upland.
Lake Restoration	•
The Land Confirm Confi	(Charle all that are let)
(c) I have applied for or received permits from the following agencies	
Municipal County Wis. DN	IR Corps of Engineers
(d) Date activity will begin if permit is issued 8-1-09; be	e completed: 10-30-09
(e) Is any portion of the requested project now complete?	If yes, identify the completed portion on the enclosed drawings
Yes No	and indicate here the date activity was completed:
I hereby certify that the information contained herein is true and accurate.	Lalso certify that I am entitled to apply for a permit, or that I am
the duly authorized representative or agent of an applicant who is entitled	
result in permit revocation, the imposition of a forfeiture(s) and requireme	nt of restoration.
Signature of Applicant(s) or Duly Authorized Agent	Date Signed
Signature of Applicant(s) of Duly Authorized Agent	4-8-09
TO X MOUNT CONTRACTOR AND TOUR	
Corps of Engineers Process No.	CEIVING AGENCY USE ONLY Wisconsin DNR File No.
Composition of the Composition o	
Received By	Date Received Date Application Was Complete

# State of Wisconsin Department of Natural Resources

# Fee for Applications to Alter Lakes, Streams or Wetlands

R1-07

www.dnr.wi.gov

Form 3500-053A

page 1 of 2

#### **FEE INFORMATION**

#### Information about Fees for Applications to Alter Lakes, Streams or Wetlands

State law requires that the Department charge a fee for processing your request to make changes to public waters and wetlands. The Department begins review of each application for completeness only after the correct fee is received. Please review the application information for the activity you are applying for in order to determine the correct fee. This information is available on the Department's web site at www.dnr.wi.gov under the topic Waterway and Wetland Permits.

- \* Please see Page 8 of this Application for Applicable Fees \*
- \* COMPLETE BOTH SIDES OF THIS FORM AND SUBMIT WITH YOUR APPLICATION \*

For purposes of determining permit application fees, a "single project" is defined as an activity that affects a single waterway, waterbody or wetland within a single county. After exemption determinations and general permit deadlines are met, individual applications are reviewed on a first in - first out basis.

An optional **expedited decision process** is available for a supplemental fee of \$2000. The expedited permit review guarantees a decision by a mutually agreed-upon date between the applicant and the Department. If you wish to request an expedited permit review, submit a letter with your application describing the time frame that will meet your needs, along with a check for the applicable permit fee and a separate check for the supplemental fee. Supplemental fees are based on county boundaries. If your project involves alterations to the landscape in 2 separate counties your supplemental fee will be \$4,000. (The supplemental fee funds permit reviewers specifically designated for expedited decision-making). Within twenty days we will respond in writing, specifying any additional information needed for an expedited decision on your proposal, and the date by which we can make a decision once the application is complete.

**After-the-fact applications**, for permits or approvals submitted after work has been commenced or completed, require twice the usual fee. Projects started or completed without obtaining the appropriate permits are subject to enforcement actions (e.g. monetary forfeitures, mandatory abatement, mandatory restoration).

**Refunds** of standard fees are made only if the applicant withdraws their application and requests a refund before we determine that the application is complete.

**Note:** Personally identifiable information on this form is not used for any other purpose than filing of this application but it may be made available to requesters under Wisconsin's open records law [s. 19.31-19.39, Wis. Stats.].

Activity Applied for	Amount Enclosed
Individual Permit For Lake Dredging	\$ 500.00 Make checks payable to "Wisconsin DNR"

LEAVE BLANK – DEPARTMENT OF NATURAL RESOURCES USE ONLY						
Fee Received \$	Fee Received \$ Check  Money Order					
Received by			Docket Number			

# State of Wisconsin Department of Natural Resources

# Fee for Applications to Alter Lakes, Streams or Wetlands

R1-07

www.dnr.wi.gov

Form 3500-053A

page 2 of 2

Please review the permit application materials closely to see if your project is eligible for a General Permit (GP) or an Individual Permit (IP). This will make a difference in your fee, and in the permit processing time. For projects that require multiple permits or approvals, use the right hand columns to calculate your total fee. **The following projects do not require fees:** Waterway projects funded in whole or in part by any Federal or State agency, dam or wetland projects conducted by any Federal or State agency.

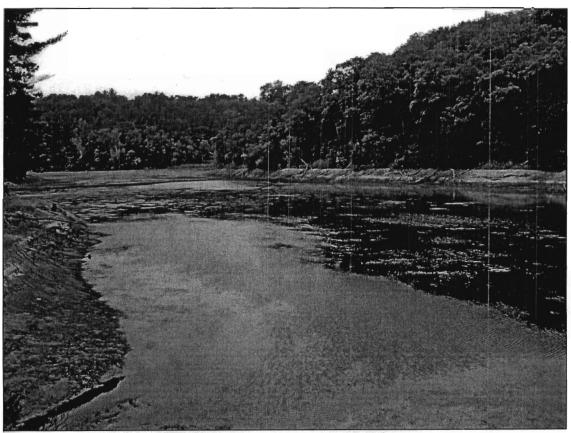
Activity	Quantity	Amount	Subtotal
Activities requiring a \$50 fee:		MARKET CHARLES	and the same of
GP for biological shore erosion control structure			
GP for boat landing (public only)	The state of the s		
GP for clear-span bridge		100	11.0
GP for dredging- manual or less than 25 cubic yards from a river or stream	A company and the		- N
GP for dredging- plant and animal nuisance removal in "outlying waters"			74
GP for dredging - previously permitted drainage district maintenance	11234	100	
GP for dry fire hydrant		×	
GP for fish crib, half log, spawning reef, tree drop, wing deflector)			
GP for ford	- C215 F 139		
GP for piling	Market Street		A CONTRACTOR
GP for pond-landscape (not located in a wetland)			
GP for pond-wildlife / wetland conservation (meeting criteria in NR 353.04 and NR 353.05)			
GP for new riprap on moderate and high energy lakes and flowages			
GP for riprap repair or replacement on inland lakes and flowages			
GP for seawall replacement or seawall replacement with riprap or vegetated armoring			
GP for temporary in-stream crossing			
GP for weed rake			
GP for wildlife habitat structure (nesting structure)	111111111111111111111111111111111111111		
Boathouse / fixed houseboat repair certification	A STATE OF THE STATE OF		
Total Quantity	1	x \$50	= \$
Activities requiring a \$300 fee:			
GP for a new culvert			
GP for dredging-each open trench utility crossing or dredging a previously dredged area			
GP for grading greater than 10,000 square feet on the bank			
GP for intake-outfall structure			
GP for pond-stormwater			
Total Quantity	,	x \$300	= \$
Activities requiring a \$300 fee:		THE PROPERTY OF STREET STREET,	
Individual Permit (IP) for fish/wildlife habitat structures		2	
	_		
IP for non-metallic mining in Marathon County			
IP for piling			
Boathouse certification for an exception	single project	\$300	=\$300
Permits requiring a \$500 fee:			
All Individual Permits (IP) unless otherwise specified			
Dam construction or modification approval	14		1
Dam transfer ownership and/or financial responsibility approval			
Declaratory rulings	$\dashv$		
Municipal bulkhead line approval	<del>-</del>		
Water level or flow order			
Water Quality Certification (e.g. wetland draining, dredging, filling)	single project	\$500	= \$500
Trace Quality certification (e.g. wettand draining, dreaging, mining)		1947 RESIDENCE TO A SECURIOR S	
	Subtotal	\$ 500.00	500.00
After-the-fact Permit Fee: double the applicable fee (these fees are non-refundable)		\$	
Optional Request for Expedited Permit Decision: Supplement Fee of \$2000 per county	The second second	\$	A THE STATE
Make checks payable to "Wisconsin DNR" TOTAL	CHARLEST CHARLEST SERVICE	\$ 500.66	THE PARTY OF THE P

# **Stewart Lake Dredging Project Narrative**

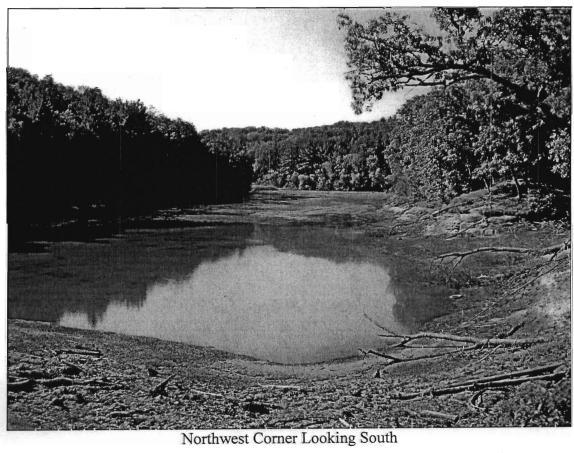
Dane County, the Village of Mount Horeb, and the Wisconsin Department of Natural Resources are proposing a hydraulic dredging of Stewart Lake to be completed before October 15, 2009. The lake was drawn down in the fall of 2007 to facilitate dam inspection, maintenance, and repair. The repairs have now been made and the lake will be slowly filled during the summer of 2009 in order to have sufficient water levels for hydraulic dredging.

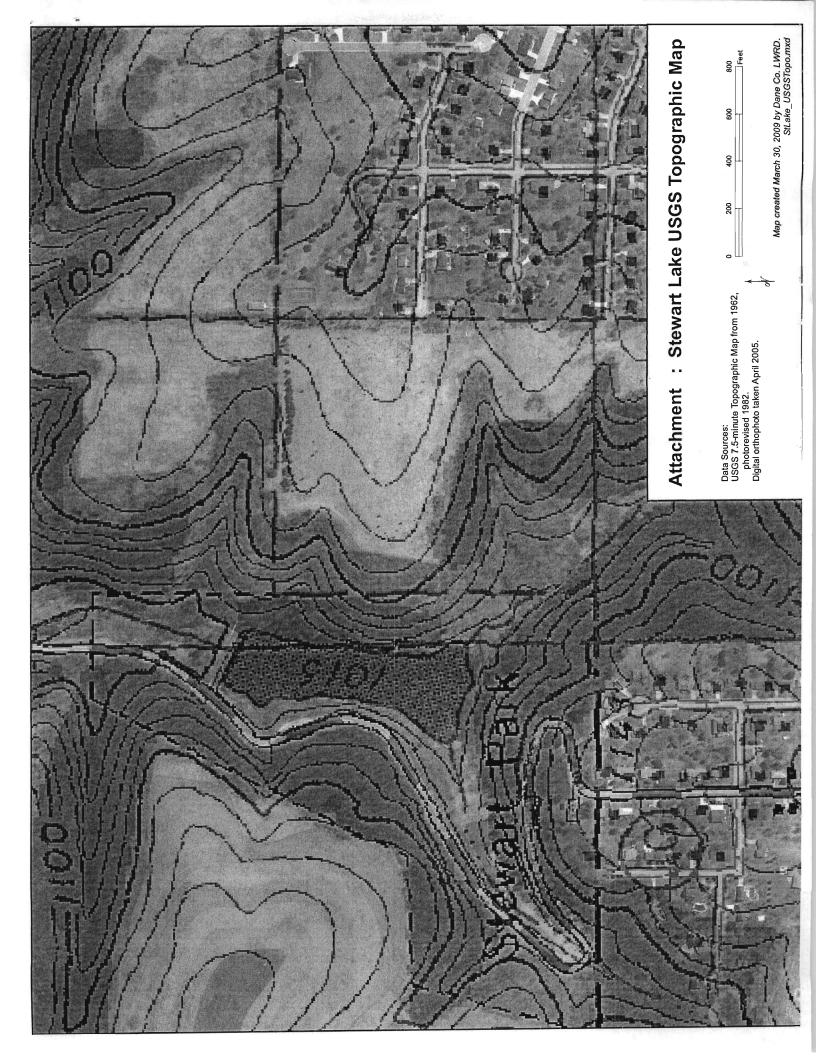
Approximately 20,000 cubic feet of lake sediment will by hydraulically dredged and pumped onto existing Dane County parkland directly to the east of the lake. A booster pump will also be used due to the significant elevation of the disposal site. The disposal site will consist of a multi-celled sedimentation basin with a return pipe that outlets back into the lake. Polymers will be added to the dredged material to increase sedimentation and the discharge back to lake will be monitored to ensure compliance with the TSS requirement.

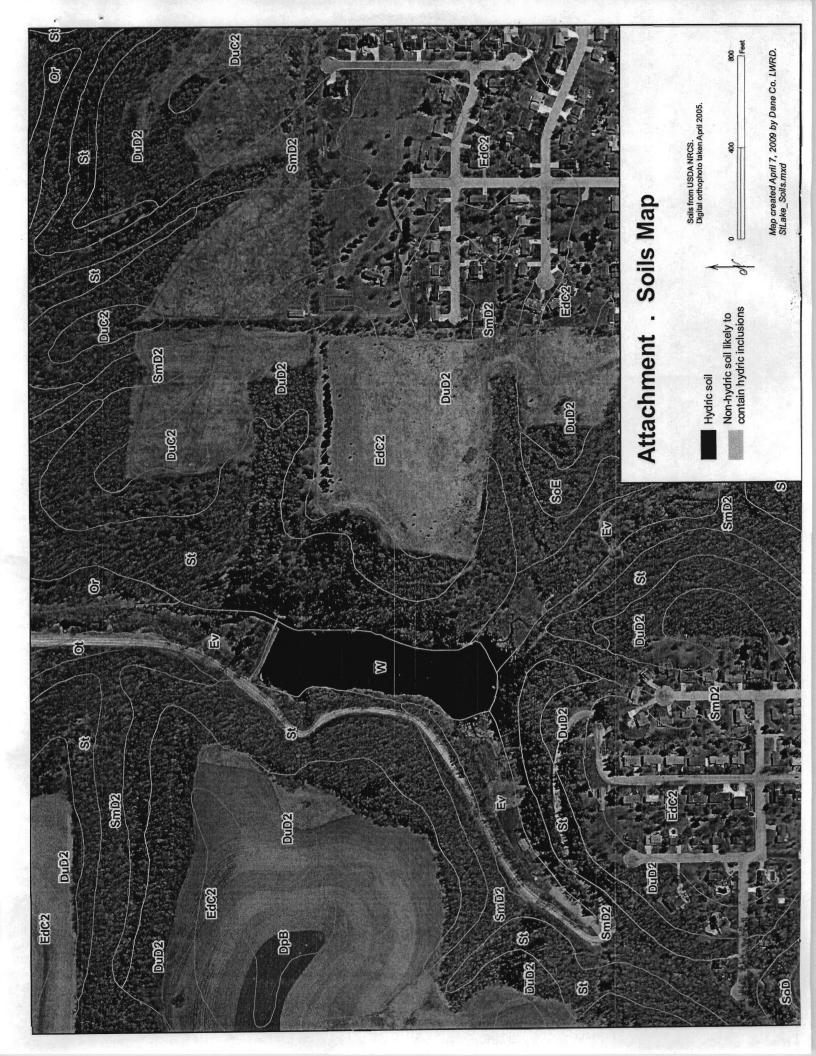
Once dredging has been completed the lake will be returned to its permanent water elevation. Stocking of the lake with fish will be completed in partnership with the DNR Fisheries Manager when lake conditions stabilize. Once the dredged sediment has dewatered sufficiently, it will be graded to blend in with the surrounding terrain and seeded to native prairie and mulched.



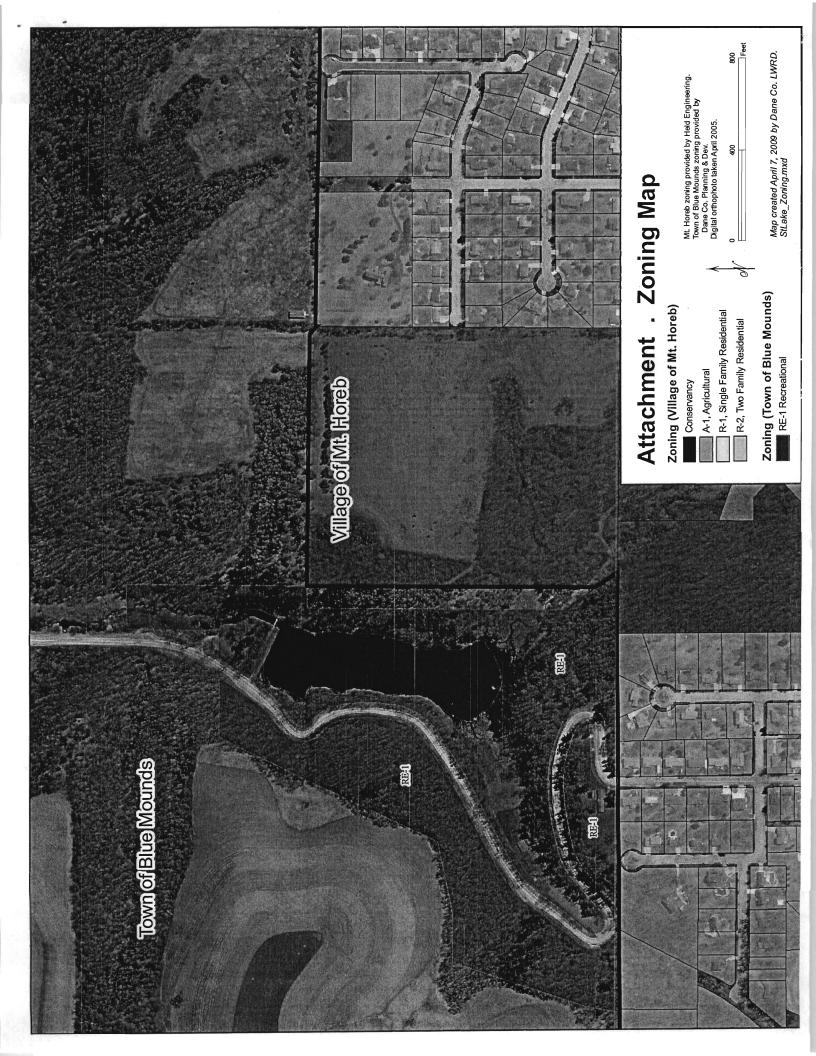
Northeast Corner Looking South

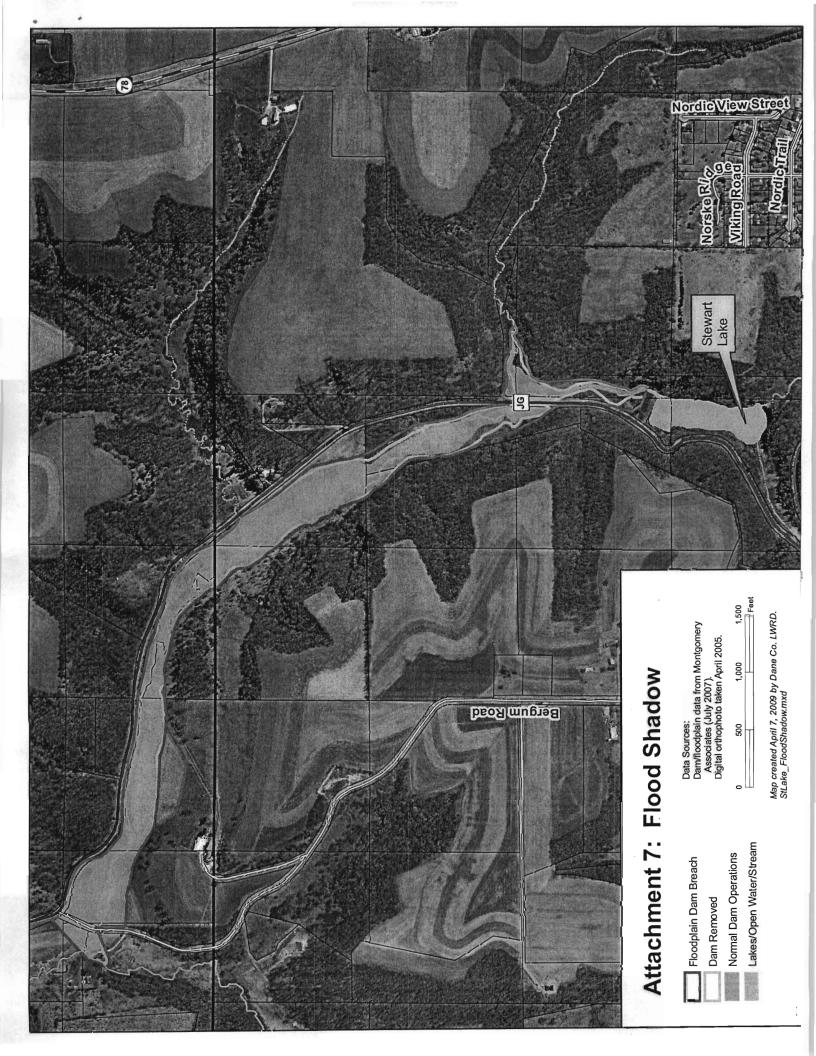


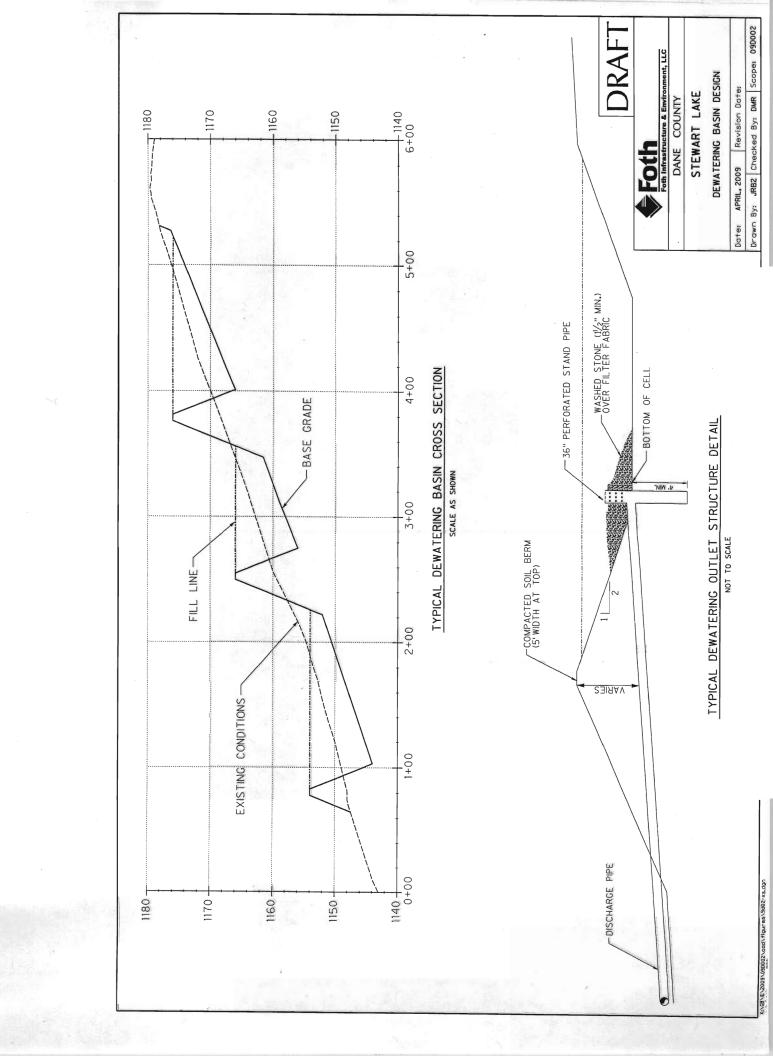


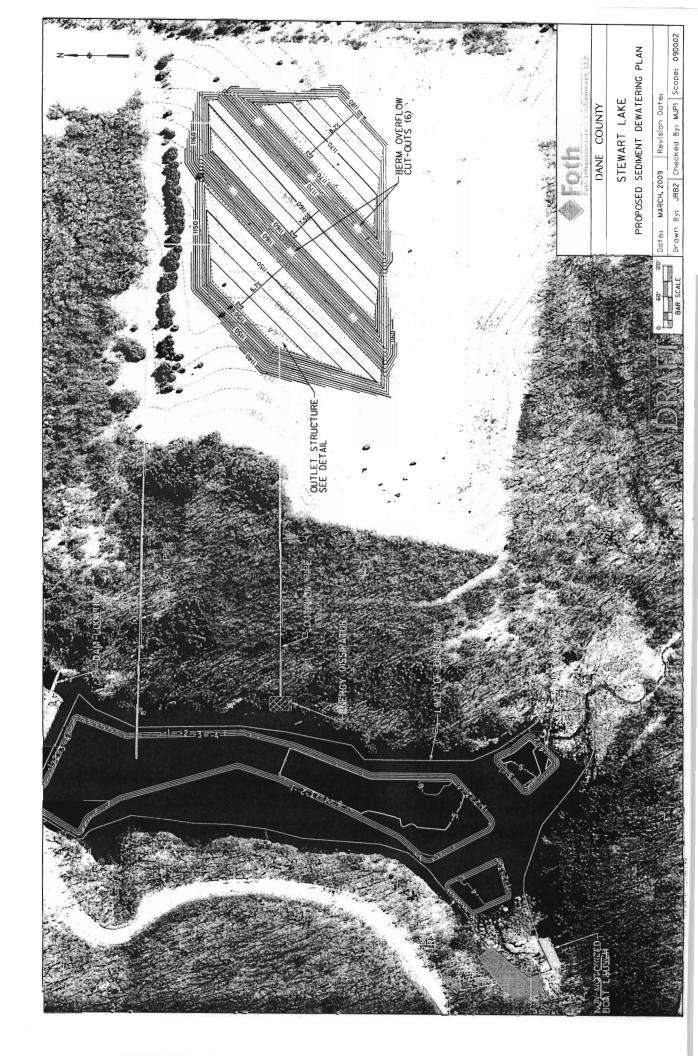


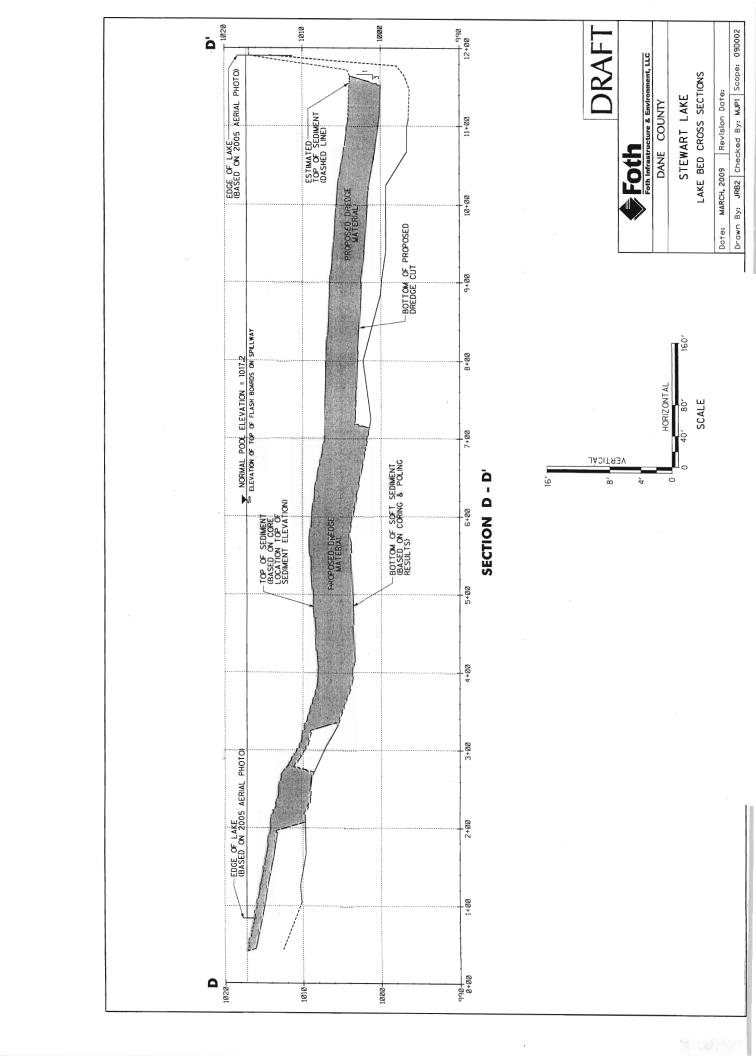


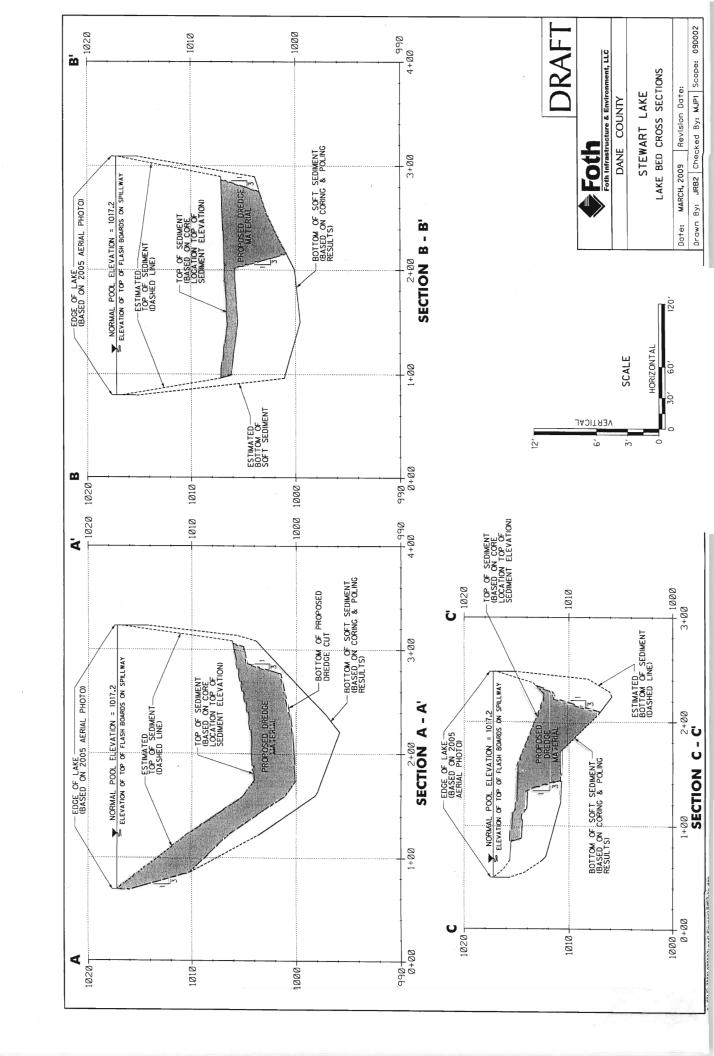


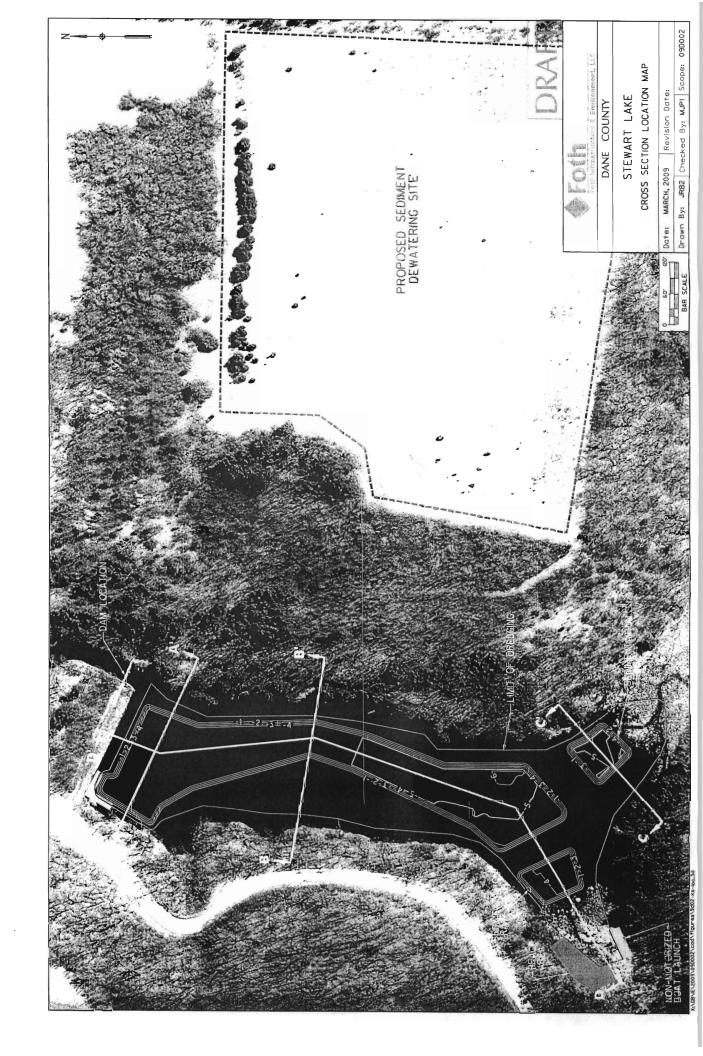












# Appendix B

# **WPDES Permit**

### GENERAL PERMIT REQUEST FOR COVERAGE

**Dredging Operations** 

WPDES Permit No. WI-0046558-04-0

State of Wisconsin Department of Natural Resources

Rev. 03/30/2006



FID#:

The information requested on this form will be used by the Department of Natural Resources to determine if the proposed discharge of carriage and/or interstitial water from your dredging operation requires coverage under a Wisconsin Pollutant Discharge Elimination System (WPDES) permit, and qualifies for general permit WI-0046558. The discharge of wastewater from a dredging operation, which has not obtained coverage under the general permit or other applicable WPDES permit, may result in forfeitures up to \$10,000 per day, pursuant to s. 283.91(2), Stats. The Department may request additional information regarding your dredging operation to assess the eligibility for coverage under a WPDES permit.

SECTION I: DREDGING INFORMATION					
Project Name Stewart Lake Restoration	Contact Title Desemy Balousek	le Utban Conscruation Engineet			
Location: County, Township, Range, Section, 4 Section Dane County, TON RGE, Sec. 2, SE/4	Phone # Fax 608-224-3747 6	×# 08-224-3745			
Latitude / Longitude (if available) Lat. 43° 1'84"N Long	Email balouseK@co.dane.w	i.u5			
Site Map: Attach a site map, such as a USGS topographic map, showing the location of the proposed dredging project, the discharge site for groundwater discharges, and/or receiving water for surface water discharges.					
Project Description: Attach a brief description of the proposed dredging premoved, wastewater treatment facilities and water treatment additives if					

SECȚION II: MAILING ADDRESS INFORMATION (Company/Owner)				
Company/Owner	Company Contact	Title Urban Conservation		
Dane County Land and Water Resources Dep	t Jeremy Balousek	Engineer		
Mailing Address: P.O. Box, Street, or Route	Phone #	Fax #		
I Fen Oak Court Rm. 208	608-224-3730	608-224-3745		
City, State, Zip Code	Email			
Madison, Wisconsin 53718	balousek@co.d	lane.wi.us		

Complete SECTION III for those outfalls that are identified as surface or groundwater discharges in SECTION IV question 1, using the characterization data required in SECTION 4 question 4.

SECTION III: DISCHARGE CHARACTERIZATION						
Type of Wastewater (check all that apply):	Outfall Number	Flow Daily Average (gallons per day)	Contaminants of Concern (Exceeds the CBSQG TEC)	Consensus Based Sediment Quality Guidelines TEC	Sediment Concentration (dry weight)	Elutriate Concentration
S Carriage Water (Water portion from hydraulic dredging)	# 1	319,000	None	See attached plan	50% in place 15% dreadged	809/19/L
☐ Interstitial Water	#					
(Also known as pore water. Water from mechanical dredging	#					
dewatering)						
☐ Other (describe type)	#					

Attachment additional sheet for Section III if more space is needed.

S	ECTION IV: ELIGIBILITY CH	ECKLIST		
				For Department Use Only:
1.	more than one outfall (an outfall i pond, that wastewater enters prior	s an individual discharge per to discharging to a receiving	vater discharge? If your facility has point, like a pipe, channel, or seepage ng water), indicate in the space urface waters. (check all that apply)	□ Eligible □ Ineligible
-	Groundwater (this includes infiltreditches, and absorption ponds).	roundwater (this includes infiltration of wastewater through the soil via irrigation, drain fields, tches, and absorption ponds).		□ ERW □ ORW
	Outfall #(s):			
	Wetland (note whether you believ	te the wetland is $\square$ natural,	or □ artificial).	
Ø	Surface Water (this includes creek pipes that convey wastewater to a		s and any ditches, storm sewers, and ke).	
	Outfall #(s): 1			
	Name of the surface water your di	scharge enters? Stew	eart Lake	
	How far is it from the point where surface water (include the length t		Iging project until it reaches the s or drainage ditches)? Check one.	
	Less than 1000 feet ☐ Between 1000 and 5000 feet ☐ Greater than 5000 feet			
req pag you dis	Sanitary Sewer (discharge to a Pubnisidered a sanitary sewer. If <u>all</u> disquire regulation under a WPDES disge 3. We will remove you from our facility result in a discharge, you charges from your facility go to the charges above.	charges from your facility g scharge permit. Therefore, r tracking system. If at son will need to inform the De	go to a sanitary sewer, you do not skip the rest of the checklist and sign the point in the future operations at partment. If only some or no	
2.	To the fullest extent of your knowl be harmful to human health, animal		scharge contain any of the substances lis	sted below, or other substances that could
	<ul> <li>□ PCB</li> <li>□ Dioxin and Furan</li> <li>□ Aldrin</li> <li>□ Diedrin</li> <li>□ Chlordane</li> <li>□ Endrin</li> <li>□ Heptachlor</li> </ul>	☐ Lindane ☐ Toxaphene ☐ DDT and DDE ☐ Arsenic ☐ Barium ☐ Cadmium ☐ Chromium	☐ Copper ☐ Cyanide ☐ Iron ☐ Lead ☐ Manganese ☐ Mercury ☐ Nickel	☐ Selenium ☐ Zinc ☐ Ammonia Nitrogen ☐ Nitrogen (total) ☐ Oil and Grease ☐ Phosphorus ☐ Other
				and a limit will apply. You may also be an individual WPDES discharge permit.
	Are water treatment additives used? suspended solids in a wastewater tr  No. Continue on to question #  Yes. For each additive submit a. Commercial name of t b. Additive Dosage conc c. Anticipated discharge d. Proposed usage freque	For Department Use Only  Additive Approved  Follow-up Necessary		
on tl		ast one 48-hour LC <sub>50</sub> or E0	tive supplier. Aquatic toxicity data $C_{50}$ for Daphnia magna or	

4. Has an analysis been performed to characterize the sediment to be dredged?  As part of the ch. 30 dredging permit, sediment analysis and elutriate testing must be conducted in accordance with ch. NR 347, Wis. Adm. Code. This data is used in determining permit eligibility and the monitoring requirements under the WPDES permit. The Sediment must be characterized according to ch. NR 347, Wis. Adm. Code in the absence of any documentation that it's uncontaminated.				
□ No. A permit may not be issued unless sediment characterization information is provided.  □ Yes. Attached a copy of the results of the analysis to this form. Attached				
If the sediment is believed to be "uncontaminated", and no sediment characterization data is available, describe below the basis for this determination (attach additional information as necessary). Only in rare situations would the Department accept a determination of "uncontaminated" without any actual sediment analysis data (for example, sediment from a water body known to have high water quality and no history of wastewater discharges or other activity that could contaminate the sediment).				
5. Will dredged materials be disposed of in Lake Michigan or Lake Superior?				
☑ No. ☐ Yes. If yes, indicate below which method is proposed for disposal.				
Any dredged material proposed for beach nourishment or unconfined disposal in the Great Lakes must comply with the sediment quality identified in Table 5.2 of the WPDES general permit. Documentation must be submitted to demonstrate compliance with the maximum concentrations.				
☐ Beach Nourishment ☐ Unconfined Disposal				
SECTION V: SIGNATORY REQUIREMENTS				
Signature of person completing the form, attesting to the accuracy and completeness of the statements made.	Date Signed May 13, 2009			
July XVIII	Phone # 608-224-3747			
peg or Printed Name and Title. Consultant Name (if applicable).  Fax #  608-224-3745				

Type or Printed Name and Title. Consultant Name (if applicable).

Type or Printed Name and Title. Consultant Name (if applicable).

Togines

This form must be signed by the official representative of the permitted facility who is: the owner, the sole proprietor for a sole proprietorship, a general partner for a partnership, a ranking elected official or other duly authorized representative for a unit of government, a manager for a limited liability company, or a responsible officer of at least the level of manager, having overall responsibility for the operation of the facility for a corporation. If this form is not signed, or is found to be incomplete, it will be returned.

Signature of authorized representative attesting to the accuracy and completeness of the statements made.

Typed or Printed Name and Title

Here Together To

Mail to: Wisconsin Department of Natural Resources Regional Wastewater Permit Coordinator

# **Stewart Lake Dredging Project Narrative**

Dane County, the Village of Mount Horeb, and the Wisconsin Department of Natural Resources are proposing a hydraulic dredging of Stewart Lake to be completed before October 15, 2009. The lake was drawn down in the fall of 2007 to facilitate dam inspection, maintenance, and repair. The repairs have now been made and the lake will be slowly filled during the summer of 2009 in order to have sufficient water levels for hydraulic dredging.

Approximately 20,000 cubic feet of lake sediment will by hydraulically dredged and pumped onto existing Dane County parkland directly to the east of the lake. A booster pump will also be used due to the significant elevation of the disposal site. The disposal site will consist of a multi-celled sedimentation basin with a return pipe that outlets back into the lake. Polymers may be added to the dredged material to increase sedimentation and the discharge back to lake will be monitored to ensure compliance with the TSS requirement. The polymer that will be used has not been selected, but the product used and application rate will be determined in consultation with the DNR. It is anticipated that there will be 50% in-situ solids that will be pumped at 15% solids to the dewatering area. This will result in approximately 980 cubic yards of sediment being dredged from the lake per day.

Once dredging has been completed the lake will be returned to its permanent water elevation. Stocking of the lake with fish will be completed in partnership with the DNR Fisheries Manager when lake conditions stabilize. Once the dredged sediment has dewatered sufficiently, it will be graded to blend in with the surrounding terrain and seeded to native prairie and mulched. Granular lime may be added to the dredged material in order to preserve soil structure.

#### State Laboratory of Hygiene University of Wisconsin

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996 R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director \_\_\_\_\_

Environmental Science Section (608) 224-6277 DNR LAB ID 113133790 Inorganic chemistry

Source: Sediment

جي ۽ جيھ

Id: 1012413 Point/Well/..: Field #: SL-1 Route: WT1

Collection Date: 06/27/06 Time: 09:05 County: 13 (Dane)

From: STEWART LAKE

Description: SE END - PISTON CORER

To: AMRHEJ

DNR

FITCHBURG

Account number: DA021 Collected by: AMRHEIN

Waterbody/permit/..: 1252300

Date Received: 07/03/06 Labslip #: IR000007 Comment: Partial report; RESULTS ARE PROVISIONAL AND MAY CHANGE.

ARSENIC, ICP, DRY WT (SW846 6010B)	8.	MG/KG
CADMIUM, ICP, DRY WT (SW846 6010B)	0.6	MG/KG
CHROMIUM, ICP, DRY WT (SW 846 6010B)	17.6	MG/KG
COPPER, ICP, DRY WT (SW846 6010B)	11.8	MG/KG
DIG 750.1, ICP, SOLIDS (SW846 3050B)	COMPLETE	
LEAD, ICP, DRY WT (SW846 6010B)	25.	MG/KG
MERCURY, @60 DEG C, AA VAPOR, DRY WT (SW846 7471A)	0.061	MG/KG
NICKEL, ICP, DRY WT (SW846 6010B)	11.	MG/KG
PREP MERCURY AT 60 DEG.C	COMPLETE	
PREP AT 103 DEG.C	COMPLETE	
POTASSIUM, ICP, DRY WT (SW846 6010B)	1430.	MG/KG
ZINC, ICP, DRY WT (SW846 6010B)	111.	MG/KG
TEMPERATURE ON RECEIPT	**	C #4
ICP TEST	COMPLETE	

### --- Footnotes ---

Remark #1: SAMPLE RECEIVED WAS NOT ICED Remark #2: SAMPLE RECEIVED WAS NOT ICED Remark #3: SAMPLE RECEIVED WAS NOT ICED

Remark #4: NOT ICED

Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes see http://www.slh.wisc.edu/nelap/

# State Laboratory of Hygiene University of Wisconsin

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996
R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director
Environmental Science Section (608) 224-6277 DNR LAB ID 113133790

Id: 1012413 Point/Well/..: Field #: SL-1 Route: WT1

Collection Date: 06/27/06 Time: 09:05 County: 13 (Dane)

From: STEWART LAKE

Description: SE END - PISTON CORER

Inorganic chemistry

To: AMRHEJ

DNR Source: Sediment

FITCHBURG

Account number: DA021 Collected by: AMRHEIN

Waterbody/permit/..: 1252300

Date Received: 07/03/06 Labslip #: IR000232 Reported: 07/31/06

 % SAND
 21.
 %

 % SILT
 68.
 %

 % CLAY
 11.
 %

Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes see http://www.slh.wisc.edu/nelap/

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996
R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director

Environmental Science Section (608) 224-6277 DNR LAB ID 113133790

Inorganic chemistry

Id: 1012414 Point/Well/..: Field #: SL-2 Route: WT1

Collection Date: 06/27/06 Time: 09:35 County: 13 (Dane)

From: STEWART LAKE

Description: SW END - PISTON CORER

To: AMRHEJ

DNR Source: Sediment

FITCHBURG

Account number: DA021 Collected by: AMRHEIN

Waterbody/permit/..: 1252300

Date Received: 07/03/06 Labslip #: IR000008 Reported:

Comment: Partial report; RESULTS ARE PROVISIONAL AND MAY CHANGE.

11.	MG/KG
0.5	MG/KG
24.5	MG/KG
14.1	MG/KG
COMPLETE	
26.	MG/KG
0.043	MG/KG
19.	MG/KG
COMPLETE	
COMPLETE	
2050.	MG/KG
	MG/KG
**	C #4
COMPLETE	- " -
	24.5 14.1 COMPLETE 26. 0.043 /KG 19. COMPLETE COMPLETE 2050. 83. **

## --- Footnotes ---

Remark #1: SAMPLE RECEIVED WAS NOT ICED Remark #2: SAMPLE RECEIVED WAS NOT ICED Remark #3: SAMPLE RECEIVED WAS NOT ICED

Remark #4: NOT ICED

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996 R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director \_\_\_\_\_\_ Environmental Science Section (608) 224-6277 DNR LAB ID 113133790

Inorganic chemistry

Id: 1012414 Point/Well/..: Field #: SL-2 Route: WT1

Collection Date: 06/27/06 Time: 09:35 County: 13 (Dane)

From: STEWART LAKE

Description: SW END - PISTON CORER

To: AMRHEJ

DNR

Source: Sediment

FITCHBURG

Account number: DA021

Waterbody/permit/..: 1252300

Collected by: AMRHEIN

Date Received: 07/03/06 Labslip #: IR000233 Reported: 07/31/06

% SAND 11. 용 % SILT 66. 용 % CLAY 23.

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996 R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director \_\_\_\_\_\_

Environmental Science Section (608) 224-6277 DNR LAB ID 113133790

Inorganic chemistry

Id: 133376 Point/Well/..: Field #: SL-3

Route: WT1

Collection Date: 06/27/06 Time: 10:05 County: 13 (Dane)

From: STEWART LAKE

Description: MIDDLE OF LAKE - PISTON CORER

To: AMRHEJ

DNR

Source: Sediment

FITCHBURG

Account number: DA021

Collected by: AMRHEIN

Waterbody/permit/..: 1252300

Date Received: 07/03/06 Labslip #: IR000009 Reported: Comment: Partial report; RESULTS ARE PROVISIONAL AND MAY CHANGE. \_\_\_\_\_\_

.

ARSENIC, ICP, DRY WT (SW846 6010B) 7. MG/KG CADMIUM, ICP, DRY WT (SW846 6010B) 0.3 MG/KG 17.6 CHROMIUM, ICP, DRY WT (SW 846 6010B) MG/KG COPPER, ICP, DRY WT (SW846 6010B) 9.8 MG/KG DIG 750.1, ICP, SOLIDS (SW846 3050B) COMPLETE 18. MG/KG

LEAD, ICP, DRY WT (SW846 6010B) MERCURY, @60 DEG C, AA VAPOR, DRY WT (SW846 7471A) 0.035 MG/KG detected between 0.015 (LOD) and 0.045 (LOQ) MG/KG NICKEL, ICP, DRY WT (SW846 6010B) MG/KG PREP MERCURY AT 60 DEG.C COMPLETE PREP AT 103 DEG.C COMPLETE

POTASSIUM, ICP, DRY WT (SW846 6010B) 1360. MG/KG ZINC, ICP, DRY WT (SW846 6010B) 58. MG/KG \*\* C #4 TEMPERATURE ON RECEIPT ICP TEST COMPLETE

## --- Footnotes ---

Remark #1: SAMPLE RECEIVED WAS NOT ICED Remark #2: SAMPLE RECEIVED WAS NOT ICED Remark #3: SAMPLE RECEIVED WAS NOT ICED Remark #4: NOT ICED

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996 R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director

\_\_\_\_\_\_

Environmental Science Section (608) 224-6277 DNR LAB ID 113133790

Inorganic chemistry

Id: 133376 Point/Well/..:

Field #: SL-3

Route: WT1

Collection Date: 06/27/06 Time: 10:05 County: 13 (Dane)

From: STEWART LAKE

Description: MIDDLE OF LAKE - PISTON CORER

To: AMRHEJ

DNR

Source: Sediment

FITCHBURG

Account number: DA021

Waterbody/permit/..: 1252300

Collected by: AMRHEIN

Date Received: 07/03/06 Labslip #: IR000234 Reported: 07/31/06

% SAND 15. % SILT 72. 용 13. % CLAY

in situ volume specific gravity, solids 20,000 CY 2.60

inputs in BOLD

Sediment Solids and Water Mass Balance Calculations for Generic Dredging, Dewatering and Fill Scenarios

Foth Infrastructure & Environment, LLC Green Bay, Wisconsin

<u> </u>	% solids	dry weight	% solids	dredge	dredge	dails	4.4.	1.21		% solids	basin fill	basin fill	total	water
1 33							dredge	daily	active period					
	in situ	of solids	dredge	removal rate	efficiency	removal	days	pumpage	dredge flow	dewatered *	rate '	rate	till volume	outlow'
1.502	(%)	(tons)	(***)	(in situ cy/h)	("`w)	( in situ cy/d)	(d)	(MGD)	(gpm)	(%)	(cy/d)	(ac-fi/d)	(ac-lt)	(MGD)
	45%	10,485	10%	35	70%	588	34	0.694	688	25%	1239	0.768	26.1	0.443
1 1	45%	10,485	15%	35	70%	588	34	0.447	444	29%	1037	0.643	21.9	0.238
.1	45%	10,485	20%	35	70%	588	34	0.324	321	33%	884	0.548	18.6	0.146
1 0	45%	10,485	25%	35	70%	588	34	0.250	248	36%	791	0.490	16.7	0.090
c:18es		,					• •							
3	50%	12,168	10%	35	70%	588	34	0.805	7 <u>9</u> 8	30%	1154	0.715	24.3	0.572
, E	5004											11:1172		
5	50%	12,168	20%	35	70%	588	34	0.376	373	38%	856	0.531	18.1	0.203
, at	50%	12,168	25%	35	70%	588	34	0.290	288	42%	750	0 465	15 ×	0.139
dewatering	55%	14,007	10%	35	70%	588	34	0.927	919	34%	1137	0.705	24.0	0.697
	55%	14,007	15%	35	70%	588	34	0.597	593	38%	986	0.611	20 X	0.398
1 2	55%	14,007	20%	35	70%	588	- 34	0.433	429	42%	863	0.535	18.2	0.259
e	55%	14,007	25%	35	70%	588	34	0.334	332	46%	762	0.472	16.1	0.180
Moderate		,												
2	60%	16,026	10%	35	70%	588	34	1.060	1052	36%	1209	0.750	25.5	0.816
1 1	60%	16,026	15%	35	70%	588	34	0.684	678	40%	1054	0.653	22 2	0.471
1 1	60%	16,026	20%	35	70%	588	34	0.495	491	44%	927	0.575	19.5	0.308
	60%	16,026	25%	35	70%	588	34	0.382	379	48%	821	0.509	17.3	0.216
	, , , , , , , , , , , , , , , , , , , ,													
	45%	10,485	10%	35	70%	588	34	0.694	688	40%	690	0.427	14.5	0.554
1 1	45%	10,485	15%	35	70%	588	34	0.447	444	41%	667	0.414	14.1	0.312
1 1	45%	10,485	20%	35	70%	588	. 34	0.324	321	42%	646	0.400	13.6	0.194
1 1	45%	10,485	25%	35	70% 70%	588	34	0.324	248	43%	626	0.388	13.2	0.124
ارد ا	4576	10,465	2376	33	70%	300	34	0.230	240	4376	020	0.566	13.2	0.124
cases	50%	12,168	10%	35	70%	588	- 34	0.805	798	45%	682	0.423	14.4	0.667
1 2	50%	12,168	15%	35	70%	588	34	0.519	515	46%	662	0.410	14.0	0.385
딸	50%	12,168	20%	35	70%	588	34	0.376	373	47%	642	0.398	13.5	0.246
<u> </u>	50%	12,168	25%	35	70%	588	34	0.290	288	48%	623	0.386	13.1	0.164
늴		,												l
3	55%	14,007	10%	35	70%	588	34	0.927	919	50%	677	0.420	14.3	0.790
1 8	55%	14,007	15%	35	70%	588	34	0.597	593	51%	658	0.408	13.9	0.465
12.	55%	14,007	20%	35	70%	588	34	0.433	429	52%	639	0.396	13.5	0.304
Rapid dewatering	55%	14,007	25%	35	70%	588	34	0.334	332	53%	622	0.385	13.1	0.209
2														
	60%	16,026	10%	35	70%	588	34	1.060	1052	52%	731	0.453	15.4	0.912
	60%	16,026	15%	35	70%	588	34	0,684	678	53%	711	0.441	15.0	0.540
1 1	60%	16,026	20%	35	70%	588	34	0.495	491	54%	692	0.429	14.6	0.356
	60%	16,026	25%	35	70%	588	34	0.382	379	55%	673	0.417	14.2	0.246

Prepared by: GRE

- Notes:

  1 Calculations for reference purposes only, without considerations of debris removal or desanding, unsaturated conditions, evaporation, precipitation or melt water.

  2 Dredge removal rates based on assumption of 8" hydraulic dredge. Dredge efficiency and percent solids produced by dredge may vary.

  3 Active period dredge flow considers dredge flow under I 109% efficiency (no downtime), and value is affected by percent solids and removal rates.

  4 Values for percent solids for dewatered solids are estimates only; actual values will vary with operations and environmental factors.

  5 Basin fill volumes do not consider long-term dewatering.

  6 Water outflow comes from balance of water inputs and dewatered percent solids, and estimate does not consider long term dewatering or other sources/sinks for water.

= Anticipated Conditions

2601 Agriculture Drive, PO Box 7996, Madison, WI 53707-7996 R.H. Laessig, Ph.D., Director D.F. Kurtycz, M.D., Medical Director \_\_\_\_\_\_

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Foth Infrastructure & Environment, LLC Green Bay, Wisconsin

	% solids	dry weight	% solids	dredge	dredge	dails	dredec	dails	active period	% solids	basin fill	basin fill	tetal	water
1.026	in situ	of solids	dredee	removal rate	efficiency	removal	davs	pumpage	dredge flow	devatered 4	rate 1	rate '	till volume	outlow'
1.0	(%)	(tons)	(%)	(in situ cy/h)	("s)	( in situ c\/d)	(d)	(MGD)	(gpm)	(%)	(cv/d)	(ac-fi/d)	(ac-li)	(MGD)
	(	(1013)	1.4	(m sup cyn)	1 4/	( in sua cyra)	(0)	(MGD)	(E)AU		(5.1.5)	1112 12 11		
	45%	10,485	10%	35	70%	588	34	0.694	688	25%	1239	0.768	26.1	0.443
1 1	45%	10,485	15%	35	70%	588	34	0.447	444	29%	1037	0.643	214	0.238
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₹	50%	12,168	25%	35	70%	588	34	0.290	288	42%	750	0.465	12.6	0.139
dewatering cases	55%	14.007	10%	35	709/	588	٠.	0.927	919	34%	1137	0.705	24,0	0,697
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Moderate	5576	14,007	237		107	300	,,	0.554	502	4474	• ••=			
Σ	60%	16,026	10%	35	70%	588	34	1,060	1052	36%	1209	0.750	25.3	0.816
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1 - 5 1	50%	12,168	25%	35 35	70%	588	34 34	0.376	288	48%	623	0,386	13.1	0.164
[]	3076	12, 100	2376	33	7.076	300	34	0.290	200	40 /	023	0.500	••••	""
Rapid dewatering	55%	14,007	10%	35	70%	588	- 34	0.927	919	50%	677	0.420	14.3	0.790
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2	10	,507						5.554						
	60%	16.026	10%	35	70%	588	34	1.060	1052	52%	731	0.453	15.4	0.912
	60%	16,026	15%	35	70%	588	34	0,684	678	53%	711	0.441	15.0	0.540
	60%	16,026	20%	35	70%	588	34	0.495	491	54%	692	0.429	14.6	0.356
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Prepared by: GRE
Checked by:

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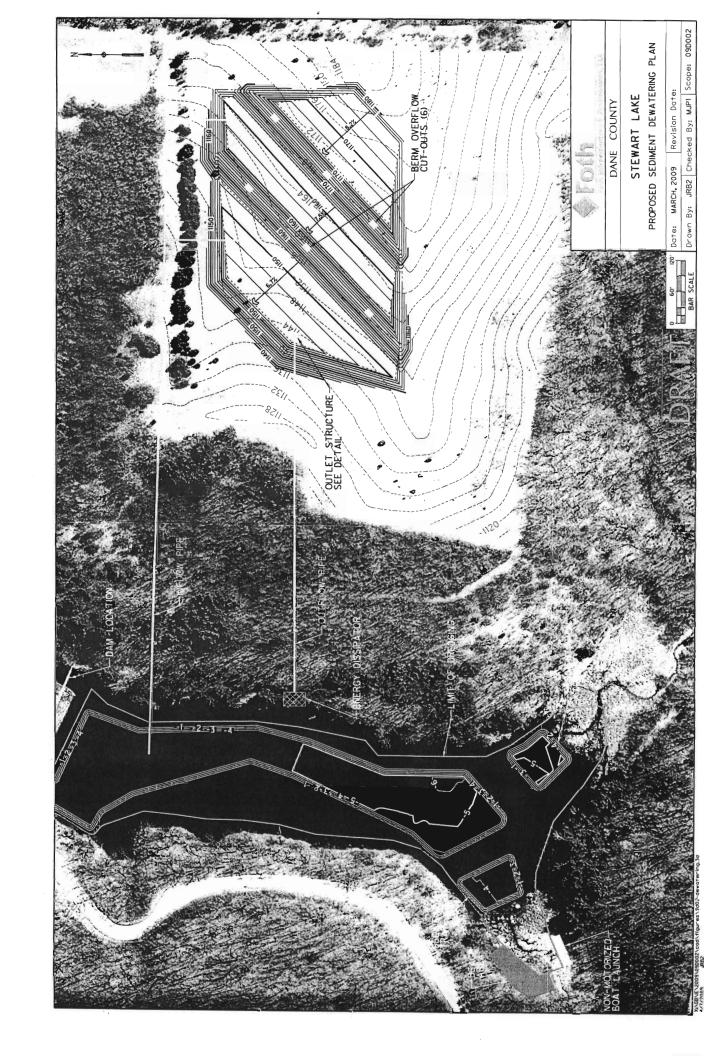
  3 Active period dredge flow considers dredge flow under 100% efficiency (no downtime), and value is affected by percent solids and removal rates.

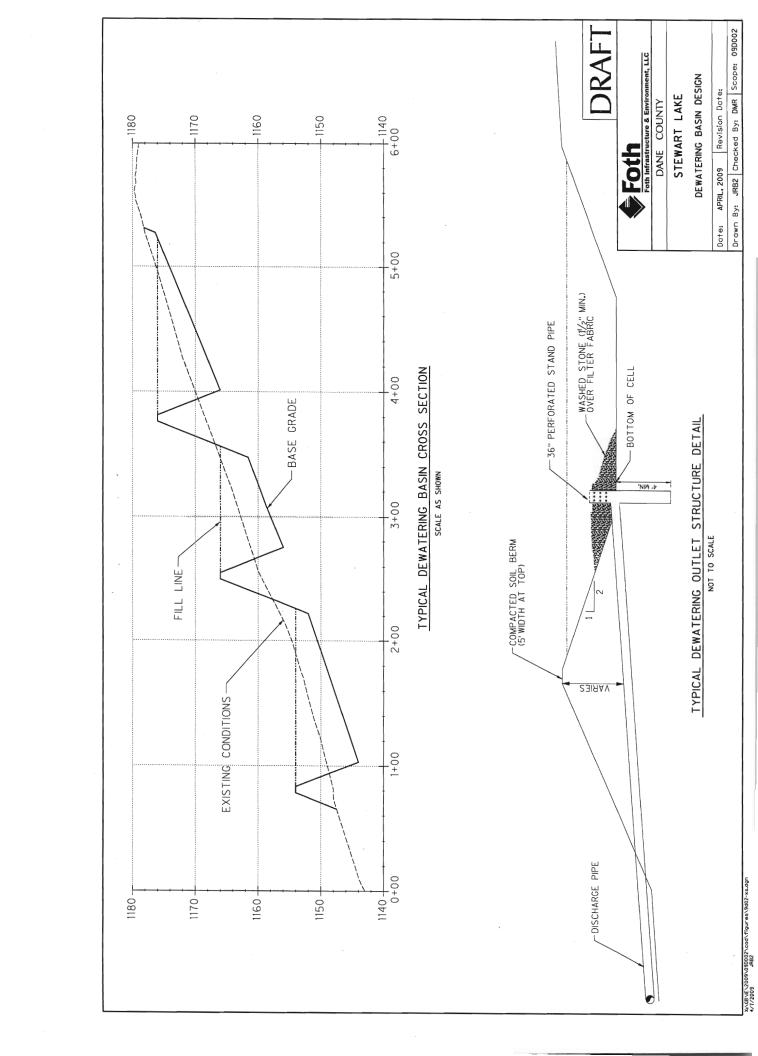
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= Anticipated Conditions





## Appendix C Sediment Characterization Data

## Appendix C

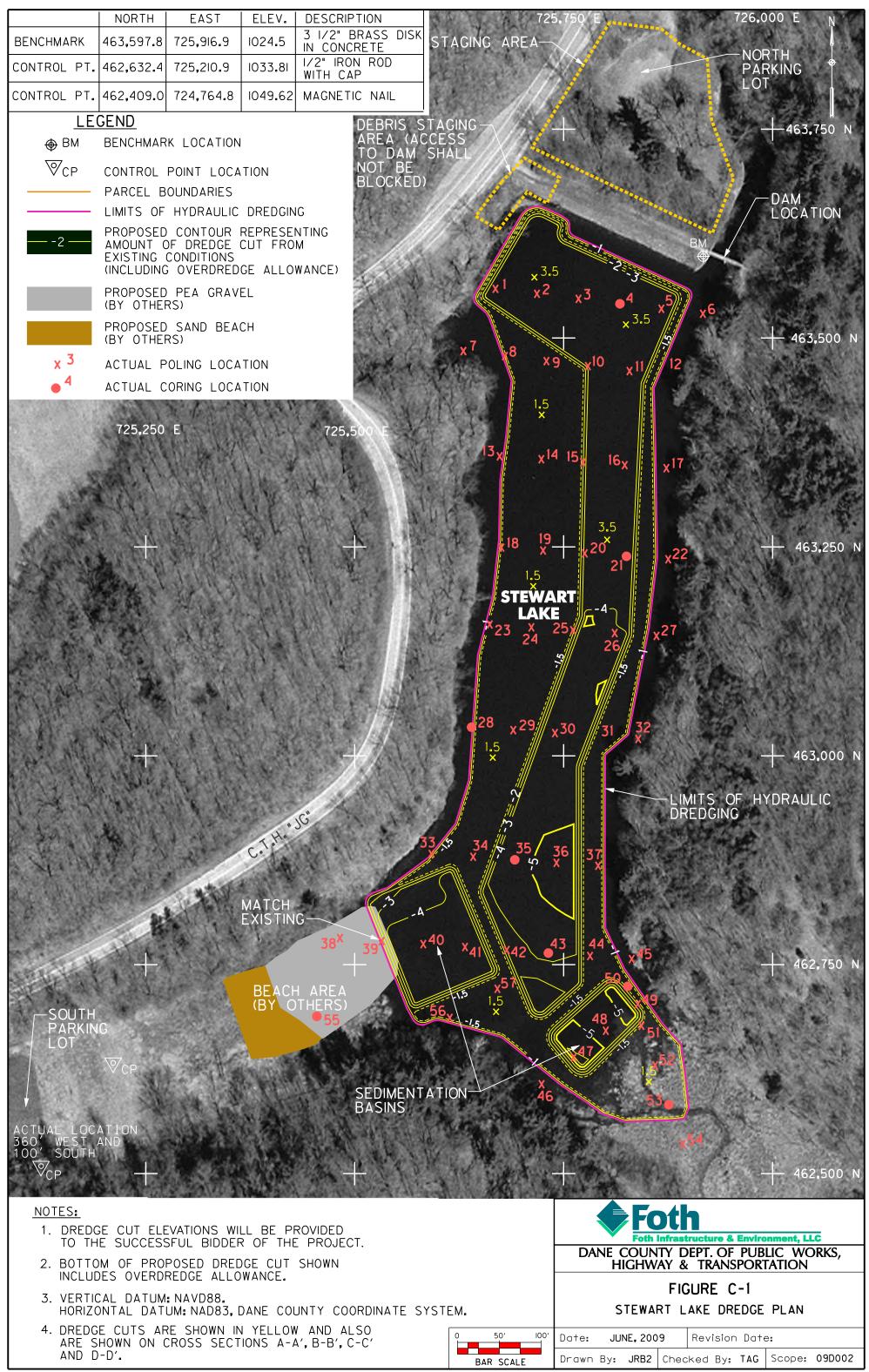
## Index

Figure C - 1 Stewart Lake Dredge Plan

**Sediment Core Collection And Processing Log** 

**Analytical Results of Sediment** 

**Laboratory Test Results for Sediment Samples** 



4

			1	2nd Attempt	1st Attempt 2nd Attempt				Fluff (ft):	Sample Number		
	Sample Location ID:			1st Attempt 271 495.6	Sediment Core Penetration: Sediment Recovered: % Recovery:				Date Processed:	Core Intervals (ft)		
In Lake Dredging iii  Sediment Core Collection And Processing Log	Time 1st / 2nd Attempts:	JS1	40 winds NNE 10-15 MAPH	Coordinates Northing Easting ft. Water Elev.	To Refusal Light Effort To Refusal 2.5 C.C.C.S.S.S.S.S.S.S.S.S.S.S.S.S.S.S.S.S	Field Observation			Core Processing (Observations) Da	Core Description		
Project Name: Dane County Stewart Lake Dredging Project Location: Mt. Horeb, Wisconsin 09D002 Scope ID: Sediment	Date: 2/19/09 Ti	Sampling Personnel: G.	Weather Conditions: Cloudy 300-	Proposed Location Goordinates  Northing 272 367.   Easting 263.76 85.   Datum Wisconsin SPS NAD 83/91	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:		Sediment Description - 1st Attempt  0 - = NO COR.	Sediment Description - 2nd Attempt 0 -	Core Length (ft):	Core Intervals (ft)		

Note: Total Probed Length = Water Depth + Sediment Thickness

Checked by:

Processing Personnel:

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Logged by: Checked by Page 1 of 1

Date sent to FVD:

		Actual Sampling Location 2nd Attempt 20 40	ion: A Attempt 2nd 2nd Attempt 2nd 2nd Attempt 2nd			Fluff (ft):	Core Intervals (ft) top bottom Sample Number	
sing Log	Sample Location ID: Z	1st At 371 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5	Sediment Core Penetration: Sediment Recovered: % Recovery:	uo.		Date Processed:	Core In top	
Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin 09D002  Sediment Core Collection And Processing Log	60	3	Total Probed Length:  Let Attempt  Local Water Depth:  Sediment Thickness:  Probing Observation:	Field Observation		Core Processing (Observations)	Core Description	
Project Name: Dane County Stewart   Project Location: Scope ID: O9D002	Sampling Personnel:	ed Location 272 203 77 Wisconsin SP	Total Probed Length:  TCL Water Depth: Probed Sediment Thickness: Probing Observation:	Sediment Description - 1st Attempt 0 - = \mathcal{\lambda}	Sediment Description - 2nd Attempt 0 - =	Core Length (ft):	Core Intervals (ft)	

		ber								Logged by:	Page 1 of 1
Fluff (ft):		Sample Number									
	vals (ft)	bottom									
	Core Intervals (ft)	top									
Date Processed:							Date sent to FVD:	Transported by:	Delivery Time :		
Core Processing (Observations)		Core Description								+ Sediment Thickness	forms)\Sediment Collection & Processing Log 2008
Core Length (ft):		Core Intervals (ft)					Processing Personnel:	Checked by:		Note: Total Probed Length = Water Depth + Sediment Thickness	GBNE2008\08G007\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008

Project Name:	Dane County Ste	Dane County Stewart Lake Dredging	
Project Location:	Mt. Horeb, Wisconsin	isoo	
Scope ID:	09D002		
		Sediment Core Collection And Processing Log	
Date:	2/19/09	Time 1st / 2nd Attempts:	D: 3
Sampling Personnel:		GJP/BJS1	
Weather Conditions:	Charde	Christo 300-40, winds 120E 10-15 mon	

		2nd Attempt					pt 2nd Attempt					
	on	•					1st Attempt		な	8	4753335F-	
	Actual Sampling Location	1st Attempt	2.648.278	7.037784	1003.38			ı	Sediment Core Penetration:	Sediment Recovered:	% Recovery:	
5			Northing	Easting	Water Elev.							
		Offset from Proposed	Coordinates				2nd Attempt	To Refusal				***************************************
		Offset fron	Coord				2nd A	Light Effort To Refusal				
,				#	#		1st Affempt	To Refusal	8.1	7.9	8.9	Jer Went
		rdinates	ν ∞	~	AD 83/91		1st A	Light Effort				248
		Proposed Location Coordinates	5/1,555.8	2637783	Wisconsin SPS NAD 83/91				Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation: 2011 Over
		Ż	Northing	Easting	Datum						Prob	

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		Field Observation					
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sediment Description - 2nd Attempt	and Attempt						Γ
= -0							٦
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Core Length (ft):	Core Proce	Core Processing (Observations) Date F	Date Processed:			Fluff (ft):	1
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Core Intervals (ft)		Core Description	to	top	pottom	Sample Number	
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Core Description	top	bottom	Sample Number	
				ı
Date sent to FVD:				
Transported by :				
Delivery Time: Depth = Water Depth + Sediment Thickness   Delivery Time: Delive			Logged by: Checked by:	Page 1 of 1
1	Description	Date sent to FVD:  Transported by:  Delivery Time:	Date sent to FVD:  Transported by:  Delivery Time:	Description         top         bottom         Sample Number           A control of the sent to FVD:         Transported by:         Delivery Time:         Logged by: Checked by:

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wart La	
Ste	
Count	
Dane	

Mt. Horeb, Wisconsin

09D002

Project Location:

Scope ID:

Project Name:

Sediment Core Collection And Processing Log

Sample Location ID:

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2
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Time 1st / 2nd Attempts:
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-

NNE (2): ACS GJP/BJS1 300.40 2/19/09 Clossy

> Weather Conditions: Sampling Personnel:

Date:

2nd Attempt

1st Attempt

Sediment Core Penetration:

Light Effort | To Refusal 2nd Attempt

Light Effort To Refusal

1st Attempt

©.√

Total Probed Length: Ice /Water Depth:

Probed Sediment Thickness: 8.6 Probing Observation: SOFF ONE MEND

% Recovery: Sediment Recovered:

2nd Attempt

Location

Field Observation			Dark Drown	Freight to some track @ 10.5 Fine south without in hother of some		
	Sediment Description - 1st Attempt	h-Q = -0	4-8 Clay Dark Drown	8-12 Difficult to some track	Sediment Description - 2nd Attempt	11 10

Core Length (ft):	: Core Processing (Observations) Date Processed:	sed:	Fluff (ft):
		Core Intervals (ft)	
Core Intervals (ft)	Core Description	top bottom	Sample Number
0-412"	Black, Very 50ft but Plasticity wet silt w/ few organic Pipers		
12"- 40"	Very Soft , Black Wet, Law Plasticity Claver 5:14		
40, - 42,	Losse Tan wet Non- Colusive Fine Sond.		
2 - 687	Enft Black wet medium plasticity clayer silt	1.0TSF (Fast)	
68 87.	Soft Black, wet medion photocity, oilly clay	0.7575F	
, 201 - L8	Dense Black Moist Fine grain Sandi Silt trace Organic Fibers		

1 Can Party	
Processing Personnel:	Checked by:

Date sent to FVD: Transported by: Delivery Time:

Logged by: Checked by Page 1 of 1

Note: Total Probed Length = Water Depth + Sediment Thickness

Mt. Horeb, Wisconsin

Project Location:

Project Name:

(Thin ice) NO Poling Sample Location ID: **Sediment Core Collection And Processing Log** 10-15 MOL 350 Time 1st / 2nd Attempts: 30°-40 Wiws GJP/BJS1 2/19/109 Closor 09D002 Weather Conditions: Sampling Personnel: Date: Scope ID:

ng Location	2nd Attempt						ist Attempt 2nd Attempt					
Actual Sampling Location	1st Attempt								Sediment Core Penetration:	Sediment Recovered:	% Recovery:	•
		Northing	Easting	Water Elev.								
	Offset from Proposed	Coordinates				2nd Attempt	The state of the s	To Refusal				
	Offset fron	Coord			_	2nd A	7	Light Effort To Refusal				
			#	#:		1st Attemnt	10111011	To Refusal				
	dinates	いい	8	ND 83/91		1st A		Light Effort				
	Proposed Location Coordinates	572 544.5	381 502	Wisconsin SPS NAD 83/91			í	•	Total Probed Length:	Water Depth:	Probed Sediment Thickness:_	Probing Observation: _
	ā.	Northing	Easting	Datum							Prot	

Field Observation

Polis

Sediment Description - 1st Attempt

0

Sediment Description - 2nd Attempt

Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft):	
			Core Intervals (ft)		
Core Intervals (ft)	Core Description		top bottom	om Sample Number	
Processing Personnel:		Date sent to FVD:			
Checked by:	4	Transported by:			

Note: Total Probed Length = Water Depth + Sediment Thickness

Logged by: Checked by: Page L of T

Delivery Time:

Project Name:	Dane County Stewart Lake Dredging Mt. Honels, Wilconsein		
:: ::			
Date:	Sediment Core Collection And Processing Log	Scessing Log	
onnel: tions:	GIP/BISI		- no poling
Proposed	Coordinates	Actual Sampling Location  1st Attempt  Northing  Easting  Water Elev.	Location 2nd Attempt
Total obed Sedii	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	Sediment Core Penetration: Sediment Recovered: % Recovery:	1st Attempt 2nd Attempt
	Field Observation	ervation	
cription -	Sediment Description - 1st Attempt  0 - = ATO POLIMA  Sediment Description - 2nd Attempt  0 - =		
(4)	(Secondary (Observations)	Data Drangend	Florif (#1)
Core Intervals (ft)	Core Processing (Observations)  Core Description	Core Interva	
Processing Personnel: Checked by:		Date sent to FVD:  Transported by:  Delivery Time:	

Note: Total Probed Length = Water Depth + Sediment Thickness

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Checked by Page 1 of 1



Sediment Core Collection And Processing Log  Time 1st / 2nd Attempts:  GJP/BJSJ  GJP/BJSJ  GJP/BJSJ  GJP/BJSJ  GJP/BJSJ  AD 83/91  ft.  Light Effort To Refusal Light Effort T		Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin 09D002		
Time 1st   2nd Attempts:				
GIP/BJS1  2.0 C. 10 L. 21 ADS ALVA E. 10 L. 15 August a Sampling Location  Actual Sampling Location  Light Effort  Actual Sampling Location  Actual	2/19/09	Time 1st /		
Actual Sampling Location   2nd Attental Sampling Location   2nd Attempt   2nd		GIP/BJS1	Spork	sling
Coordinates   Northing	Location Co	Offset from Proposed	1st At	2nd Attempt
1st Attempt Light Effort To Refusal Light Effort To Refusal Sediment Core Penetration: Sediment Recovered: Sediment Recovered: Recovery: Rield Observation	21C C91 4 2657645 Wisconsin SPS NAD 83/91	Coordinates ft.	Northing Easting Water Elev.	
Light Effort To Refusal Sediment Core Penetration: Sediment Recovered: Sediment Recovered: Field Observation			A 181	
Field Observation		Light Effort To Refusal Light Effort		
Field Observation	Total Probed Length: Water Depth:		Sediment Core Penetration: Sediment Recovered:	
- Independent	Probed Sediment Thickness:	16	% Recovery:	
	Probing Observation:	n:		
Politing		Field Obse	rvation	
Doling	Sediment Description - 1st Attempt			
	2	poline		
	= -0			
		Core Processing (Observations)	Date Processed:	luff (ft):
	W-94-F2		Interva	
Date Processed:  Core Intervals (ft)		Core Description		Sample Number
Date Processed:  Core Intervals (ft) top bottom				
Date Processed:  Core Intervals (ft)  top bottom				
Date Processed:  Core Intervals (ft)  top  bottom				
Date Processed:  Core Intervals (ft) top bottom				
Date Processed:  Core Intervals (ft)  top  bottom				
Date Processed:  Core Intervals (ft)  top  bottom				
Date Processed:  Core Intervals (ft)  top  top			Date sent to FVD:	
Date Sent to FVD:	Checked by:		Transported by:	
Date sent to FVD:  Transported by:			Delivery Time:	

Note: Total Probed Length = Water Depth + Sediment Thickness

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Project Name:	Dane County Stewart Lake Dredging	dging				•			
Project Location:	Mt. Horeb, Wisconsin			•					
Scope ID:	09D002								
	Sedim	Sediment Core Collection And Processing Log	Collection	n And P	Ocessing	Log			
Date:	2/19/09	Time 1st / 2nd	/ 2nd Attempts:	Quant	S S	Sample Location ID:			
Sampling Personnel:		GJP/BJS1							
Weather Conditions:	Cloudy 300.40		5	ME	WINDS ANDE 10-15 MON	Z.			
	à	,	•			Actual Sampling Location	fion		
Propose	Proposed Location Coordinates		Offset from Proposed	Proposed		1st Attempt	2nd Attempt	tempt	
	7.007 715		Coordinates	ates	Northing	372, 281. 3		•	
Easting	Wiscopsin SPS NAD 83/01	####			Easting	203 7704			
	12/ca dan e te menocin	1		-	water Elev.	1003.83			
		********							
	1st	1st Attempt	2nd Attempt	mpt			1st Attemnt	2nd Attemnt	
	Light Effort	To Refusal	Light Effort	To Refusal					
Tota	Total Probed Length:	7:2				Sediment Core Penetration:			
	Water Depth:	6.8				Sediment Recovered:			
Probed Sedi	Probed Sediment Thickness:	2.2				"Westonam"			
Prob	Probing Observation: And And And	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							

Field Observation						
	Sediment Description - 1st Attempt	-0 = -0		Sediment Description - 2nd Attempt	= -0	

Core Length (ft):	Core Processing (Observations)	Date Processed:		Elu46 (44).
			Core Intervals (ft)	
Core Intervals (ft)	Core Description		top bottom	m Sample Number
Processing Personnel:		Date sent to EVD .		
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THE PARTY OF THE P		Deliner Time		
Note: Total Probed Length = Water Douth + Codiment Thiskers	r Dooth + Codimont This leaves	Delivery Time:		

Note: Total Probed Length = Water Depth + Sediment Thickness

Checked by Page 1 of 1

Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

Date:

# **Sediment Core Collection And Processing Log**

Sample Location ID: Time 1st / 2nd Attempts: GIP/RIS1 2119109

		Actual Sampling Location	2nd Attempt				1st Attempt 2nd Attempt		tration:	overed:	% Recovery:	
	en prijeste de de la companya de la	Actual	1st Attempt	6.112.212	0827 202	100 3.65			Sediment Core Penetration:	Sediment Recovered:	%Re	
	MON			Northing	Easting	Water Elev.						
	120E. 10-15 mole		Offset from Proposed	inates			tempt	To Refusal				
•	NNE		Offset from	Coordinates			2nd Attempt	Light Effort				
GJP/BJS1	Con S				世	نو	1st Attempt	Light Effort To Refusal	に.つ	9·1	4.9	
	Class 200-40 W		Proposed Location Coordinates	572.280.6	7.03 THY	Wisconsin SPS NAD 83/91	1st	Light Effort	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Prohing Observation:
Sampling Personnel:	Weather Conditions:		Proposed	Northing	Easting	Datum			Total		Probed Sedin	Probir

Field Observation

Sept C

Sediment Description - 1st Attempt

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Sediment Description - 2nd Attempt

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Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft);
			Core Intervals (ft)	
Core Intervals (ft)	Core Description		top bottom	m Sample Number
Processing Personnel:		Date sent to FVD:		
Checked by:		Transported by:		
		Delivery Time:		

Note: Total Probed Length = Water Depth + Sediment Thickness

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Mt. Horeb, Wisconsin

09D002

Project Location:

Scope ID:

Project Name:



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Processing	
And	
Collection	
Core	
Sediment	

Sample Location ID: 10 Time 1st / 2nd Attempts: 2/10/15

Date:	2/19/69 Time 1st	Time 1st / 2nd Attempts:	Sal	Sample Location ID: /O
Sampling Personnel:	GJP/BJS1	31		
Weather Conditions:	Cloudy 500 - 40 Winds UNE 10-15 mon	Sinds NNE 10-15	302	
	•		3	Actual Sampling Locatio
Proposed	d Location Coordinates	Offset from Proposed		1st Attempt
Northing	372774.9	Coordinates	Northing	572.276.3
Easting	203 7794		Easting	763 796
Datum	Wisconsin SPS NAD 83/91	ft.	Water Elev.	100.3. 60

2nd Attempt

1st Attempt

% Recovery:

Sediment Core Penetration: Sediment Recovered:

Light Effort | To Refusal 2nd Attempt

Light Effort To Refusal

Total Probed Length: Water Depth:

1st Attempt

٥ -80 N

Probing Observation

Sediment Description - 2nd Attempt

Probed Sediment Thickness:

2nd Attempt

Field Obcounding	reid Observation	Cox	
	Sediment Description - 1st Attempt	0- = ND CON	

Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):	
			Core Intervals (ft)	als (ft)		
Core Intervals (ft)	Core Description		top	bottom	Sample Number	
		The state of the s				1
						1
						1
Processing Personnel:		Date sent to FVD:				

Note: Total Probed Length = Water Depth + Sediment Thickness

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Dane County Stewart Lake Dredging rroject Name:

	Thin Ice	Actual Sampling Location 1st Attempt 2nd Attempt	Sediment Core Penetration: Sediment Recovered: % Recovery:			Sesed:	Core Intervals (ft) top bottom		
Sedime	Closs 25 - 42 Wind Strempts:	iset from Propos Coordinates	Total Probed Length:  Water Depth: Probed Sediment Thickness: Probing Observation:	Attempt  AD Poline	l Attempt	Core Processing (Observations) Date Processed:	Core Description		
Project Location: Scope ID:	onne!: ions:	Northing Easting Datum	Total I Probed Sedim	Sediment Description - 1st Attempt 0 - AID	Sediment Description - 2nd Attempt 0 -	Core Length (ft):	Core Intervals (ft)		Processing Personnel:

Note: Total Probed Length = Water Depth + Sediment Thickness

Checked by:

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Sample Location ID: 12

Section 1

Time 1st / 2nd Attempts:

2119169

Date:

Project Name:	Dane County Stewart Lake Dredging	
Project Location:	Mt. Horeb, Wisconsin	
Scope ID:	09D002	
	Sediment Core Collection And Processing Log	<b>&gt;&gt;</b>

Sampling Personnel:			GJP/BJS1						
Weather Conditions:	Clear, &	500.40	3	SNNE	12 NNE 10-15 Mph	<b>20%</b>			
	<b>-3</b>		·				Actual Sampling Location	ation	
Proposed	<b>Proposed Location Coordinates</b>	inates		Offset fron	Offset from Proposed		1st Attempt		2nd Attempt
Northing	377.263.6	ی		Coord	Coordinates	Northing	272.240.7		
Easting	703 7898		# <u></u>			Easting	203 7883		
Datum	Wisconsin SPS NAD 83/91	3 83/91	H.			Water Elev.	1603 41		
The state of the s									
	ļ	1st A	1st Attempt	2nd A	2nd Attempt			1st Attempt	2nd Attempt
		ight Effort	Light Effort To Refusal	Light Effort	To Refusal				
Tota	Total Probed Length:		2.3				Sediment Core Penetration:		
	Water Depth:		0.0				Sediment Recovered:		
Probed Sedi	Probed Sediment Thickness:		5:2				% Recovery:		
Prob	Probing Observation: 2054 Over M	TO LICE	Jest Mark	1					
					Field Obs	Field Observation			

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Sediment Description - 1st Attempt

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Sediment Description - 2nd Attempt

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Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft):
			Core Intervals (ft)	
Core Intervals (ft)	Core Description		top bottom	Sample Number
Processing Personnel:		Date sent to FVD:		
Checked by:		Transported by:		
		Delivery Time:		

Note: Total Probed Length = Water Depth + Sediment Thickness

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Mt. Horeb, Wisconsin 09D002

Project Location: Scope ID:

Project Name:

## Sediment Core Collection And Processing Log

				7			
Sample Location ID: 13		No.	Actual Sampling Location	1st Attempt	372,165.1	2837682	01.7001
Š		S W			Northing	Easting	Water Elev.
Time 1st / 2nd Attempts:		300-40 Winds NNE 10-15 MUP		Offset from Proposed	Coordinates	T.	1
9 Time 1st /	GJP/BJS1	300-40	•	Coordinates	66.2	00	S NAD 83/91
211910		Closedy	ŝ	Proposed Location (	275	26376	Wisconsin SPS NAD 83/91
Date:	Sampling Personnel:	Weather Conditions:		Propose	Northing	Easting	Datum

Proposed Location Coordinates		Offset fron	Offset from Proposed		1st Attempt	2nd Attempt	tempt
Northing 372 166.2		Coord	Coordinates	Northing	372.1165.1		
Easting 76576 89	#			Easting	763787		
Datum Wisconsin SPS NAD 83/91	Lt.			Water Elev.	01.2001		
1st Attempt	empt	2nd A	2nd Attempt			1st Attempt	2nd Attempt
Light Effort To Refusal	To Refusal	Light Effort	To Refusal				
Total Probed Length:	5.9				Sediment Core Penetration:		
Water Depth:	0.0				Sediment Recovered:		
Probed Sediment Thickness:	8.9				% Recovery:		
Probing Observation:					•		
			Field Ob	Field Observation	and the second s		
Sediment Description - 1st Attempt					Andrews		
0- = NO COR							
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Sediment Description - 2nd Attempt							
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Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):
			Core Intervals (ft)	als (ft)	
Core Intervals (ft)	Core Description		top	bottom	Sample Number
Processing Personnel:		Date sent to FVD:			
Checked by:		Transported by:			

Note: Total Probed Length = Water Depth + Sediment Thickness

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Logged by: Checked by Page 1 of 1

Delivery Time:

Mt. Horeb, Wisconsin

Project Location: Project Name:

Scope ID:	09D002			
	Sedime	Sing		
Date: Sampling Personnel:	7/19/09 Time 1st / 2nd Attempts:	Sample Location ID:	)	
Weather Conditions:	Cloudy, 300-40 Winds NWE. 10-15 mak	Mode		
Propose Northing Easting Datum	Proposed Location Coordinates  9 22 165.5  g 26 3 77 34  Wisconsin SPS NAD 83/91  ft.  Coordinates  Rating  Water Elev.	203 203 100 3	Actual Sampling Location 1st Attempt 756 97	ation 2nd Attempt
Tota Probed Sedi	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	Sediment C Sedin	Sediment Core Penetration: Sediment Recovered: % Recovery:	1st Attempt 2nd Attempt
Sediment Description - 1st Attempt	1st Attempt Field Observation			
= -0	No Com			
Sediment Description - 2nd Attempt	and Attempt			
Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft):
Core Intervals (ft)	Core Description		Core Intervals (ft)	Sample Number
Processing Personnel:		400		
Checked by:		Transmert 1		
Note: Total Probed Length = M	Note: Total Probed Length = Water Depth + Sediment Thickness	Pansported by: Delivery Time:		
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		sling	Actual Sampling Location  2nd Attempt	1st Attempt 2nd Attempt 2nd.	J.:			Fluff (ft):	Core Intervals (ft)  top bottom Sample Number	
Processing Log	Sample Location ID: 15	10-15 mon 20 Poling	Actual Sai 1st Attempt Northing Easting Water Elev.	Sediment Core Penetration: Sediment Recovered:	76 Recovery:			Date Processed:	Core In top	
in Sediment Core Collection And Processing Log	Time 1st / 2nd Attempts:	GIP/BISI	Offset from Proposed Coordinates ft.	1st Attempt 2nd Attempt Effort To Refusal Light Effort To Refusal	Fleid C			Core Processing (Observations)	Core Description	
Project Name: Dane County Stewart Lake Dredging Project Location: Mt. Horeb, Wisconsin Scope ID: 09D002 Sediment	Date: 2/19/04	Sampling Personnel: Cloudy 26°	Proposed Location Coordinates  Northing  272   59. 9  Easting  203   776 9  Wisconsin SPS NAD 83/91	1st / Light Effort Total Probed Length: Water Depth: Probed Sediment Thickness:	Probing Observation:  Sediment Description - 1st Attenut	8	= -0	Core Length (ft):	Core Intervals (ft)	

Note: Total Probed Length = Water Depth + Sediment Thickness

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Processing Personnel:

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Date sent to FVD:

e Collection And Processing Log	Sample Location ID:	Proposed         1st Attempt         2nd Attempt           nates         372 lq7.q         4           Easting         2.5.76.3.5         Actual Sampling Location           Water Elev.         100.3.72.         7	To Refusal Sediment Core Penetration: Sediment Recovered: % Recovery:	Field Observation		vations) Date Processed: Fluff (ft):	Core Intervals (ft) top bottom Sample Number	
Project Name: Dane County Stewart Lake Dredging Project Location: Mt. Horeb, Wisconsin Scope ID: See Collection An	Sampling Personnel:  Weather Conditions: Close 1 200 40 Winds WWE [	Northing 272,157.2 Coordinates Coordinates Easting 2.0.5.78.39 (ft. Datum Wisconsin SPS NAD 83/91 (ft.	1st Attempt 2nd Attempt Light Effort To Refusal Light Effort To Refus Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	Sediment Description - 1st Attempt  0 - = $\Lambda$ O C	Sediment Description - 2nd Attempt  0 - =	Core Length (ft): Core Processing (Observations)	Core Intervals (ft)  Core Description	

Checked by:	tote: Total Probed Length = Water Depth + Sediment Thickness
	Note:

Processing Personnel:

Date sent to FVD:

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Mt. Horeb, Wisconsin

Project Location: Project Name:

Scope ID:



# Sediment Core Collection And Processing Log

				2nd Attempt				
Sample Location ID:		W.	Actual Sampling Location	1st Attempt	372 143.3	203 7873	77. 2001	
,		15/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2			Northing	Easting	Water Elev.	
Time 1st / 2nd Attempts:		WINDS UNE 10-15 MADE		Offset from Proposed	Coordinates	if.	ft.	
Time 1st /	GJP/BJS1	3	a			4	<b>+</b>	
5/14/09		Cless, 300.4	9	<b>Proposed Location Coordinates</b>	372 153.6	2037889	Wisconsin SPS NAD 83/91	
Date:	Sampling Personnel:	Weather Conditions:		Propose	Northing	Easting	Datum	

2nd Attempt

1st Attempt

Sediment Core Penetration:

Light Effort To Refusal 2nd Attempt

Light Effort To Refusal

1st Attempt

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Water Depth: Total Probed Length:

Probed Sediment Thickness:

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Probing Observation: 25 Court No.W

% Recovery: Sediment Recovered:

Field Observation						
	Sediment Description - 1st Attempt	0 - 0 = 0		Sediment Description - 2nd Attempt	= -0	

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Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):
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Core Intervals (ft)	Core Description		top	bottom	Sample Number
Processing Personnel:		Date sent to FVD:			
Checked by:		Transported by:			
		Delivery Time:			

Note: Total Probed Length = Water Depth + Sediment Thickness

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Note: Total Probed Length = Water Depth + Sediment Thickness

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Delivery Time :

Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

# Sediment Core Collection And Processing Log

Sample Location ID: Time 1st / 2nd Attempts: 2119109 Date:

			tion			
			Actual Sampling Location	1st Attempt	372.045.9	
5		\$ 0 S			lorthing	
		NS NNE 16-15	L.,	Offset from Proposed	Coordinates	
	GJP/BJS1	Cloudy 200.40, winds NNE 16-15 MOL	4 5	d Location Coordinates	2/2 054.6	And the same of th
	Sampling Personnel:	Weather Conditions:		Proposed Log	Northing	L

2nd Attempt

		1st Attempt 2nd Attempt									
572.045.9 263.7740	1003.74			Sediment Core Penetration:	Sediment Recovered:	% Recovery:					
Northing Easting	Water Elev.							Field Observation			
Coordinates		2nd Attempt	To Refusal					Field Ob			
		2nd A	Light Effort   To Refusal				2				
##	#	1st Attempt	Light Effort To Refusal	G.	೦.೧	6.8	Ser halm				
Northing 21,C 054.6 Easting 205 7742	Wisconsin SPS NAD 83/91	1st A	Light Effort	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation: 名外 6 いん		Sediment Description - 1st Attempt	= No Con	

Sediment Description - 2nd Attempt

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Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):
			Core Intervals (ft)	als (ft)	
Core Intervals (ft)	Core Description		top	pottom	Sample Number
Processing Personnel:		Date sent to FVD:			
Checked by:		Transported by:			
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Weather Conditions: Sampling Personnel:

Project Name:	Dane County Stewart Lake Dre	dging		
Project Location:	Mt. Horeb, Wisconsin	•		
Scope ID:	09D002			
	Sedin	<b>Sediment Core Collection And Processing Log</b>	ig Log	
Date:	2/14/04	Time 1st / 2nd Attempts:	Sample Location ID: 20	
Sampling Personnel:		GJP/BJS1	Dan Colonia	

			· 		T		ىيە						
		2nd Attempt					2nd Attempt						
	tion						1st Attempt						
	Actual Samulina Location	1st Attempt	2.72047.2	15% 17 000	1004.08				Sediment Core Penetration:	Sediment Recovered:	% Recovery:	•	
No. 1 N. P. W. S.		V	Northing	Easting	Water Elev.								
A De		Proposed	inates				tempt	To Refusal					
A P A		Offset from Proposed	Coordinates			_	2nd Attempt	Light Effort To Refusal				3	
1	7			<u>#</u>	¥		1st Attempt	To Refusal	6.7	0.0	6.7	er hank	
ather Conditions: [ ] . # & & & & &		roposed L	_ '	Easting 2.03 7792	Datum Wisconsin SPS NAD 83/91		1st A	Light Effort	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation:	

Cok

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Sediment Description - 1st Attempt

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Sediment Description - 2nd Attempt

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Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft).	1
			1		X 1611 (AL).	1
197 - Table 197 - C			Core Intervals (ft)	(£)		
Core Intervals (Tt)	Core Description		top	bottom	Sample Number	
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Processing Personnel:		Date sent to FVD:				
Checked by:		Transported by:				

Note: Total Probed Length = Water Depth + Sediment Thickness

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Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin Project Location:

Froject Name:

Scope ID:

605

Sample Location ID:

Sediment Core Collection And Processing Log 2/19/109 09D002

Time 1st / 2nd Attempts: GJP/BJS1

30". 40 Winds NNE. 10-15 MUDIL

Offset from Proposed

Coordinates

372 048.3 20 3 7842 Wisconsin SPS NAD 83/91

Easting Northing Datum

**Proposed Location Coordinates** 

Classe

Sampling Personnel: Weather Conditions:

Date:

Light Effort | To Refusal 2nd Attempt نے To Refusal 5 V 0.0 1st Attempt

Light Effort

Total Probed Length:

Water Depth:

TOOF ICE 1st Attempt 7057846 372047 Water Elev. Northing Easting

2nd Attempt

Actual Sampling Location

2nd Attempt 1st Attempt 64 % 00 iol (cv) Sediment Core Penetration: Sediment Recovered:

% Recovery:

Field Observation Sediment Description - 1st Attempt

Probing Observation: Sett over had

r J

Probed Sediment Thickness:

Year in bottom of cork 7 0

Of Cox / Oarler in color / timer texture 1 Sand in bo How difficult to penetrate

Sediment Description - 2nd Attempt

Core Intervals (ft) Date Processed: Core Processing (Observations) Core Length (ft): Core Intervals (ft)

the organics Silt 5084 Black, wet non-Plastic, non cohosive Core Description 30ft Black Pout - 110ty Fiberous. 0"- .75' 0.75 - 1.95

Sample Number

bottom (4°95) THE STATE OF THE S

top 178 00 子のと

2.25

Fluff (ft):

Cohesive Chyen Sitt trace Orgenics 3 Mastic Silt sand mediu Demse SOFF, Black wer Tan Malack - 4.80. 1.85- 4.45

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Processing Personnel: [ ( Oleva ) Const Checked by:

Note: Total Probed Length = Water Depth + Sediment Thickness

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Delivery Time: Transported by:

Date sent to FVD:

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				Sample Location ID: 22	Spring along Shore		Actual Sampling Location	1st Attempt 2nd Attempt	372.046.1	1881	W.	1st Attempt 2nd Attempt		Sediment Core Penetration:	Sediment Recovered:	% Recovery:	
			Sediment Core Collection And Processing Log			Winds NUE 10-15 mon		Offset from Proposed	Coordinates Northing 372	Easting 203 78 A	Water Elev. 1004	2nd Attempt	Light Effort   To Refusal	Sedim			
Dane County Stewart Lake Dredging	Mt. Horeb, Wisconsin	09D002	Sediment Core C	21/9/09 Time 1st / 2nd Attempts:	GJP/BJS1	Cloud: 300-40 Win	3 33		572.044.6	2037892	Wisconsin SPS NAD 83/91 ft.	1st Attempt	Light Effort To Refusal L	Total Probed Length: 5. 3	Water Depth: 0.0	Probed Sediment Thickness: 3.3	
Project Name:	Project Location:	Scope ID:		Date:	Sampling Personnel:	Weather Conditions:		Proposed	Northing	Easting	Datum			Total		Probed Sedi	

	Field Observation
Sediment Description - 1st Attempt	
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Sediment Description - 2nd Attempt	Attempt
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Core Length (ft):	Core Processing (Observations) Nate Drocessed:
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Delivery Time :

							Actual Sampling Location	2nd Attempt				1st Attempt 2nd Attempt		: u	
			lg Log	Sample Location ID: 23	735		Actual Sam	1st Attempt	1.749175	263 7687	1003.94			Sediment Core Penetration:	La constitución de la constituci
			ore Collection And Processing Log			5 NOW 51 - 51			Northing	Easting	Water Elev.				
	٠		on And P	Oppose		1 1		Offset from Proposed	Coordinates			2nd Attempt	To Refusal		
			Collecti	st / 2nd Attempts:		Winds JUE		Offset fron	Coord			 2nd A	Light Effort		
ging			ant Core	Time 1st / 21	GJP/BJS1		-			ff.	ff.	1st Attempt		5.7	S
Dane County Stewart Lake Dredging	sconsin	-	Sediment C			200.40		oordinates	3.1	78	NAD 83/91	1st A	Light Effort	th:	‡.
Dane County S	Mt. Horeb, Wisconsin	7000760		2/19/09		Clossy	4	<b>Proposed Location Coordinates</b>	571965.1	2037678	Wisconsin SPS NAD 83/91			Total Probed Length:	Water Denth
Project Name:	Project Location:	Scope ID:		Date:	Sampling Personnel:	Weather Conditions:		Propose	Northing	Easting	Datum			Tota	

Sediment Recovered: % Recovery:

Probed Sediment Thickness:

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	Field Observation					
Sediment Description - 1st Attempt	Attempt					1
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Sediment Description - 2nd Attempt	d Attempt					_
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Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):	11
***			Core Intervals (ft)	rals (ft)		F
Core Intervals (ft)	Core Description		top	bottom	Sample Number	
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		Core Intervals (ft)	vals (ft)	
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2nd Attempt 2nd Attempt 1st Attempt Actual Sampling Location Sediment Core Penetration: % Recovery: Sediment Recovered: 11946.4 1st Attempt 2037729 Sample Location ID: Sediment Core Collection And Processing Log Easting Water Elev. Northing Light Effort To Refusal Offset from Proposed 360.40 Winds JUE Coordinates 2nd Attempt Time 1st  $\it I$  2nd Attempts: Probing Observation: 2014 Color Many Light Effort To Refusal GJP/BJS1 るる ろら 0.0 1st Attempt Proposed Location Coordinates
371962.5
2637729
Wisconsin SPS NAD 83/91 Mt. Horeb, Wisconsin Total Probed Length: Water Depth: Probed Sediment Thickness: 2/19/09 Clouby 09D002 Weather Conditions: Sampling Personnel: Project Location: Date: Project Name: Northing Easting Datum Scope ID:

	Field Observation			
Sediment Description - 1st Attempt	Attempt			
0 - 0	do Con			
Sodiment Description	A44			
0 - = Autempt	Attempt			
Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft):
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	10014 1000 0 100	do	DOTO	Sample Number
Processing Personnel:	Dati	Date sent to FVD:		
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Page 1 of 1

Dane County Stewart Lake Dredging Project Name:

	seed C.
l Processing Log	Samuel Continues
llection And	ttempts:

g Log Sample Location ID: 25	Actual Sampling Location 1st Attempt 371 948. 4 20.3. 77.79	Sediment Core Penetration: Sediment Recovered: % Recovery:			Date Processed:	Core Intervals (ft) top bottom Sample Number	
Mt. Horeb, Wisconsin  Sediment Core Collection And Processing Log  2/19/69 Time 1st / 2nd Attempts:  Glouby 50 - 40 Wisdle Will Collection And Processing Log	Proposed Location Coordinates  271958.6 Coordinates Northing Wisconsin SPS NAD 83/91  11. Easting Water Elev.	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	1st Attempt  AB Core	2nd Attempt	Core Processing (Observations) Date	Core Description	
Project Location: Scope ID: Date: Sampling Personnel: Weather Conditions:	Propose Northing Easting Datum	Total Probed Sedir	Sediment Description - 1st Attempt  0 - = \mathcal{D}	Sediment Description - 2nd Attempt 0 - =	Core Length (ft):	Core Intervals (ft)	

Date sent to FVD:

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Processing Personnel:

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Project Name:

Project Location:	Mt. Horeb, Wisconsin			•		The second secon		
Scope ID:	09D002							
	Sedim	Sediment Core Collection And Processing Log	Collection	on And P	ocessing	Log		
Date:	2/19/09	Time 1st / 2n	st / 2nd Attempts:		,	Sample Location ID: 26		
Sampling Personnel:		GJP/BJS1	•					
Weather Conditions:	Clossy 300-40		5 Som 3	UNE.	10 15 Mak	NOT		
	<b>3</b>	7		•		Actual Sampling Location	Location	
Propose	<b>Proposed Location Coordinates</b>		Offset from Proposed	Proposed		1st Attempt		2nd Attempt
Northing	371956.2		Coordinates	inates	Northing	371947.7		
Easting	PS87 202	#		:	Easting	203 7822		
Datum	Wisconsin SPS NAD 83/91	#			Water Elev.	1604.71		
	1st	1st Attempt	2nd Attempt	tempt			1st Attempt	2nd Attempt
	Light Effort	To Refusal	Light Effort	To Refusal				
Tot	Total Probed Length:	N. J.				Sediment Core Penetration:		
	Water Depth:	0.0				Sediment Recovered:		
Probed Sed	Probed Sediment Thickness:	5.7				% Recovery:		
Prol	Probing Observation:	over help	2					

Field Observation	Sediment Description - 1st Attempt	= NB Core		Sediment Description - 2nd Attempt		
	Sediment Descriptio	= -0		Sediment Descriptio	= -0	

Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):
			Core Intervals (ft)	s (ft)	
Core Intervals (ft)	Core Description		top	bottom	Sample Number
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Processing Personnel:		Date sent to FVD:			
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Checked by: Page 1 of 1

Project Name:	Dane County Stewart Lake Dredging	ging					-
Project Location:	Mt. Horeb, Wisconsin					1	
Scope ID:	09D002						
	Sedime	ent Core	Collecti	on And P	Sediment Core Collection And Processing Log	Log	
Date:	2/19/09	Time 1st / 2n	2nd Attempts:		<u>  (7</u>	Sample Location ID: 27	
Sampling Personnel:		GJP/BJS1				odin.	
Weather Conditions:	Classy , 300-40	3	inds 2	NE 10	NNE 10-15 MOR	4	
	1					Actual Sampling Location	tion
Proposec	Proposed Location Coordinates		Offset fron	Offset from Proposed		1st Attempt	2nd Attempt
Northing	71 425.7		Coord	Coordinates	Northing	871952.9	
Easting	203 7874	#:			Easting	742 78BI	
Datum	Wisconsin SPS NAD 83/91	±			Water Elev.	1005.72	
	1st A	1st Attempt	2nd A	2nd Attempt			1st Attempt 2nd Attempt
	Light Effort	Light Effort To Refusal	Light Effort	To Refusal			-
Tota	Total Probed Length:	8.2				Sediment Core Penetration:	
	Water Depth:	0.0				Sediment Recovered:	
Probed Sedi	Probed Sediment Thickness:	8.2				% Recovery:	
Prob	Probing Observation: つかん	er hem					

Sediment Description - 1st Attempt	0 - 0			Sediment Description - 2nd Attempt
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0-

Core Length (ft):	Core Processing (Observations)	Date Processed:		Eln# (4).	
			Core Intervals (ft)		
Core Intervals (ft)	Core Description		top	bottom Sample Number	er
			Г		
Processing Personnel:		Date sent to FVD:			
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Date:

Project Location:

Scope ID:

Project Name:

			d Processing Log	Sample Location ID: 28 (Mosed)
-			Sediment Core Collection And P	Time 1st / 2nd Attempts:
Daile Coulity Stewart Lake Dieuging	Mt. Horeb, Wisconsin	09D002		5/16/108

2nd Attempt 20ft Spring Area. Actual Sampling Location 1st Attempt 371 839 2001 Easting Water Elev. NNE 10-15 NOW Northing Offset from Proposed Coordinates (C) 1-65 GJP/BJS1 300.40 Proposed Location Coordinates 3718422037658 Wisconsin SPS NAD 83/91 Closor Weather Conditions: Sampling Personnel: Northing Easting Datum

2nd Attempt

1st Attempt

0)-0)-

Sediment Core Penetration:

Light Effort | To Refusal

Light Effort To Refusal

Total Probed Length: Water Depth:

1st Attempt

0.0 <u>ه</u>

2nd Attempt

Sediment Recovered:

ı	ı	ļ	_	7	ı
52 %					
% Recovery:				Cow	S CS F COCO
		Field Observation		1 Reat end Of Cone	Saw in our of the
,0	New Services		~	, Penetrate,	ī
9	OVER			٦ 1	"
Thickness:	Probing Observation: Seff over		tempt	D: Fercul	27
Probed Sediment Thickness:	Probing Ot		Sediment Description - 1st Attempt	= 4.6	0.5)
•			Sediment D	-0	

Sediment Description - 2nd Attempt	- 0	The second secon

Core Length (ft):	: Core Processing (Observations)	Date Processed:			Fluff (ft):
		,	Core Intervals (ft)	vals (ft)	
Core Intervals (ft)	Core Description		top	bottom	Sample Number
0., 0.0	Sleck, Soft, wet Low plasticity, non-colosine Silt trace	O PagulC S	1.5	(F80+)	
2.5 - 16.0	Black Very Coose Organic Pagat Moist		2.5	(Koot)	
3,2 - 3.9	Brown Tan wet weatherd Sandshow chunks of rock	nock.			

Note: Total Probed Length = Water Depth + Sediment Thickness

Processing Personnel: 1 6 (Lastranshi)

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Project Name:

				52
			g Log	Sample Location ID:
00			ediment Core Collection And Processing Log	Time 1st / 2nd Attempts:
0	Mt. Horeb, Wisconsin	09D002	ശ്	60/61/2
	Project Location:	Scope ID:		Date:

NOVE 10-15 MON

50,03 GJP/BJS1

Weather Conditions: Sampling Personnel:

Proposed I	Proposed Location Coordinates	Offset from Proposed		1st At	Actual Sampling Location 1st Attempt	ing Locati	on 2nd Attemnt	- Int
Northing Easting Z Datum V	271839.3 2037268 ft. Wisconsin SPS NAD 83/91 ft.	11	Northing Easting Water Elev.	178 178 177 525 105 5001	65/6			
Total F Probed Sedim Probin	1st Attempt Light Effort To Refusal Total Probed Length:  Water Depth: Co.Co Probed Sediment Thickness: Probing Observation: Soft Co.Co	2nd Attempt al Light Effort To Refusal	,	Sediment Co Sedime	Sediment Core Penetration: Sediment Recovered: % Recovery:		1st Attempt	2nd Attempt
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Sediment Description - 1st Attempt  0 - =	st Attempt  No Com							
Sediment Description - 2nd Attempt	nd Attempt							
Core Length (ft):	Core Pro	Core Processing (Observations)		Date Processed:		The state of the s	Fluff (ft):	
Core Intervals (ft)		Core Description			Core Intervals (ft) top botto	rals (ft) bottom	Sample Number	nber
Processing Personnel:		The state of the s	Da	Date sent to FVD:				

Note: Total Probed Length = Water Depth + Sediment Thickness

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Transported by: Delivery Time:

Project Name:

	ssing Log	Sample Location ID: 20		36
	diment Core Collection And Processing Log	Time 1st / 2nd Attempts:	GJP/BJS1	WMS UNE 10-15 MM
Mt. Horeb, Wisconsin 09D002	Se	50/6/12		Closby, 300-40
Project Location: Scope ID:		Date:	Sampling Personnel:	Weather Conditions:

Propose Northing Easting	Offset from Proposed Coordinates	Northing	ts / 20	2nd Attempt	
	SPS NAD 83/91 ft.	Easting Water Elev.	اماد		<del></del>
Tota Probed Sedi	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:		Sediment Core Penetration: Sediment Recovered: % Recovery:	1st Attempt 2nd Attempt	1 1 1 1 1 1
	Field Observation	vation			-
0 - = NO	Corc				
Sediment Descrintion 2nd Attenuat	and Attacement				
= -0	יינות עונים ווואר				
Core Length (ft):	Core Processing (Observations)		Date Processed:	T1. FF (6.)	
Core Intervals (ft)	Core Description		Core Intervals (ft)	Sample Minister	

Note: Total Probed Length = Water Depth + Sediment Thickness

Processing Personnel:

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Project Name: Project Location:	Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin	•				
	diment Core	Collection And Processing Log	cessing Log			
Date:	2/19/09 Time 1st / 2nd Attempts:	tempts:	Sample Location ID:	2		
Sampling Personnel: Weather Conditions:	Cloudy 200-40, Winds	NNE	Jam 51-01	foren Grand	No Poling	
roposec	Proposed Location Coordinates  9    20   825   825   807   81   82   82   82   82   82   82   82	Offset from Proposed Coordinates	Actus 1st Attempt Northing Easting Water Elev.	Actual Sampling Location	ion 2nd Attempt	
Tota bed Sedi Probi	ttempt To Refusal	2nd Attempt Light Effort To Refusal	Sediment Co Sedime	Sediment Core Penetration: Sediment Recovered: % Recovery:	1st Attempt 2nc	2nd Attempt
		Field Observation	vation			
ription -	Sediment Description - 1st Attempt  0 - = NO Polive					
ription =	Sediment Description - 2nd Attempt 0 - =					
Core Length (ft):	Core Processi	Core Processing (Observations)	Date Processed		Fluff (ft):	
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Processing Personnel:			Date sent to FVD:			
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Dane County Stewart Lake Dredging Project Name:

		•	75	
consin	Sediment Core Collection And Processing Log	Time 1st / 2nd Attempts:		200-40, Winds NWE 15-15 MAC
Mt. Horeb, Wisconsin 09D002		2/19/09	J	Closo
Project Location: Scope ID:		Date:	Sampling Personnel:	Weather Conditions:

Proposed Location Coor		Actual Sampling Location	
ng 2037829.4	Northing	F	2nd Attempt
л 83/91	Water Elev.	100 B . 53	
Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:		Sediment Core Penetration: Sediment Recovered: % Recovery:	1st Attempt 2nd Attempt
100, 77,000			
Sediment Description - 1st Attempt  0 - = NO COR	ervation		
Descri			
Core Length (ft): Core Processing (Observations)		Jafa Drossessi.	
	7	Date Processed:	Fluff (ft):
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Sediment Core Collection And Processing Log  Time 1st / 2nd Attempts:  GJP/BJS1  GJP/BJS1  GJP/BJS1  AD 83/91  1st Attempt  1st Attempt  2.8  Co. Co.  Co. Co.  Sediment Core Penetration: Sediment Recovered: Sediment Recovery: Selventy:	Sediment Core Collection And Processing Log  Time 1st / 2nd Attempts: CIP/BLIST  COPPLIST  COORDINATES  ACTUAL Sample Location ID: 33  COORDINATES  ACTUAL Sampling Location 1st Attempt  1st Attempt 1st Attempt 1st Attempt 2.8  Sediment Core Penetration: Sediment C	Sediment Core Collection And Processing Log   OG   Time 1st / 2nd Attempts:	Sediment Core Collection And Processing Log    Of   Time 1st / Ind Attempts:   Sample Location ID: 35     Cardinates   Coordinates   Coordinat	Sediment Core Collection And Processing Log   Time 1st / 2nd Attempts:   Sample Location ID: \$3	Project Name: Project Location:	Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin			
Time 1st   2nd Attempts:	Coordinates	Coordinates	Coordinates	Core Processing Observations   Care Description	06D	diment Core	ssing Log		
GJP/BJS1   CJP/BJS1   Coordinates   Coordi	Coordinates	CIP/BJS1   Cardinates   Coordinates   Coor	Coordinates	Corresponding   Correspondin	7	119109	Sample Location ID:		
Actual Sampling Location   1st Attempt   1st Attempt   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0	Actual Sampling Location   1st Attempt   1st Attempt   2nd Attempt   2	Actual Sampling Location   2nd Attental   2nd Attempt   2nd	Sediment Core Penetration   Sediment Core Penetration	Social Processing   Core   Free   Processing   Core   Processed	3	GIP/BISI	SOR		
1st Attempt	Sediment Core Penetration   Sediment Core Penetration	1st Attempt	Coordinates	Morthing		•		Actual Sampling Local	
1st Attempt Light Effort To Refusal Light Effort To Refusal Sediment Core Penetration:    C.C   Sediment Recovered: Sediment Recovery:	Light Effort To Refusal Light Effort To Refusal Sediment Core Penetration:    Light Effort To Refusal Sediment Core Penetration: Sediment Recovered: Sediment Recovered: Sediment Recovery: Field Observation Field Observation	1st Attempt   2nd Attempt   1st Attempt	1st Attempt 2nd Attempt  Light Effort To Refusal Light Effort To Refusal Sediment Core Penetration:  Sediment Recovered: Sessiment Recovered: Sessiment Recovered: Sediment Recovered:  Sediment Recovered:  Recovery:  Field Observation	19th Effort To Refusal Light Effort To Refusal Sediment Core Penetration:  A Recovery:  A Recovery:  Core Processing (Observations)  Core Processing (Observations)  Core Description  Core Description  Core Description  Core Description  Core Processing (Observations)  Core Description  Core De	Wisco	Offset from Proposed Coordinates ft.	26. 10 10	empt	2nd Attempt
Self over hand	tion: Sight over have  Field Observation	ion: Soft over how Field Observation	ion: Suff Over have	Field Observation  Core Processing (Observations)  Core Description  Core Descriptio	Prob	1st Attempt 2nd Att	Sediment Co	e Penetration:	
		<i>y</i>		Core Processing (Observations)  Core Description  Core Intervals (ft)  Core Description  Ltop bottom	ment ng O	Set over he		% Recovery:	
	4			Core Processing (Observations)  Core Description  Core Description  Core Description  Top bottom  Top bottom	1st Ati				
		empt	tempt	Core Processing (Observations)  Core Description  Core Description  Core Description  Top bottom	₹	4			
Core Processing (Observations)  Date Processed:	Date Processed:	Date Processed:				Core Description		Core Interva	
Core Processing (Observations)  Core Description  Core Intervals (ft)	Date Processed:  Core Intervals (ft)	Date Processed:  Core Intervals (ft)	Core Intervals (ft)			nond recording			Sample Number
Core Processing (Observations)  Core Description   Date Processed:  Core Intervals (ft)  top  top	Date Processed:  Core Intervals (ft)  top  bottom	Core Intervals (ft) top bottom							
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin 09D002 Project Location: Project Name:

2,119,109

Date:

Scope ID:

Sampling Personnel:

Sample Location ID: 34 Sediment Core Collection And Processing Log Time 1st / 2nd Attempts: GJP/BJS1

34, 30°.40 Winds UNE 16-15 moh	Offset from Prop	1st Attempt   2nd Attempt	empt  No Corc.	empt	Core Processing (Observations) Date Processed:	Core Description top bottom Sample Number		
3	rdinates	To Refuse 4.7	2	Sediment Description - 2nd Attempt 0 - ==	Core Length (ft): Core Proce	Core Intervals (ft)		Processing Personnel:

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Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

Date:

Core

**Sediment Core Collection And Processing Log** 

Sample Location ID:

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	Time 1st / 2nd Attempts:		
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10-15 MOK Offset from Proposed とでで Coordinates 26°-40° CS (m/25) ہے ہے Proposed Location Coordinates 371684.4Zo2 C II Wisconsin SPS NAD 83/91 Weather Conditions: Cloudy Sampling Personnel: Northing Easting Datum

	2nd Attempt			
<b>Actual Sampling Location</b>	ot	\ \		
Actı	1st Attempt	371678	203 7711	1005.24
		Northing	Easting	Water Elev.
			1	1

2nd Attempt

	1st Attempt		00	00	\$0 VS	
			Sediment Core Penetration:	Sediment Recovered:	% Recovery	
•	2nd Attempt	To Refusal				
	2nd A	Light Effort				2
	1st Attempt	Light Effort To Refusal Light Effort To Refusal	7.6	0.0	4.6	Over ha
	151.	Light Effort	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation: 55 Ht Over han

Field Observation			
	Sediment Description - 1st Attempt	0- = 5.0 Arfficult to Demetrale	

ediment Description - Znd Attempt	-0	

Core Processing (Observations)  Slack (gray 5084 Wet Low plasticity Cohesive Clayer 5114 W. There Organics Slack Soft wet Low plastic ity Cohesive Clayer 5114 W. There Organics Slack Soft wet Low plasticity Cohesive Clayer 5114 Some Organics Slack Medium wet Low plasticity Cohesive Clayer 5114 Some Organics Slack medium wet Loose Sith Send Trace organics

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Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

Date:

Sediment Core Collection And Processing Log

Sample Location ID: 36

Moved (Frozen Grosses **Actual Sampling Location** 1st Attempt 571667. Easting Water Elev. Northing 5 - 0 Offset from Proposed Coordinates Time 1st / 2nd Attempts: WINDS NUT GJP/BJS1 200-40 Proposed Location Coordinates **203 7760** Wisconsin SPS NAD 83/91 2/19/09 Clease Sampling Personnel: Weather Conditions: Northing Easting Datum

2nd Attempt 2nd Attempt 1st Attempt Sediment Core Penetration: Sediment Recovered: % Recovery: 1008.14 Light Effort | To Refusal 2nd Attempt Light Effort To Refusal 6 N 0.0 Probed Sediment Thickness: 6.5
Probing Observation: 1st Attempt Water Depth: Total Probed Length:

Field Observation	L Description - 1st Attempt	= All American	
	ediment Description	= 0	

Sediment Description - 2nd Attempt

Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft):
			Core Intervals (ff)	
Core Intervals (ft)	Core Description		top bot	bottom Sample Number
			T	
Processing Personnel:		Date sent to FVD:		
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Project Location; Scope ID;	Mt. Horeb, Wisconsin 09D002
Date:	'e Collection And Processing Log
Weather Conditions:	1 0.1
Northing Easting Datum	Proposed Location Coordinates  Offset from Proposed  371 67   Wisconsin SPS NAD 83/91  Actual Sampling Location  1st Attempt  Coordinates  Coordinates  Resting  Actual Sampling Location  1st Attempt  Coordinates  Easting  Actual Sampling Location  1st Attempt  Coordinates  Actual Sampling Location  And Attempt  Authority  Actual Sampling Location  1st Attempt  Coordinates  Water Elev.  Actual Sampling Location  1st Attempt  Actual Sampling Location  2nd Attempt  And Attempt  Authority  Actual Sampling Location  And Attempt  And And Attempt  And And Attempt  And
Total Probed Length: Water Depth: Probed Sediment Thickness: Probing Observation	Total Probed Length:    Light Effort   To Refusal   Sediment Core Penetration:   Sediment Thickness:   Sedimen
Sediment Description - 1st Attempt	1 15
Sediment Description - 2nd Attemnt	Attennt
= -0	
Core Length (ft):	Core Processing (Observations) Date Processed:
Core Intervals (ft)	Core Description  Core Intervals (ft)  top bottom Sample Number
Processing Personnel:	
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Note: Total Probed Length = Water Depth + Sediment Thickness	Depth + Sediment Thickness  Transported by :  Delivery Time :

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Sample Location ID: 38

Sediment Core Collection And Processing Log Time 1st / 2nd Attempts: 09D002

Dane County Stewart Lake Dredging

Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

60/61/2

Date:

			Znd Attem					
	**************************************	Actual Sampling Location	1st Attempt	271588.9	752 7502	5.20		
	MON			Northing		à		
	E 10-15	<b>\</b>	Offeet from Proposed	Coordinates	_			
	SS AN		Officat f	Co		٦. :	<u> </u>	
GJP/BJS1	200-43 WINDS NUTE 10-15 MON	I		irdinates	r,a	2	JAD 83/91	
	8. 78 Y	A		Proposed Location Coordinates	2/1 200.	7027502	Wisconsin SPS 1	
Sampling Borsonnel	Meather Conditions:	Medical College		Propos	Northing	Easting	Datum	

2nd Attempt

1st Attempt

Sediment Core Penetration: Sediment Recovered: % Recovery:

Light Effort | To Refusal 2nd Attempt

Light Effort To Refusal

1st Attempt

0 2. S.

Total Probed Length: Water Depth: Probing Observation: 26th Daws Man

Probed Sediment Thickness:

Field Observation	empt	Sold State of the		tempt	
	Sediment Description - 1st Attempt	0-	And the second s	Sediment Description - 2nd Attempt	= 0

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		Core Intervals (ft)	
Core Intervals (ft)	Core Description	top bottom	Sample Number
	Does cont to E.	_	
Drocesing Personnel:	Date Solit to 1 VD		
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Checked by:	Delivery Time:		
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Project Name:

Project Location:	Mt. Horeb, Wisconsin	
· or odo	Sediment Core Collection And Processing I on	
Date:	Z/19/09 Time 1st / 2nd Attempts:	Sample Location ID: 39
Sampling Personnel: Weather Conditions:	Closing 20-40- Winds NWE 10-1	15 mon
Propose Northing Easting Datum	Coordinates Offset from Proposed Coordinates Coordinates Ht.	# Actual Sampling Location  1st Attempt  Northing \$71.585.3  Easting 2037552  Water Elev. (O.10.49
Tot Probed Ser	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	Sediment Core Penetration: Sediment Recovered: % Recovery:
Sediment Description - 1st Attempt 0 - = MO	Field Observation  - 1st Attempt  AD Core	rvation
Sediment Description - 2nd Attempt 0 -	- 2nd Attempt	
Core Length (ft):	:, Core Processing (Observations)	Date Processed:
Core Intervals (ft)	Core Description	Core Intervals (ft) top bottom
Processing Personnel:		Date sent to FVD:
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Note: Total Probed Length	Note: Total Probed Length = Water Denth + Sediment Thickness	

Note: Total Probed Length = Water Depth + Sediment Thickness

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			ing Log	Sample Location ID: 40			Actual Sampling Location
Lake Dredging			Sediment Core Collection And Processing Log	Time 1st / 2nd Attempts:	GJP/BJS1	00 40 WINS NNE 16 15 NOW	
Dane County Stewart Lake Dredging	Mt. Horeb, Wisconsin	09D002	S	2/19/109		Closdy 500.40	<b>♦</b>
Project Name:	Project Location:	Scope ID:		Date:	Sampling Personnel:	Weather Conditions:	

2nd Attempt				1st Attempt 2nd Attempt										
1st Attempt	371576.9	702 71.67	1009.79			Sediment Core Penetration:	Sediment Recovered:	% Recovery:	•					
	Northing	Easting	Water Elev.							Field Observation				
Offset from Proposed	Coordinates			2nd Attempt	To Refusal					Field Ob				
Offset from	Coord			2nd A	Light Effort				<b>-</b> 0					
		#	<u></u>	1st Attempt	To Refusal	4.3	0.0	4.3	Rr had					
rdinates	ر. ان	2	AD 83/91	1st A	Light Effort				20st 00					
<b>Proposed Location Coordinates</b>	9.285 112	7035201	Wisconsin SPS NAD 83/91			Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation: 28th our		Sediment Description - 1st Attempt	= No Cox		Sediment Description - 2nd Attempt
Pro	Northing	Easting	Datum					Probe			Sediment Descri	- 0		Sediment Descrip

II

Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):
			Core Intervals (ft)	als (ft)	
Core Intervals (ft)	Core Description		top	bottom	Sample Number
		and the state of t			
Processing Personnel:		Date sent to FVD:			
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Project Location:

Scope ID:

Project Name:

Mt. Horeb, Wisconsin 09D002

# **Sediment Core Collection And Processing Log**

(moved) 25th area Sample Location ID: No. is all INC Time 1st / 2nd Attempts: 300, 40 (Dials GJP/BJS1 2119109 1 18.00 L

Sampling Personnel:

Date:

	ation	2nd Attempt				1st Attempt 2nd Attempt					
	Actual Sampling Location	1st Attempt	571 579	20371.52	1009.13			Sediment Core Penetration:	Sediment Recovered:	% Recovery:	•
303			Northing	Easting	Water Elev.						
Weather Conditions: Cloudy 302-40 Winds 111E 10-15 mov		Offset from Proposed	Coordinates		ft.	2nd Attempt	al Light Effort To Refusal				2
2002	ı	S				1st Attempt	Light Effort To Refusal	3.7	0.0	3.7	over has
Cloudy 302	,	<b>Proposed Location Coordinates</b>	87156	2591502	Wisconsin SPS NAD 83/91		Light Ef	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation: Soft - over have
Weather Conditions:		Propos	Northing	Easting	Datum			Tc		Probed Se	ď

	Field Observation			
Sediment Description - 1st Attempt	Attempt			
0 - 0	No Cork			
Sediment Description - 2nd Attempt	Attempt			
- 0				
Core Length (ft):	Core Processing (Observations) Date P	Date Processed:		Fluff (ft):
		Core Intervals (ft)	vals (ft)	
Core Intervals (ft)	Core Description	top	bottom	Sample Number

g Personnel:	Date sent to FVD:
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Note: Total Probed Length = Water Depth + Sediment Thickness

Processing Personnel:

redging	
wart Lake D	
County Ste	
Dane	

Mt. Horeb, Wisconsin 09D002

Project Location: Scope ID: Project Name:

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Proposed Northing Easting Datum	ditions: Clovby 30°-40°  Proposed Location Coordinates  202 776 271576. 2  Wisconsin SPS NAD 83/91	1576.	GJP/BJS1   GJP/BJS1	GJP/BJS1  GJP/BJS1  COORSE from Coord  COORSE from the fire the fire the fire from the fire fire fire fire fire fire fire fir	Attempts:Offset from Proposed Coordinates	Northing Easting Water Elev.	Sample Location ID: 42   Actual Sampling Location   1st Attempt	st Atten	2nd Attempt
Total   Probed Sedim Probin	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	ght Effort	Light Effort To Refusal 4.2 0.0 4.2 4.2	Light Effort	To Refusal		Sediment Core Penetration: Sediment Recovered: % Recovery:		

	Field Observation	loi				Г
Sediment Description - 1st Attempt						T
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Sediment Description - 2nd Attempt						_
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Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):	11
			Core Intervals (ft)	vals (ft)		ı
Core Intervals (ft)	Core Description		top	bottom	Sample Number	
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Note: Total Probed Length = Water Depth + Sediment Thickness

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Project Name:	Dane County Stewart Lake Dredging			
Project Location:	Mt. Horeb, Wisconsin		- 11-	
Scope ID:	09D002	•		
	Sediment Core C	<b>Sore Collection And Processing Log</b>	ng Log	
Date:	2/19/09 Time 1st / 2nd	1st / 2nd Attempts:	Sample Location ID:	43
Sampling Personnel:	GJP/BJS1			
Weather Conditions:	Clossy 30°-40	Was UNE 10-15 man		
•	9		Act	Actual Sampling Location

<b>3</b>					Actual Sampling Location	ation	
Proposed Location Coordinates		Offset from Proposed	Proposed		1st Attempt	2nd Attempt	tempt
Vorthing 371 572.7		Coordinates	inates	Northing	27/572.7		
2	#			Easting	2927752		
•	#			Water Elev.	1007.14		
1st Att	1st Attempt	2nd At	2nd Attempt			1st Attempt	2nd Attempt
Light Effort To Refusal	To Refusal	Light Effort	To Refusal			::2	
Total Probed Length:	2.6				Sediment Core Penetration:	න. ට	
	٥. 0				Sediment Recovered:	7.6	
	2.5				% Recovery:		
Probing Observation: 2014 Cover	nex head	-9					
			Field Ob:	Field Observation			
1 1							

	Field Observation	
t Description -	ttempt	
0 - = 4.5'	i difficult to peratrade 22 nd in bottom of core	Core
Sediment Description - 2nd Attempt	Removed 6" of took mass (Talk to Grey)	
= -0		
Core Length (ft):	Core Processing (Observations) Date Processed:	Fluff (ft):
Core Intervals (ft)	Core Description	Core Intervals (ft) Sample Number
	Black Very Fiberous Silky Dead (commonic) wet.	1.5 CROF
	Tan/Brown weathorned Sand Stone Debrock.	
	9	
Processing Personnel:	Date sent to FVD:	VD:
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Total Probed Length = Water Depth + Sediment Thickness	
Note:	

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		2nd Attempt	ppt 2nd Attempt
	Sample Location ID: 44	Actual Sampling Location 1st Attempt 27) 563.8 0.2 7795	Sediment Core Penetration: Sediment Recovered: % Recovery:
Dane County Stewart Lake Dredging Mt. Horeb, Wisconsin 09D002  Sediment Core Collection And Processing 1 on	2/19/09 Closóy	Proposed Location Coordinates  27 569  Coordinates  Northing Wisconsin SPS NAD 83/91  Telev.	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:
Project Name: Project Location: Scope ID:	Date: Sampling Personnel: Weather Conditions:	Propos Northing Easting Datum	To Probed Se

ıtion				
Sediment Description 1ct Attant	0 - A Core		Sediment Description - 2nd Attempt	

Fluff (fr):	Core Intervals (ft) Sample Number						
Core Processing (Observations) Date Processed:	Core Description						Date sent to FVD:
Cole Length (It):	Core Intervals (ft)					Processing Personnel	Tellion of the state of the sta

Checked by: ng Personnel:

Note: Total Probed Length = Water Depth + Sediment Thickness

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Delivery Time :

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Note: Total Probed Length = Water Depth + Sediment Thickness

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Project Name:

	Processing Log	Sample Location ID: 4/	7	10-15 mol
, Wisconsin	Sedim	7/09 Time 1st / 2nd Attempts:	GJP/BJS1	1, 50° 40, Winds UNE K
Project Location: Mt. Horeb, Wiscons Scope ID: 09D002		1	Sampling Personnel:	Weather Conditions: Closor

	Actual Sampling Location tempt 2nd Attempt				1st Attempt 2nd Attempt		00:	:pe	ry:				
	1st Ai	5	lev,	NO Shet			Sediment Core Penetration;	Seullient Recovered:	/a Necovery:				
		Northing	Water Elev.		-	<u>,</u>	Į		_	***************************************	Field Observation		
	Offset from Proposed	coordinates 		2nd Attempt	ort To Refusal						Field		
	Offset	#	 	2	Light Effort	-			March				
g.				1st Attempt	To Refusa	<i>N</i>	0.0	0.					
à	Proposed Location Goordinates Northing 2カルジ	Easting 70.3.45	Datum Wisconsin SPS NAD 83/91	1st A.	Light Effort To Refusal	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation:			Sequinein Description - 1st Attempt	0.0

Sediment Description - 2nd Attempt

Date sent to FVD:	Core Length (ft):	Core Processing (Observations) Core Description	Date Processed:	Core Interv	S (ff)	Fluff (ft):	
				dot	oottom	Sample Number	
	Processing Personnel: Checked by:		Date sent to FVD:				

Note: Total Probed Length = Water Depth + Sediment Thickness

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	:				n 2nd Attempt			1st Attempt 2nd Attempt							Fluff (ft):	Sample Number				
	<b>60</b> -	Sample Location ID: リア			Actual Sampling Location 1st Attempt		No shet	ļ	Sediment Core Penetration: Sediment Recovered:	% Recovery:					Date Processed:	Core Intervals (ft)				
		2nd Attempts:	13S1	NN	pasc	Coordinates Northing  ft. Easting  ft. Water Elev.		2nd Attempt			Field Observation				Core Processing (Observations)	Core Description				
Dane County Stewart Lake Dredging  Mt. Horeb, Wisconsin  09D002		219909 Time 1st /	Chan 25 20 LO	, , , , , , , , , , , , , , , , , , , ,	Proposed Location Coordinates			1st Attempt Light Effort To Refusal		5.5 24x our h		- 1st Attempt	No Core	- zna Attempt						Total Control of the
Project Name: Project Location: Scope ID:		Date:	Sampling Personnel: Weather Conditions:		Propose	Northing Easting Datum			Tot	Probed Sed		Sediment Description - 1st Attempt	= -0	0 - = Attempt	Core Length (ft)	Core Intervals (ft)				

Note: Total Probed Length = Water Depth + Sediment Thickness

Processing Personnel:

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Dane County Stewart Lake Dredging Mt. Horeh Wisconsin Project Location: Project Name:

	Sediment Core Collection And Processing Log	pts:		NINE 16-15 Man
in	Sediment Core Coll	Time 1st / 2nd Attempts:	GJP/BJS1	26° . 40 Wins
09D002		2119/09		C. Lesson
Scope ID:		Date:	Mosther Contra	Weduler Conditions:

Actual Sampling Location   1st Attempt   2nd Attempt   203 7917.4   203 7817   1016 . 55	Sediment Core Penetration: Sediment Recovered: % Recovery:
Northing Easting Water Elev.	
Offset from Proposed Coordinates	2nd Attempt Light Effort To Refusal
# #	Sal
Proposed Location Coordinates  Northing 271 460. ]  Easting 2.5 3782.   Datum Wisconsin SPS NAD 83/91	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:

				Date Processed:	Core Intervals (ft)				Date sent to FVD :
Sediment Description - 1st Attempt  0 - = Am Constitution - 1st Attempt	1 1	Descri		Core Length (ft): Core Processing (Observations)	Core Intervals (ft)				Processing Personnel:

Note: Total Probed Length = Water Depth + Sediment Thickness

Checked by:

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Project Name:	Dane County Stewart Lake Dredging			
Project Location:	Mt. Horeb, Wisconsin	•		
Scope ID:	09D002			
	Sediment Con	ore Collection And Processing Log	ing Log	
Date:	2/19/09 Time 1st	t / 2nd Attempts:	Sample Location ID: 49	
Sampling Personnel:	GJP/BJS1	SI		]
Weather Conditions:	Closs 500-40 W	DINGS UNE 10-15 MOL	30	ļ
	2		Actual Sampling Location	. [
Propose	Proposed Location Coordinates	Offset from Proposed	1st Attempt 2nd Attempt	
Northing	2018/12	Coordinates		Т

				1st Attempt 2nd Attempt												
			100 SM	· · · · · · · · · · · · · · · · · · ·		Sediment Core Penetration:	Sediment Recovered:	% Recovery:	•							
Northing	Easting	Water Elev.								Field Observation						
Coordinates	ff.	ft.	Sale-Market	2nd Attempt	il Light Effort To Refusal				March	Field Ob						
Northing 371 572.4		83/91		1st Attempt	Light Effort To Refusal	Total Probed Length:		Probed Sediment Thickness:	Probing Observation: Soft Over M		Sediment Description - 1st Attempt	$0 - = \lambda b C_{a} C_{a}$		Sediment Description - 2nd Attempt	= -0	

Core Length (ft):	Core Processing (Observations)	Date Processed:		Fluff (ft):
			Core Intervals (ft)	
Core Intervals (ft)	Core Description		top bottom	Sample Number
rocessing Personnel:		Date sent to FVD:		
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		Delivery Time :		

Note: Total Probed Length = Water Depth + Sediment Thickness

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Page 1 of 1

X.\GB\IE\2008\08\G00\7\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008

Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

09D002

## Sediment Core Collection And Processing Log

Sample Location ID:

P	- Contraction of the Contraction	
Time 1st / 2nd Attempts:		
Time 1st /		torm are
,\o		
J.,	1	

Date:

Northing Offset from Proposed Son Son Coordinates GJP/BJS1 Proposed Location Coordinates 371 533.3 **263 7847**Wisconsin SPS NAD 83/91 Closso Weather Conditions: Sampling Personnel: Northing Easting Datum

2nd Attempt Actual Sampling Location 1st Attempt 203 7848 371533.9 01.6001 Easting Water Elev.

Light Effort | To Refusal | Light Effort | To Refusal 2nd Attempt Probing Observation: 20th Dark March 0.0 1st Attempt Water Depth: Total Probed Length: Probed Sediment Thickness:

00 % Recovery: Sediment Core Penetration: Sediment Recovered:

2nd Attempt

1st Attempt

-		2016		
Field Observation		०१ द		
ield Obs		( end		
L.		2 ms 1		
		8/3		
		Penethral		
		9	gas	
		1627		
	ttempt	, Z.	,	
	ın - 1st A	6.5	,	
	escriptio	11		
	Sediment D	- 0		

Sediment Description - 2nd Attempt

Core Intervals (ft)		Date Processed:		Fluff (ft):
Core Intervals (ft)		Core Intervals (ft)		
•	Core Description	dot	bottom	Sample Number
0-1.3 Very 30st, Blad	K Fiberros Wet non-oblastic non calvesive charme sill 0,5 (But	5,14 0,5 (	43	
1.3- 342.7 Soft, Plack	Fine BUS will Law Olashirity Man calosing a ready	Sound O Secure	1.00	15.0 F
3.3- 3.6 Tax Bown	Westerne Sandston			3

· Call Basal	
rocessing Personnel:	Checked by:
	Processing Personnel: 1. Oad rows/

Date sent to FVD: Transported by:

Delivery Time:

Logged by: Checked by: Page 1 of 1

Note: Total Probed Length = Water Depth + Sediment Thickness

X:\GB\IE\2008\08\G007\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008

Dane County Stewart Lake Dredging
Mt. Horeb, Wisconsin

Project Name:

Note: Total Probed Length = Water Depth + Sediment Thickness

XAGBVIB/2008/08/G007/14000 field data/Templates (field forms)/Sediment Collection & Processing Log 2008

Project Name:	Dane County Stewart Lake Dredging	ging						
Project Location:	Mt. Horeb, Wisconsin			•				
Scope ID:	09D002							
	Sedime	ent Core	Collecti	Sediment Core Collection And Processing Log	ocessing	Log		
Date:	60/61/2	Time 1st / 2	2nd Attempts:	Филипен.	ဟ	Sample Location ID: 52		
Sampling Personnel:		GJP/BJS1						
Weather Conditions:	Class, 50°-40 Winds	2 Sm	A AMPE		10-15 mov			
	<b>3</b>	g.				Actual Sampling Location	ion	
Propose	Proposed Location Coordinates		Offset from	Offset from Proposed		1st Attempt	2nd Attempt	tempt
Northing	371430.6	-	Coor	Coordinates	Northing	371439.6		
Easting	263 7880	H.			Easting	263 7883		
Datum	Wisconsin SPS NAD 83/91	발			Water Elev.	1013.11		
	1st A	1st Attempt	2nd /	2nd Attempt			1st Attempt	2nd Attempt
	Light Effort	Light Effort To Refusal	Light Effort	To Refusal				
Tota	Total Probed Length:	5.3				Sediment Core Penetration:		-
	Water Depth:	0.0				Sediment Recovered:	:	
Probed Sedi	Probed Sediment Thickness:	5.3				% Recovery:		
Prob	Probing Observation: 2011 over New	Mary Mary	Z					

Field Observation
Sediment Description - 1st Attempt
0. = 0
Sediment Description - 2nd Attempt
<b>-</b> 0

Core Length (ft):	Core Processing (Observations)	Date Processed:		***************************************	Fluff (ft):
			Core Intervals (ft)	s (ft)	
Core Intervals (ft)	Core Description		top	pottom	Sample Number
		And the second s			
		477			
rocessing Personnei:	The state of the s	Date sent to r v D :			
Checked by:		Transported by:			
		Delivery Time:			

Note: Total Probed Length = Water Depth + Sediment Thickness

X:\GB\IE\2008\08\08\08\000\7\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008

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Project Location:

Scope ID:

Project Name:

Mt. Horeb, Wisconsin



Sediment Core Collection And Processing Log

Sample Location ID:

300-40 Winds NNE 10-15 Mph Time 1st / 2nd Attempts: GJP/BJS1 2/19/109 Clossy

Weather Conditions:

Sampling Personnel:

Date:

ion	2nd Attempt						
 Actual Sampling Location	1st Attempt	707 L2	1060	205 7894	V 75	77	
		Northing	L	Easung	Water Elev.		
	Oilset from Proposed	Coordinates	_		1,		
bosed Location Coordinates	2712017		グラインのない	Wisconsin SPS NAD 83/01			
Pro	Northing		Easting	Datum			

_		t 2nd Attempt	<	000	5.4	
	•	1st Attempt	00	7.7	2	
			Sodimont Cond Cond	Sodiment Cole Pelletration	Sediment Recovered:	/a recovery:
	mpt	o Refusaí				
	2nd Attempt	Light Effort To Refusal				7
	1st Attempt	Light Effort To Refusal	5.5'	0.0	s, s	May Low
	1st	Light Effor	Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation: Soft over h
			<u>1</u>		Probed Se	Ρις

Field Observation					end of Acre
2	Sediment Description - 1st Attempt	. 0		Sediment Description - 2nd Attempt	0- = 6.0' became hard to push / Sand in end of nove

		o
Fluff (ft):	Sample Number 0.75 (Fro.t) 3.50 (So.t)	
d:	bottom bottom	
Date Processed:	Fileross Organiz	
Core Processing (Observations)	Very 50th Black wet Non-Obesta Pon-colusive fileros organic 3174  The Black, wet Low Plasticity Colusive Clayery 51th - trace Pine Sono	
Core Length (ft):	Core Intervals (ft) 0 - 1:72.4 2.4-3.5 1 3.5-4.5	

Processing Personnel: [ Own DASK Checked by:

Date sent to FVD: Transported by: Delivery Time:

Note: Total Probed Length = Water Depth + Sediment Thickness

X./GBVIEV2008/08G007014000 field data/Templates (field forms)/Sediment Collection & Processing Log 2008

Project Location: Project Name:

Scope ID:

Mt. Horeb, Wisconsin 09D002



## Sediment Core Collection And Processing Log

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		ition	2nd Attempt		1st Attempt 2nd Attempt													Fluff (ft):	<sub>1</sub>	Sample Number						
ا ا		Actual Sampling Location	1st Attempt		100 Shot		Sediment Core Penetration:	Sediment Recovered:	% Recovery:									ed:	Core Intervals (ft)	top bottom						
Sample Location ID:	10-15 mor	9		Easung Water Elev.			Sediment (	Sedi			vation							Date Processed:		en de para para para para Angula, menandra de mandra de mandra de mandra de mandra de mandra de mandra de mandr		ti and più tha spail, i sa tha tha bhaichtig suimbhidh a bhaichtig sa chair in teannain suimean sean				
2nd Attempts:	Sinds whe 10-		Offset from Proposed Coordinates		2nd Attempt	Light Effort To Refusal					Field Observation							Core Processing (Observations)		Core Description						
Time 1st /	GP/BJS1	Þ		NAD 83/91 ft.	1st Attempt	Light Effort To Refusal		Ö	S:	" SET OSC PST								Core Proce						And the second s		
60/6/17,	ions: Closov	9	5   1	Wisconsin SPS NAD 83/91			Total Probed Length:	Water Depth:	Probed Sediment Thickness:	Probing Observation:		Sediment Description - 1st Attempt	= NO 0		Sediment Description - 2nd Attempt			ngth (ft):	•	is (ft)						
Date:	Sampling Personnel: Weather Conditions:		1 170	Easung Datum					Prob			Sediment Descr	- 0		Sediment Descr	- 0		Core Length (ft):		Core Intervals (ft)						

Note: Total Probed Length = Water Depth + Sediment Thickness

Processing Personnel:

Checked by:

X:\GB\IE\2008\08\G007\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008

Logged by: Checked by: Page 1 of 1

Date sent to FVD: Transported by: Delivery Time:

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Mt. Horeb, Wisconsin 09D002

Project Location:

Scope ID:

Project Name:

Date:

Sample Location ID:

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ime 1st / 2nd Attempts:	•
Time 1st	GJP/BJS1
109	
60/6//7	

10-15 mol Offset from Proposed Coordinates NUE 300. 40 Walls نوند Proposed Location Coordinates **263 7476** Wisconsin SPS NAD 83/91 Josan Weather Conditions: Sampling Personnel: Northing Easting Datum

Actual Sampling Location 203 149 6 1st Attempt 1015.80 Easting Water Elev. Northing

2nd Attempt

2nd Attempt 8.61 o, N 1st Attempt 8.0, 4.5

% Recovery:

Sediment Core Penetration: Sediment Recovered:

Light Effort | To Refusal

To Refusal

Light Effort

1st Attempt

0 Core

Water Depth:

Total Probed Length:

Probed Sediment Thickness:

2nd Attempt

ation		soften of core
rieid Observation	Sediment Description - 1st Attempt	0- = 6.5' Hard to penetrate / Sand gravel in bottom of core

Probing Observation: 50th Color Mound

	OFCOR		
	in bothow		
	6 Graves		
	15an	•	
	, Denatrale		
	Harb L		
2211201	= 6.5'	•	
	- 0		

OF COR

**BOHOW** 

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Saw) gravel

to penetrate.

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(0.5.

11

0

Sediment Description - 2nd Attempt

Fluff (ft):		Sample Number	1.25 (Foot)	1.50 [Poot]	/	(Pot)	
	vals (ft)	bottom		<u>  . 8</u>		1.75	
<u></u>	Core Intervals (ft)	top	L Mass	SIL		lave sitt	//
Core Processing (Observations) Date Processed:		Core Description	43	30ft Black / gray, wet " Let Plusticity, Man Cohesive Oreanin Pibernia Sill	Weatherd Sandstone Chunks	Medium, Black, Moist, Low Plesticity, Childresive Few Sine grain Sand dlayer Sitt 1.75 (500+	Weathered Sandston Chank
Core Length (ft):		Core Intervals (ft)	15.0-0	0.4 - 2.8	2.8 - 3.1	37-41	のオージブ

OGN STONES	
وب	
Processing Personnel:	Checked by:

Date sent to FVD: Transported by:

Delivery Time:

Mt. Horeb, Wisconsin

Project Location:

Scope ID:

Project Name:

09D002

## Sediment Core Collection And Processing Log

Time 1st / 2nd Attempts:

Sample Location ID:

GJP/BJS1

8/3

Cloude

Weather Conditions: Sampling Personnel:

Date:

ıtion				
Actual Sampling Location	1st Attempt	371489.8	203 7626	68,2101
a		Northing	Easting	Water Elev.
	Offset from Proposed	Coordinates		
	<u> </u>		#	#:
•	osed Location Coordinates	37/493.9	20.3 7635	Wisconsin SPS NAD 83/91
	Prop	Northing	Easting	Datum

2nd Attempt

	1st A	1st Attempt	2nd Attempt	tempt	
. ,	Light Effort	To Refusal	Light Effort To Refusal Light Effort To Refusal	To Refusal	
Total Probed Length:		2.4			Sediment Core Penetration:
Water Depth:		0.0			Sediment Recovered:
Probed Sediment Thickness:		ユ・ア			% Recovery:
Probing Observation: Soft Angel	マナま	RY LY	7		

2nd Attempt			
1st Attempt			

Field Observation ent Description - 1st Attempt	
-------------------------------------------------	--

Sediment Description - 2nd Attempt	= -0	

Core Length (ft):	Core Processing (Observations)	Date Processed:			Fluff (ft):
			Core Intervals (ft)	ıls (ft)	
Core Intervals (ft)	Core Description		top	bottom	Sample Number
		and the state of t			
Processing Personnel:		Date sent to FVD:			

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e: Total Probed Length = Water Depth + Sediment Thickness	
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Delivery Time:

X.\GB\UE\2008\08\G007\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008

			tion 2nd Attempt	1st Attempt 2nd Attempt			Fluff (ft):	Sample Number	
	Sample Location ID: 57		Actual Sampling Location 1st Attempt 271 529. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Sediment Core Penetration: Sediment Recovered: % Recovery:			Date Processed:	Core Intervals (ft) top bottom	
Processing Log	Sample	M. M	Northing Easting Z		Field Observation		Dat		
  Core Collection And Processing Log	Time 1st / 2nd Attempts:	4) was 10-15 mg	Offset from Proposed Coordinates ft.	2nd Attempt  Light Effort To Refusal	Field		ore Processing (Observations)	Core Description	
Lake Dredging ediment	60,	GJP/BJS1		1st Attempt Light Effort To Refuse 0.0 0.0 4.4		ţ	Core Pro		
	2/19	ions: Oosdy	Proposed Location Coordinates $\frac{57}{579,2}$	Total Probed Length:  Water Depth:  Probed Sediment Thickness:  Probing Observation:	Sediment Description - 1st Attempt 0 136 CON	Sediment Description - 2nd Attempt 0 -	ngth (ft):	Is (ft)	
Project Name: Project Location: Scope ID:	Date:	Sampling Personnel: Weather Conditions:	Pr Northing Easting Datum	Prok	Sediment Descr	Sediment Descr	Core Length (ft):	Core Intervals (ft)	

Date sent to FVD:

Logged by:
Checked by Page 1 of 1

Note: Total Probed Length = Water Depth + Sediment Thickness

X:\GB\UE\2008\08\G007\14000 field data\Templates (field forms)\Sediment Collection & Processing Log 2008



Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

March 09, 2009

TROY GAWRONSKI FOTH INFRASTRUCTURE & ENVIRONM 2737 South Ridge Rd Suite 600 Green Bay, WI 54307

RE: Project: 09D002 DANE COUNTY

Pace Project No.: 4014340

## Dear TROY GAWRONSKI:

Enclosed are the analytical results for sample(s) received by the laboratory on February 24, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tod nolteneya

Tod Noltemeyer

tod.noltemeyer@pacelabs.com Project Manager

Enclosures





Pace Analytical Services, Inc. 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

## **CERTIFICATIONS**

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

Green Bay Certification IDs

Green Bay Certification IDs
Wisconsin DATCP Certification #: 105-444
Wisconsin DATCP Certification #: 105-444
Wisconsin Certification #: 405132750
Wisconsin Certification #: 405132750
South Carolina Certification #: 83006001
South Carolina Certification #: 83006001 North Dakota Certification #: R-200
North Dakota Certification #: R-200
North Dakota Certification #: R-150
North Carolina Certification #: 503
North Carolina Certification #: 503
New York Certification #: 11888

New York Certification #: 11887
Minnesota Certification #: 055-999-334
Minnesota Certification #: 055-999-334
Louisiana Certification #: 04168
Kentucky Certification #: 83
Kentucky Certification #: 82
Illinois Certification #: 200051
Illinois Certification #: 200050
Florida/NFI AP Certification #: E87951 Florida/NELAP Certification #: E87951 Florida/NELAP Certification #: E87948

REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

Lab ID	Sample ID	Watrix	Date Collected	Date Received	
4014340001	#21 COMPOSITE	Solid	02/24/09 09:15	02/24/09 12:45	
4014340002	#43 COMPOSITE	Solid	02/24/09 09:20	02/24/09 12:45	
4014340003	#53 COMPOSITE	Solid	02/24/09 09:25	02/24/09 12:45	
4014340004	#55 COMPOSITE	Solid	02/24/09 09:30	02/24/09 12:45	



#### SAMPLE ANALYTE COUNT

Project:

09D002 DANE COUNTY

Pace Project No.: 4014340

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4014340001	#21 COMPOSITE	ASTM D2974-87	AME	1
		EPA 9060 Modified	CCR	3
4014340002	#43 COMPOSITE	ASTM D2974-87	AME	1
		EPA 9060 Modified	CCR	3
4014340003	#53 COMPOSITE	ASTM D2974-87	AME	1
		EPA 9060 Modified	CCR	3
4014340004	#55 COMPOSITE	ASTM D2974-87	AME	1
		EPA 9060 Modified	CCR	3

Page 4 of 14







#### PROJECT NARRATIVE

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

Method:

ASTM D2974-87 Description: Percent Moisture

FOTH INFRASTRUCTURE & ENVIRONMENT

Client: Date:

March 09, 2009

General Information:

4 samples were analyzed for ASTM D2974-87. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

**Laboratory Control Spike:** 

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:** 

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:** 

Page 5 of 14





#### PROJECT NARRATIVE

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

Method:

EPA 9060 Modified Description: Total Organic Carbon

Client:

FOTH INFRASTRUCTURE & ENVIRONMENT

Date:

March 09, 2009

#### General Information:

4 samples were analyzed for EPA 9060 Modified. All samples were received in acceptable condition with any exceptions noted below.

#### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

#### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

#### Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

#### QC Batch: WETA/3297

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 1089664001

M0: Matrix spike recovery was outside laboratory control limits.

- · MSD (Lab ID: 129881)
  - Mean Total Organic Carbon

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

#### **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

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#### **ANALYTICAL RESULTS**

Project:

09D002 DANE COUNTY

Pace Project No.: 4014340

Sample: #21 COMPOSITE

Lab ID: 4014340001

Collected: 02/24/09 09:15 Received: 02/24/09 12:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical	Method: AS	TM D2974-87						
Percent Moisture	44.5 %	6	0.10	0.10	1		02/26/09 08:14		
Total Organic Carbon	Analytical	Method: EPA	A 9060 Modifie	ed .					
Total Organic Carbon Total Organic Carbon Mean Total Organic Carbon	54000 m 61000 m 57500 m	ng/kg	9090 9090 9090	2550 2550 2550	1 1 1		02/26/09 15:38 02/26/09 15:45 02/26/09 15:45	7440-44-0	

Date: 03/09/2009 04:15 PM

REPORT OF LABORATORY ANALYSIS

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#### ANALYTICAL RESULTS

Project:

09D002 DANE COUNTY

Pace Project No.: 4014340

Sample: #43 COMPOSITE

Lab ID: 4014340002

Collected: 02/24/09 09:20 Received: 02/24/09 12:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical I	Method: AST	M D2974-87						
Percent Moisture	62.0 %		0.10	0.10	1	02/26/09 08:14			
Total Organic Carbon	Analytical I	Method: EPA	3060 Modifie	đ					
Total Organic Carbon Total Organic Carbon Mean Total Organic Carbon	125000 m 129000 m 127000 m	g/kg	20000 20000 20000	5600 5600 5600	1 1 1		02/26/09 15:49 02/26/09 15:55 02/26/09 15:55	7440-44-0	

Date: 03/09/2009 04:15 PM

REPORT OF LABORATORY ANALYSIS

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#### **ANALYTICAL RESULTS**

Project:

09D002 DANE COUNTY

Pace Project No.: 4014340

Sample: #53 COMPOSITE

Lab ID: 4014340003

Collected: 02/24/09 09:25 Received: 02/24/09 12:45 Matrix: Solid

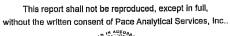
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical M	lethod: AST	M D2974-87						
Percent Moisture	41.7 %		0.10	0.10	1		02/26/09 08:14		
Total Organic Carbon	Analytical M	1ethod: EPA	4 9060 Modifie	d					
Total Organic Carbon	<b>59300</b> mg	/kg	10000	2800	1		02/26/09 16:00	7440-44-0	
Total Organic Carbon	49400 mg	/kg	11100	3110	1		02/26/09 16:05	7440-44-0	
Mean Total Organic Carbon	54600 mg	/kg ·	10500	2950	1		02/26/09 16:05	7440-44-0	

Date: 03/09/2009 04:15 PM

REPORT OF LABORATORY ANALYSIS

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#### ANALYTICAL RESULTS

Project:

09D002 DANE COUNTY

Pace Project No.: 4014340

Sample: #55 COMPOSITE

Lab ID: 4014340004

Collected: 02/24/09 09:30 Received: 02/24/09 12:45 Matrix: Solid

Results reported on a "dry-weigh	nt" basis								
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytica	I Method: AS	TM D2974-87						
Percent Moisture	37.7 %		0.10	0.10	1	02/26/09 08:14			
Total Organic Carbon	Analytica	I Method: EP	A 9060 Modifie	ed	•				
Total Organic Carbon Total Organic Carbon Mean Total Organic Carbon	43800 ± 27400 ± 35600 ±		10000 10000 10000	2800 2800 2800	1 1 1		02/26/09 16:11 02/26/09 16:16 02/26/09 16:16		

Date: 03/09/2009 04:15 PM

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#### QUALITY CONTROL DATA

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

QC Batch:

PMST/2245

Analysis Method:

ASTM D2974-87

QC Batch Method:

ASTM D2974-87

Analysis Description:

Dry Weight/Percent Moisture

Associated Lab Samples: 4014340001, 4014340002, 4014340003, 4014340004

SAMPLE DUPLICATE: 129753

Parameter Units 4014349001 Result

Dup Result

RPD

Max RPD

Qualifiers

Percent Moisture

%

6.0

6.0

.4

10

Date: 03/09/2009 04:15 PM

REPORT OF LABORATORY ANALYSIS

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#### QUALITY CONTROL DATA

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

QC Batch:

WETA/3297

Analysis Method:

EPA 9060 Modified

QC Batch Method:

EPA 9060 Modified

Analysis Description:

9060 TOC Average

Associated Lab Samples:

4014340001, 4014340002, 4014340003, 4014340004

METHOD BLANK: 129878

Matrix: Solid

Associated Lab Samples:

4014340001, 4014340002, 4014340003, 4014340004

Blank

Result

Reporting Limit

Analyzed

Qualifiers

Mean Total Organic Carbon

mg/kg

<70.0

250 02/26/09 13:57

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

129879

Units

Spike Units Conc.

LCS Result

LCS % Rec % Rec Limits

Mean Total Organic Carbon

mg/kg

1000

997

100

80-120

Qualifiers

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

129880

MSD

MS

129881

MS MSD % Rec % Rec

Max

RPD RPD Qual

Parameter Mean Total Organic Carbon

Units mg/kg

Result 28200

1089664001

MS

Spike Spike Conc. Conc. 15400

Result 15400 48500

MSD Result 53100

% Rec 132

Limits 50-150 162

30 MO

Date: 03/09/2009 04:15 PM

Page 12 of 14

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#### **QUALIFIERS**

Project:

09D002 DANE COUNTY

Pace Project No.:

4014340

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

#### **ANALYTE QUALIFIERS**

MO

Matrix spike recovery was outside laboratory control limits.

Date: 03/09/2009 04:15 PM





#### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:

09D002 DANE COUNTY

Pace Project No.: 4014340

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
4014340001	#21 COMPOSITE	ASTM D2974-87	PMST/2245		
4014340002	#43 COMPOSITE	ASTM D2974-87	PMST/2245		
4014340003	#53 COMPOSITE	ASTM D2974-87	PMST/2245		
4014340004	#55 COMPOSITE	ASTM D2974-87	PMST/2245		
1014340001	#21 COMPOSITE	EPA 9060 Modified	WETA/3297		
1014340002	#43 COMPOSITE	EPA 9060 Modified	WETA/3297		
1014340003	#53 COMPOSITE	EPA 9060 Modified	WETA/3297		
1014340004	#55 COMPOSITE	EPA 9060 Modified	WETA/3297		
4014340001	#21 COMPOSITE	· EPA 9060 Modified	WETA/3298		
4014340002	#43 COMPOSITE	EPA 9060 Modified	WETA/3298		
4014340003	#53 COMPOSITE	EPA 9060 Modified	WETA/3298		
4014340004	#55 COMPOSITE	EPA 9060 Modified	WETA/3298		

Date: 03/09/2009 04:15 PM

REPORT OF LABORATORY ANALYSIS

Page 14 of 14

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Engineering - Surveying - Material Testing

2679 Continental Drive Green Bay, Wisconsin 54311-6627

Phone: (920) 465-3911 Fax: (920) 465-3913

March 5, 2009

Mr. Troy Gawronski Foth Infrastructure & Environment, LLC 2937 S. Ridge Road P.O. Box 12326 Green Bay, Wisconsin 54307-2326

RE: Laboratory Tests Results for Sediment Samples Stewart Lake – Dane County, Wisconsin

#### Dear Troy:

Enclosed are the results of the laboratory tests performed on the sediment samples collected at Stewart Lake in Dane County, Wisconsin. Samples of the sediment material were received on February 24, 2009.

Our Scope of Services consisted of completing designated laboratory tests on the sediment material. A summary and description of the test results is as follows:

#### Percent Solids Based on Weight

Test Location	Depth	Water <u>Content</u>	% Solids <u>(Dry)</u>	% Solids (Wet)
#4	0-4'	154.6		39.3
#4	4 <b>-</b> 5'	35.1	64.9	74.0
#4	Comp	48.0	52.0	67.5
//0.1	Comp	69.6	30.4	59.0
#21	0.9-1.3	418.9		19.3
#28 #28	Comp	111.3		47.3
#35	Comp	67.8	32.2	59.6
#43	Comp	199.0		33.4
#50	1.0-1.3'	78.9	21.1	55.9
#50 #50	Comp	92.1	7.9	52.0
#53 #53	2.4-3.5° Comp	52.1 70.9	47.9 29.1	65.8 58.5
#55	1.0-1.3	53.2	46.8	65.3
#55	3.1-3.4'	51.2	48.8	66.1
#55	Comp	61.1	38.9	62.1

Mr. Troy Gawronski Foth Infrastructure & Environment, LLC March 5, 2009 Page 2

### **Specific Gravity Results**

Test <u>Location</u>	<u>Depth</u>	Specific <u>Gravity</u>
#21	Composite	2.692
#53	Composite	2.601
#55	Composite	2.617

Attached are the sieve analysis and Atterberg limits results that were performed for this project.

We appreciate the opportunity to provide our professional services to your firm. Should you require additional information or clarification, feel free to contact our office.

Sincerely,

CQM, INC.

Robert R. Rouse, C.E.T.

Soil Laboratory Manager

RRR/kml

Enclosures

# SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GE	NE	R۵	L I	DA.	<u>TA:</u>

i i	
Client:	Foth Infrastructure & Environment
Project:	Stewart Lake - Dane County, Wisconsin
Location Sampled:	
Sample No:	
Depth of Sample:	
Date Received:	
Sample Designated For:	
	Sediment From Stewart Lake
	l e e e e e e e e e e e e e e e e e e e
Munsell Color Code:	i e
Date Sampled:	2/13/03

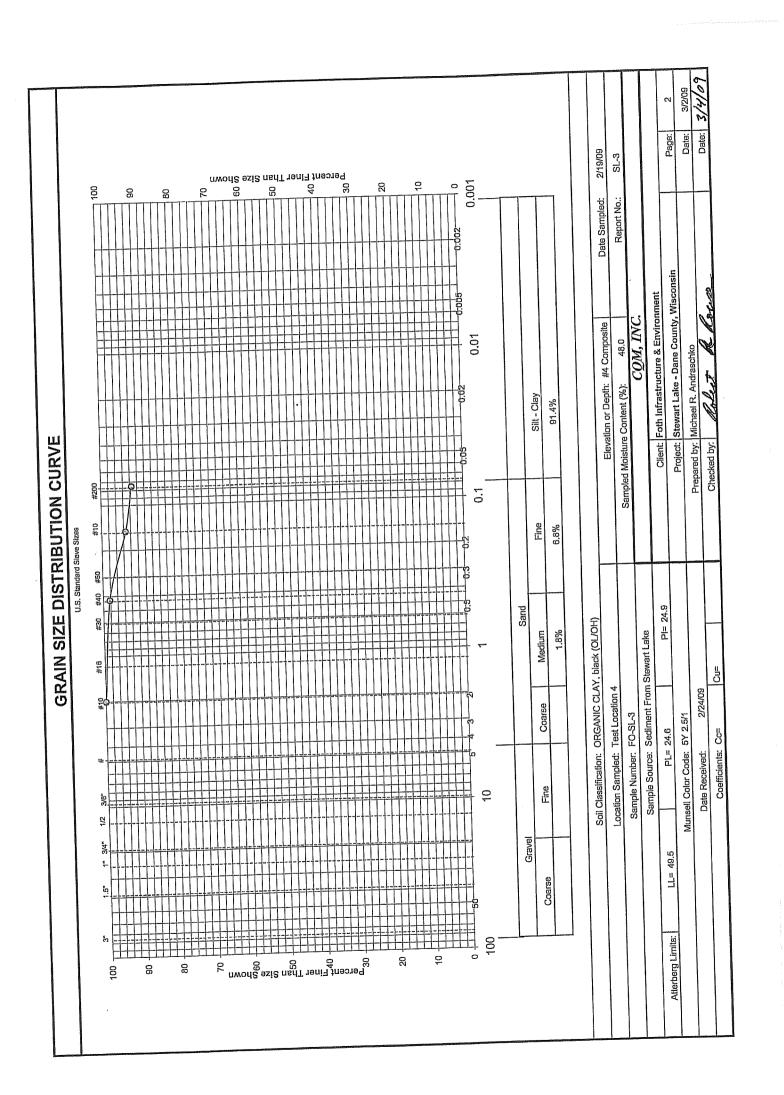
#### LABORATORY DATA:

Date Tested:	February 24-25, 2009
Test Performed By:	

		1	
24 Hrs. Turn Around:	NO	,	
		Dry Weight of Soil (gms):	329.3
Washed Gradation:	TEO	2,, 1,2,3,	

Sieve	Weight	%	%	Project Specification	Source of Specification
Size	Retained	Retained	Passing	% Passing by Weight	
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"					
#4					
#10	0.0	0.0	100.0		
#40	6.0	1.8	98.2		
#100	15.7	4.8	93.4		
#200	6.5	2.0	91.4		

	#200	6.5	2.0	91.4	
·					
			00	1	Remarks:
	REVIEWED BY:	assert 1	Rhouse		(AGHIBITIO)
DA	TE REVIEWED:	3/7/	01	J	



# SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

<b>GENERAL</b>	DATA:
----------------	-------

Client:	Foth Infrastructure & Environment
Project:	Stewart Lake - Dane County, Wisconsin
Location Sampled:	Test Location 21
Sample No:	i i
Depth of Sample:	#21 Composite
Date Received:	2/24/09
Sample Designated For:	Soil Classification
Source of Sample:	Sediment From Stewart Lake
Munsell Color Code:	5Y 2.5/1
Date Sampled:	2/19/09

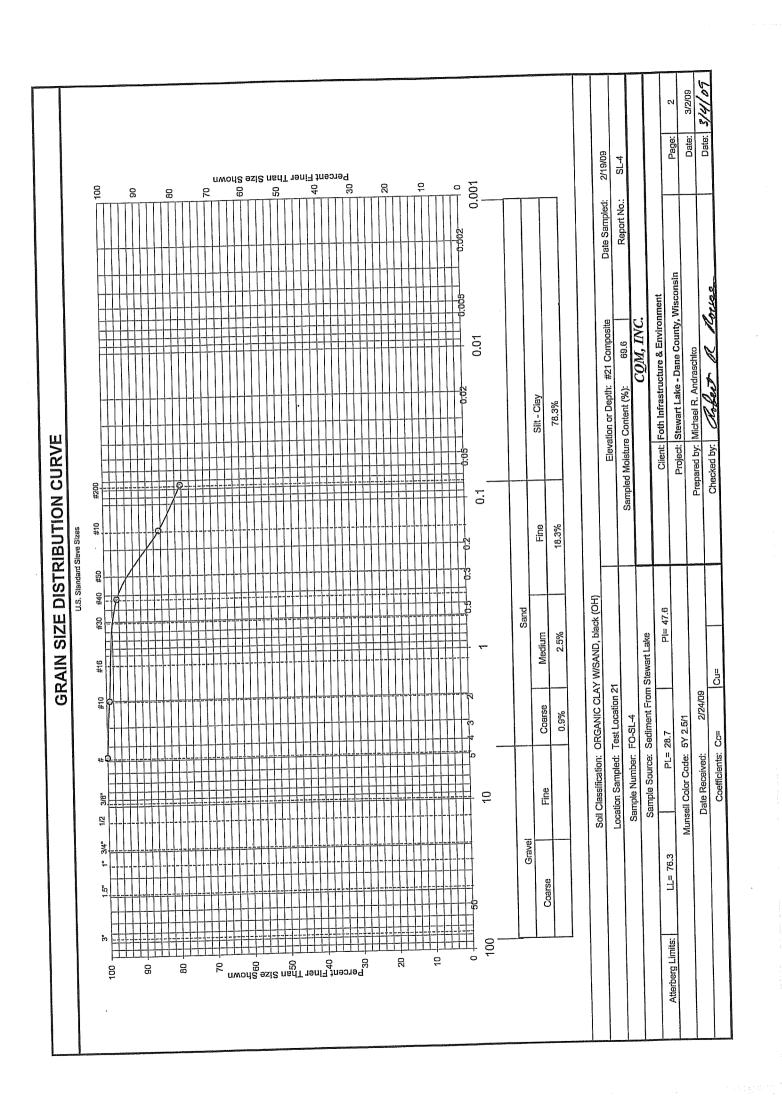
#### LABORATORY DATA:

Date Tested:	February 24-25, 2009
Test Performed By:	JLN

24 Hrs. Turn Around: Washed Gradation:	NO		000.6
Washed Gradation:	YES	Dry Weight of Soil (gms):	203.0

					ro Eastion
Sieve	Weight	%	%	Project Specification	Source of Specification
Size	Retained	Retained	Passing	% Passing by Weight	
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"					
#4	0.0	0.0	100.0		
#10	2.3	0.9	99.1		
#40	6.5	2.5	96.6		
#100	32.0	12.1	84.5		
#200	16.3	6.2	78.3		

	#40	6.5	2.0	30.0	
	#100	32.0	12.1	84.5	
	#200	16.3	6.2	78.3	
				1	
	REVIEWED BY:	Robert 1	R. Rowe	-	Remarks:
DA	TE REVIEWED:	3/4/	109	]	



# SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

Client:	Foth Infrastructure & Environment
	Stewart Lake - Dane County, Wisconsin
Location Sampled:	Test Location 43
Sample No:	FO-SL-8

Sample No: FO-SL-8

Depth of Sample: #43 Composite

Date Received: 2/24/09
Sample Designated For: Soil Classification
Source of Sample: Sediment From Stewart Lake

Munsell Color Code: 5Y 2.5/1

Date Sampled: 2/19/09

#### LABORATORY DATA:

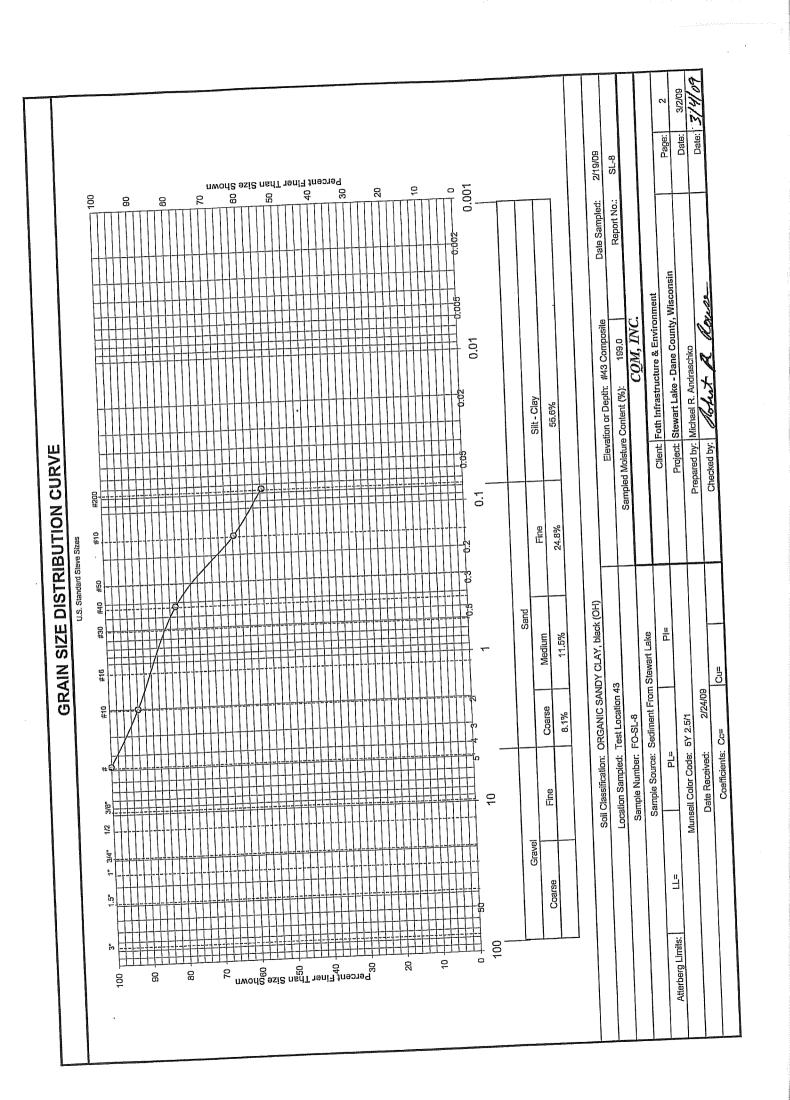
**GENERAL DATA:** 

Date Tested:	February 24-25, 2009 JLN
Test Performed By:	JLN

24 Hrs. Turn Around: NO
Washed Gradation: YES Dry Weight of Soil (gms): 119.5

Sieve	Weight	%	%	Project Specification	Source of Specification
		Retained	Passing	% Passing by Weight	
Size	Retained	Ketanieu	1 4005		
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"					
#4	0.0	0.0	100.0		
#10	9.7	8.1	91.9		
#40	13.8	11.5	80.4		
#100	19.9	16.7	63.7		
#200	9.7	8.1	55.6		

1	#100 [	10.0				1
	#200	9.7	8.1	55.6		
			······································			
			0 0	1	Remarks:	
	REVIEWED BY:	Colent a	House	-	,	
DA	TE REVIEWED:	3/4/	09	]		



# SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

<b>GENE</b>	RAL.	<u>DATA:</u>

Client:	Foth Infrastructure & Environment
	Stewart Lake - Dane County, Wisconsin
Location Sampled:	Test Location 53
Sample No:	
Depth of Sample:	#53 Composite
Date Received:	2/24/09
Sample Designated For:	Soil Classification
Source of Sample:	Sediment From Stewart Lake
Munsell Color Code:	5Y 2.5/1
Date Sampled:	2/19/09

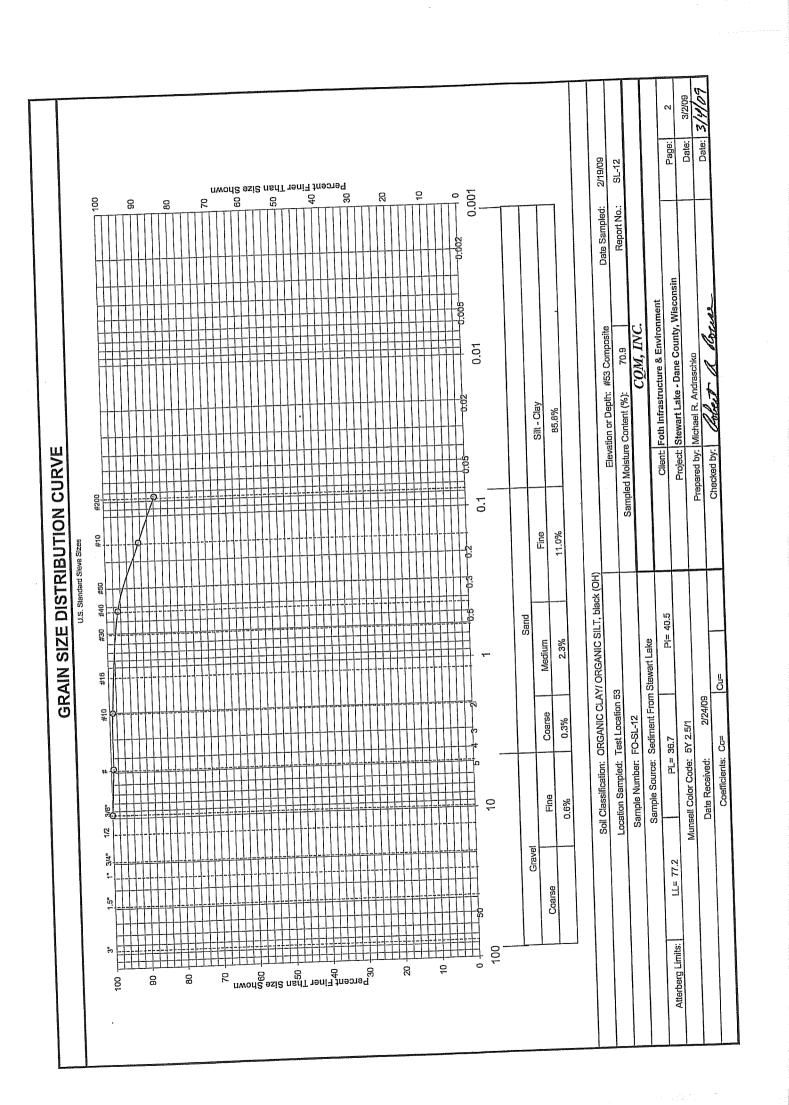
#### LABORATORY DATA:

Date Tested:	February 24-25, 2009
Test Performed By:	

24 Hrs. Turn Around: Washed Gradation:	NO	
	VEC	Dry Weight of Soil (gms): 234.7
Washed Gradation:	YES	5.,

					15 15 15
Sieve	Weight	%	%	Project Specification	Source of Specification
Size	Retained	Retained	Passing	% Passing by Weight	
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"	0.0	0.0	100.0		
#4	1.5	0.6	99.4		
#10	0.6	0.3	99.1		
#40	5.5	2.3	96.8		
#100	14.7	6.3	90.5		
#200	11.0	4.7	85.8		

1	#40	5.5	2.3	96.8	
	#100	14.7	6.3	90.5	
	#200	11.0	4.7	85.8	
ı			_		
				-	
	REVIEWED BY:	Robert 0	Rouse		Remarks:
DA	TE REVIEWED:	3/4/	109		



# SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES (ASTM D422)

GENE	RAL	DA	ГΑ:

Client	Foth Infrastructure & Environment
Project:	Stewart Lake - Dane County, Wisconsin
Location Sampled:	Test Location 55
Sample No:	FO-SL-15
Depth of Sample:	
Date Received:	
Sample Designated For:	•
Source of Sample:	
Munsell Color Code:	
Date Sampled	

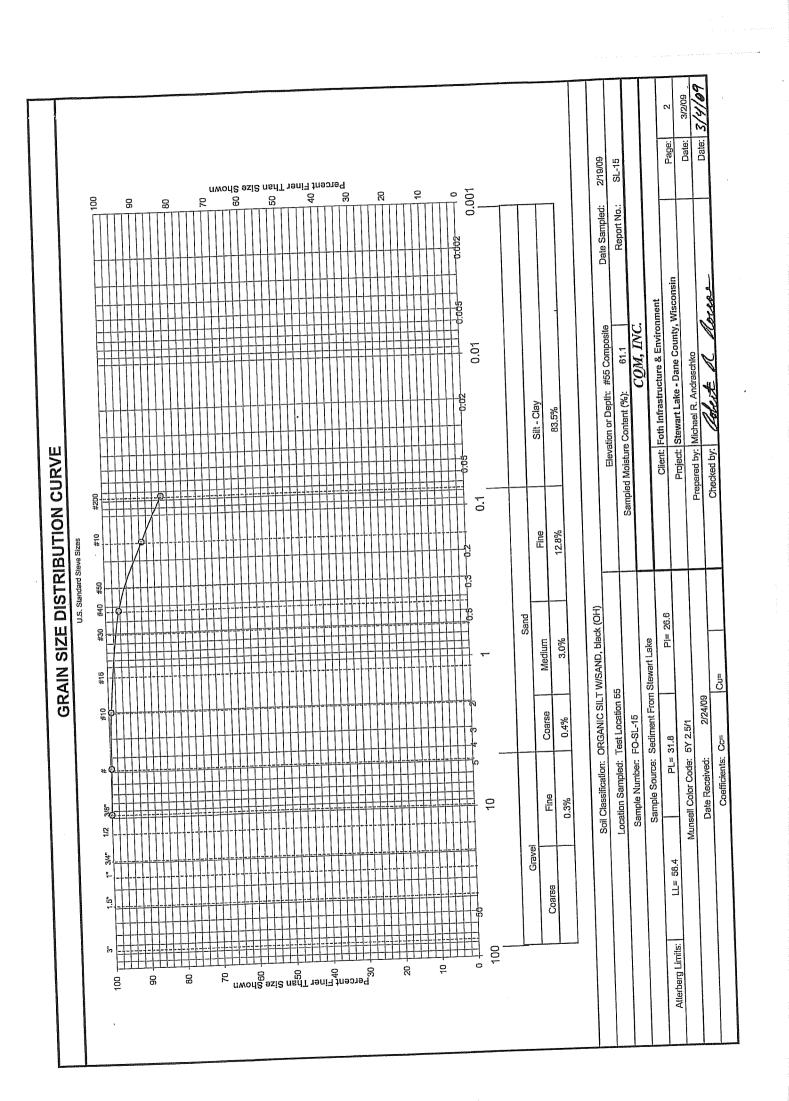
#### LABORATORY DATA:

Date Tested:	February 24-25, 2009
Test Performed By:	JLN
24 Hrs. Turn Around:	NO

		d Gradation:	YES	Dry Weigi	nt of Soil (gms): 237.4
Sieve	Weight	%	%	Project Specification	Source of Specification
Size	Retained	Retained	Passing	% Passing by Weight	

Sieve	Weight	%	%	Project Specification	Source of Specification
Size	Retained	Retained	Passing	% Passing by Weight	
3"					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"	0.0	0.0	100.0		
#4	0.7	0.3	99.7		
#10	0.9	0.4	99.3		
#40	7.2	3.0	96.3		
#100	16.5	7.0	89.3		
#200	13.8	5.8	83.5		

#200   10.0		
REVIEWED BY: Robert & Rouse	Remarks:	
DATE REVIEWED: 3/4/09		
DATE REVIEWED.		



# Foth

# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

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Page: Cooler#	# 202

Required Ship to Lab:	ojec.	mation:		Required invoice information:	nformation:									[			
Lab Name: CQM Inc	Facility ID #. Dane	Dane County Stewart Lake	t Lake	Send invoice to:	Troy Gawronski						Y Y	IAI: Standard 14 day	14 day	ደ	Kusn		Mark One
Address: Green Bay, Wisconsin	Task Code #			Address: 2737 South Ridge Road, Suite 600 / P.O. Box 12326	uth Ridge Road, Su	te 600 / P.	J. Box 123	26			If Rus	If Rush, Date due	en				
	Site Address			City/State	Green Bay, Wi		Phone #:	(920) 496-6850	8-6850		OC le	rel Requi	QC level Required: Standard	dard	Special		Mark one
Lab PM: Bob Rouse	City Mt. Horeb	State	M	Reimbursement project?	ject?	Non-reimbursement project?	risement p	roject?		Mark one	N. Re	duced D	NJ Reduced Deliverable Package?	Packag	e?		
Phone/Fax	Site PM Name	Trov Gawronski	ski	Send EDD to							MAM	MA MCP Cert?		CT RCP Cert?	Cert?		Mark One
Lab PM email	Phone/Fax: (920)	(920) 496-6850		CC Hardcopy report to	eport to						Lab F	roject ID	Lab Project ID (lab use)	_			
Applicable Lab Quote #:	Site PM Email: tgawronski@foth.com	awronski@	foth.com	CC Hardcopy report to	eport to											//	
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SAMPLE ID Character per box. (A-Z, 0-9 1,-) Samples IDs MUST BE UNIQUE	IG CHARGE WEELER	BASH-ACE WATER WO WILLIAM WATER OF WO CO	SAMPLE TYPE G=GRAB C=COM	SAMPLE DATE	SAMPLE TIME	#OF CONTAINER	FIELD FILTERED? (	1003 15804	19OH .	lonsdleh	Reduest	SONOS MENS	MUTORESTANT LUVE SOUSO STORY SOUSO METE SOUSO METE	MATORS		Comments/Lab	s/Lab D.
1 #40.4"		OS .	grab	2/19/2009		-	1 -			1		, ×	1				
2 #44'-5'		SO	grab	2/19/2009		-	- -					×					
s #4 Composite		SO	comp	2/19/2009		-	-					×	×	1			
4 #21 Composite		S	сошо	2/19/2009		-	c			1		×	×	1			
5 #28 0.9'-1.3'		SO	grab	2/19/2009		-	-			1		×		+			
6 #28 Composite		SO	сошр	2/19/2009		-	-			#	1	×					
#35 Composite		SO	сошр	2/19/2009		-	E					×	4				
8 #43 Composite		S	сошь	2/19/2009			-				_	×		1	_		
9 #50 1.0'-1.3'		SS	o grab	2/19/2009		-	n 1	$\exists$				×					
te #50 Composite		SS	сошр	2/19/2009		-	-	_		1		×	$\dashv$				
in #53 2.4'-3.5'		SO	o grab	2/19/2009		~	- -					×	$\frac{1}{1}$				
rz #53 Composite		SO	а сашр	2/19/2009		1	n 1					×	×				
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# Foth

# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

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Required Ship to Lab:	Required Project Information:	nation:		9	nformation:						ļ					-		0
Lab Name: CQM Inc	Facility ID #: Dane (	County Stewa	ıri Lake	Send Invoice to:	Troy Gawronski						۲_	TAT: Standard 14 day	ard 14 di	зу	Kush		Me	Mark One
Address: Green Bay, Wisconsin	Task Code #			Address: 2737 Sou	2737 South Ridge Road, Suite 600 / P.O. Box 12326	e 600 / P.O	. Box 123	56			7	lf Rush, Date due	e due					
	Site Address			City/State	Green Bay, Wi	뜐	Phone #:	(920)	(920) 496-6850		ğ	QC level Required: Standard	quired:	Standard		Special	Ma	Mark one
Lab PM: Bob Rouse	City Mt. Horeb	State	IM	Reimbursement project?		Non-reimbursement project?	sement p	roject?		Mark one		NJ Reduced Deliverable Package?	Deliver	able Pac	kage?			
Phone/Fax:	Site PM Name	Troy Gawronski	nski	Send EDD to							Μ	MA MCP Cert?	irt?	CT	CT RCP Cert?	2	Me	Mark One
Lab PM email	Phone/Fax: (920)	(920) 496-6850		CC Hardcopy report to	port to						2	Lab Project ID (lab use)	: ID (lab	(esn			i	
Applicable Lab Quote #:	Site PM Email: tgawronski@foth.com	awronski@	foth.com	CC Hardcopy report to	sport to													
			d			s	(N/A		Preservatives	ıtives	pa							
SAMPLE ID One Character per box. (A-Z, 0-9 / -) Samples IDs MUST BE UNIQUE	EUROSONATE NO ABSPICACION OF ABSPICA	8678 2 2	MATRIX CODE SAMPLE TYPE MOD=0 BARD=0	SAMPLE DATE	SAMPLE TIME	#OF CONTAINER	FIELD FILTEREDY (	-INO3	HCI HCI	Ve2S2O3	Rednest	1346	~	Multipeelchuur propri		Cou	/ Comments/Lab Sample I.D.	ą
1 #55 1.0'-1.3'			so grab	2/19/2009		-	-					×	1					
2 #55 3.1'-3.4'		**	so grab	2/19/2009		-	- F					×						
3 #55 Composite			сошь сошь	2/19/2009		η	n 1					*	× × ×					
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Additional Comments/Special Instructions:		112	RELINQUISHED BY	BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	1 XB OE	AFFILIAT	ION			DATIE	TIME	sample l	Receipt (	Sample Receipt Conditions	SI
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															<u> </u>	, ν/γ	X/N	Y/N
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		s D	SHIPPING METHO UPS COURIER	10D. (mark as appropriate) SA ER FEDEX PRINT Name of SAMPLER:	AMPLE	SAMPLER NAME AND SIGNATURE	AND SIG	NATUR	ш	T.					00 ni qr	·	ample tact?	) Blank?
			US MAIL	SIGNATUR	SIGNATURE of SAMPLER:				<u>ā</u>	DATE Signed		Time:				uo		Trip
ATTENDED TO THE PROPERTY OF TH	The second secon	AND DESCRIPTION OF THE PARTY OF	The second secon															

# Characterization Core Geotechnical Data February 2009 Dane County Public Works, Highway, and Transportation Stewart Lake, Dane County Mt. Horeb, Wisconsin

<u> </u>	Depth	% Solids	% Sand	% Silt/Clay	Specific Gravity	Liquid Limit	Plastic Limit	Plasticity Index	TOC
Sample Location ID	(feet)	(%)	(%)	(%)					(ppm)
Core #4	0.0'-4.0'	39.3							
Core #4	4.0'-5.0'	74.0							
Core #4	Comp	67.5	8.6	91.4		49.5	24.6	24.9	
Core #21	Comp	59.0	21.7	78.3	2.692	76.3	28.7	47.6	57,500
Core #28	0.9'-1.3'	19.3							-
Core #28	Comp	47.3							
Core #35	Comp	59.6					<del></del>		
Core #43	Comp	33.4	44.4	55.6					127,000
Core #50	1.0'-1.3'	55.9	***				***		
Core #50	Comp	52.0							
Core #53	2.4'-3.5'	65.8		***					
Core #53	Comp	58.5	14.2	85.8	2.601	77.2	36.7	40.5	54,600
Core #55	1.0'-1.3'	65.3							
Core #55	3.1'-3.4'	66.1							
Core #55	Comp.	62.1	16.5	83.5	2.617	58.4	31.8	26.6	35,600

Comp = Composite of recovered soft sediment ppm = parts per million --- = Not Analyzed

Prepared By: TAG Checked By:\_\_\_\_

#### Appendix D

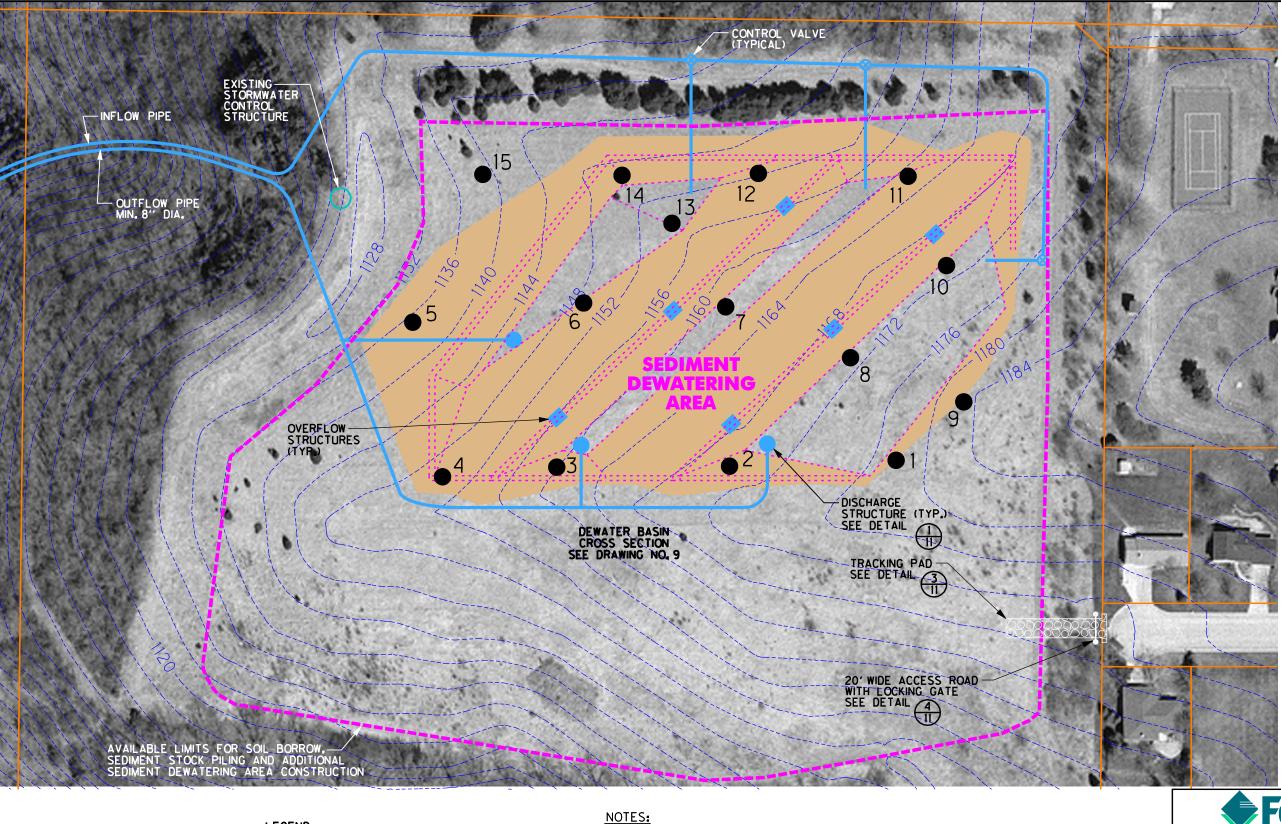
#### **Dewatering Site Geotechnical Results**

#### Appendix D

#### Index

Figure D – 1 Conceptual Dredging & Dewatering Project Layout

**Test Pit Logs** 



#### **LEGEND**

- 1160 - EXISTING GROUND CONTOUR PARCEL BOUNDARIES

TEST PIT NUMBER AND LOCATION

CONCEPTUAL BERM CONFIGURATION

- HORIZONTAL CONTROL BASED ON NAD 1983 DANE COUNTY COORDINATE SYSTEM. VERTICAL DATUM BASED ON NAVD88.
- SEDIMENT DEWATERING LAYOUT IS CONCEPTUAL ONLY. CONTRACTOR TO PROVIDE PROPOSED DEWATERING LAYOUT AS PART OF SUBMITTALS REQUIRED IN THE PROJECT MANUAL.
- 3. DREDGE CUT ELEVATIONS WILL BE PROVIDED TO THE SUCCESSFUL BIDDER OF THE PROJECT.
- 4. BOTTOM OF PROPOSED DREDGE CUT SHOWN INCLUDES OVERDREDGE ALLOWANCE.



Foth Infrastructure & Environment, LLC

DANE COUNTY DEPT. OF PUBLIC WORKS, HIGHWAY & TRANSPORTATION

FIGURE D-1 CONCEPTUAL DREDGING & DEWATERING PROJECT LAYOUT

BAR SCALE

JUNE, 2009 Revision Date:

Drawn By: JRB2 | Checked By: TAG | Scope: 09D002

#### Foth Van Dyke Associates, Inc.

LOG OF TEST PIT: TP-1

CLIENT: DANE CO.

SURFACE ELEVATION: ~ 1,177

PROJECT: STEWART LAKE DREDGING

PIT DEPTH: 4'-4"

PROJECT NUMBER: 090062

DATE: 4/15/09

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LADODATORY	
ELEV	LND SURF	INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	LABORATORY TESTS	SAMPLING NOTES
	<i>O</i>					TOPSOIL - DARK BROWN, SILTY SOME ROCKS, GRAVEL, MOIST		12010	SAMI LING NOTES
	-					, = = ;			
	( - -					SILT - SANDY, TAN TO REDDISH BROWN, SOME ROCKS AND BOULDERS			
	- - - 2					BOULDERS			
ž	 								
	- 3 -								
	- - -								
	<b>4</b> - -					BEDROCK @ 41-4".			
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TEST PI	T DATA						WATER	EVEL INCODA	TION (Dature - CURE)
111		START DATE:	4/15	100	7	DI	EPTH AT	COMPLETION:	TION (Datum = SURF)

START DATE: 4/15/09
COMPLETION DATE: 4/15/09
LOGGED BY: 8J51

METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: NA

LATER TIME/DEPTH: N/A LATER TIME/DEPTH: N/A

CAVE IN DEPTH: N/A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 09 DOOZ

LOCATION: PROPOSED SEDMENT BERNEY AREA

SURFACE ELEVATION: ~\, 170

PIT DEPTH: 3'-6"

DATE: 4/15/09

		LOCATION:	PROP	Pos	SED SED	MENT MANAGEMENT AREA			
MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
ELEV		INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	O - - - - - -					TOPSOIL - DARK BROWN, SILTY, SOME ROCKS, GRAVEL, SAND, MOIST  SILT - SANDY, REDDISH BROWN, SOME ROCKS AND BOULDERS			
	- - - 2 - -								
	<i>3</i> - - -					BEDROCK @ 31-6".		, , ,	
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	-								
EST PI	- I T DATA COMP	START DATE: PLETION DATE: LOGGED BY: METHOD:	4/15/ 4/15 BJS	109			EPTH AT LATEI LATEI	COMPLETION:	N/A N/A

j:\Test Pit Log1

CONTRACTOR: DANE CO. PARKS DEPT.

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 090002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ~ 1,166

PIT DEPTH: 41-4"

DATE: 4/15/09

MSL	DEPTH FR	SAMP DEPTH	TVDE	,,	MUNSELL	DESCRIPTION OF MATERIAL	CLASS	LABORATORY TESTS	SAMPLING NOTE
ELEV	LND SURF	INTERVAL	TYPE	#	COLOR	TOPSOIL - DARK BROWN,	CLASS	TESTS	SAMIFLING NOTE
	-					TOPSOIL - DARK BROWN, SILTY, SOME SAND AND ROCKS, MOIST.			
	- (					SILT - SANDY, REDDISH BROWN, SOME ROCKS AND			
	-		,			BOULDERS.			
	- - - 2				2				
	-		l El			CLAY - SILTY, GRAY, SOFT,			
	- 3				1	CLAY - SILTY, GRAY, SOFT, MOIST, SOME SAND AND GRAVEL.			
	-				ia l				
	- - 4								
						BEDROCK @ 41-4".			
	- 5								
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START DATE: 4/15/09

COMPLETION DATE: 4/15/09

LOGGED BY: BJS1

METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: NA LATER TIME/DEPTH: NA

LATER TIME/DEPTH: NA

CAVE IN DEPTH: NA

CLIENT: DANE CO.

SURFACE ELEVATION: ~1,150

PIT DEPTH: 2'-6"

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 690002

DATE: 4/15/09

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
	LND SURF	INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	D - - -					TOPSOIL - DARK BERUMBROWN, SILTY, MOIST. SILT - BROWN, SOME ROCKS. AND BOULDERS.			
	- 2								
	- - - 3 -					BEDROCK @ 21-6".			
	- - - 4 -								
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  -  -									
-	-								
- EST PIT	DATA			100			WATER I	LEVEL INFORMA	TION (Datum = SURF)

START DATE: 4 15 09
COMPLETION DATE: 4 15 09
LOGGED BY: BJ51
METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: N/A LATER TIME/DEPTH: N/A LATER TIME/DEPTH: N/A
CAVE IN DEPTH: N/A

CLIENT: DANE CO .

PROJECT: ORDER STEWART LAKE DREDGING

PROJECT NUMBER: 09002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ~1,137

PIT DEPTH: 3'-6"

DATE: 4/15/09

						ACTIVIDENTIAL TO THE			
MSL I	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
	ND SURF	INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
-	- 0					TOPSOIL - DARK BROWN, SILTY, SOME ROCKS AND GRAVEL. SILT - REDDISH BROWN, SOME ROCKS AND BOULDERS.			
- - - - -	2								
-  - -	3					BEDROCK @ 31-6".			
-  - - -	4					DEDRUCK W 5'- W			
- - - - -	5								
- - - -									
- - - - 							20.		
-									
- - EST PIT D	DATA	CTART DATE					WATER I	LEVEL INFORMA	TION (Datum = SURF)

START DATE: 4 15 09
COMPLETION DATE: 4 15 09
LOGGED BY: 3 551

METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: N/A

LATER TIME/DEPTH: N A A CAVE IN DEPTH: N A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 090002

LOCATION: PROPOSED SEDMENT DEWATERING AREA

SURFACE ELEVATION: ~ 1,149

PIT DEPTH: 4'-0"

DATE: 4/15/09

	MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
	ELEV		INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
				ТҮРЕ	#		DESCRIPTION OF MATERIAL TOPS DIL - DARK BROWN, SILTY, SOME ROCKS AND GRAVEL, MOIST.  SILT - REDDISH BROWN, SOME ROCKS AND GRAVEL. SOME SAND AND CLAY.	CLASS		SAMPLING NOTES
		- - - 3 -								
		- 4 - - 5					BEDROCK@41-011.			
		-								
		-								
1	ECT DI	- Г ДАТА						WATERI	EVEL INFORMA	TION (Datum = SURF)

TEST PIT DATA

START DATE: 4/15/09
COMPLETION DATE: 4/15/09
LOGGED BY: BJS1
METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

WATER LEVEL INFORMATION (Datum = SURF)

DEPTH AT COMPLETION: N/A LATER TIME/DEPTH: NA

LATER TIME/DEPTH: N/A
CAVE IN DEPTH: N/A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DEWATERING

PROJECT NUMBER: 090002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ~1,161

PIT DEPTH: 51-15"

DATE: 4/15/09

MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	_
ELEV		INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	6 - -					TOPSOIL - DARK BROWN, SILTY, SOME GRAVEL AND ROCKS, MOIST.			
	-   - -					SILT - REDDISH BROWN, ROCKY, SOME SAND AND CLAY.			
	- 2 - -								
	- 3 - -					CLAY - GRAY, SILTY, SOME GRAVEL AND ROCKS.		·	
	- - 4 -								
,	- - 5 -								
	- 6 -					BEDROCK @ 5'-10".			
	- - - 7				,				
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FST PIT	Γ DATA						WATER I	EVEL INFORMA	$\Gamma ION (Datum = SURF)$

TEST PIT DATA

START DATE: 4/15/09 COMPLETION DATE: 4/15/09 LOGGED BY: BJ51

METHOD: BACKHOE

CONTRACTOR: DANE CO. PAPILS DEPT.

DEPTH AT COMPLETION: N/A LATER TIME/DEPTH: N/A LATER TIME/DEPTH: N/A CAVE IN DEPTH: N/A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 690002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ∼ 1,171

PIT DEPTH: 5'-4"

DATE: 4/15/09

								I I DOD I MODE-I	
MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
ELEV	LND SURF	INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	. · · · · · · · · ·					TOPSOIL - DARK BROWN, SILTY, SOME GRAVEL.			
	- - - -				×	SILT- REDDISH BROWN, SAME SAND, GRAVEL, AND CLAY.			
	2 - - - - 3		æ					· ·	
	- - - 4				-	CLAY - GRAY, SANDY, SOME SILTIND GRAVEL, MOIST, SOFT.			
	- 5					BEDROCK @ 5'- 4".			
	- - - - -								
	- 7 - -								
	-  - -								
	 - -								

START DATE: 4/15/09

COMPLETION DATE: 4/15/09 LOGGED BY: BJ51

METHOD: BACKHDE CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: N/A

LATER TIME/DEPTH: N/A

CAVE IN DEPTH: N/A

SURFACE ELEVATION: ~1,183

CLIENT: DANE CO.

PIT DEPTH: 3'-6"

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 090002

DATE: 4/15/09

	NUMBER: 0900 OCATION: PROP		MENT DEWATERWG AREA		DATE.	4/15/09
	MP DEPTH TERVAL TYPE	# COLOR	DESCRIPTION OF MATÉRIAL	CLASS	LABORATORY TESTS	SAMPLING NOTES
6  1  			TOPSOIL - DARK BROWN, SILTY, SOME ROCKS, MOIST.  SILT- TAN TO REDDISH BROW SANDY, SOME ROCKS AND BOULDERS.	N <sub>J</sub>		
- 2 - - - - 3 - - - - - 4			BEDROCK@31-6".		,	
- 5						
 - - - - - - -						
- - - - - -						
-  - TEST PIT DATA				WATER	LEVEL INFORMA	TION (Datum = SURF)

START DATE: 4/15/09

COMPLETION DATE: 4/15/09

LOGGED BY: BJ54

METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: N/A
LATER TIME/DEPTH: N/A
LATER TIME/DEPTH: N/A
CAVE IN DEPTH: N/A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 090002 LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ~1,170

PIT DEPTH: 3'-10"

DATE: 4/15/09

								<del>-</del>	
MSL	DEPTH FR	SAMP DEPTH			MUNSELL	DESCRIPTION OF MATERIAL	CI AGG	LABORATORY	CAMDUSIC MOTEO
ELEV	LND SURF	INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	- 0		ŀ			TOPSOIL - DARK BROWN, SILTY, MOIST, SOME GRAVEL.			
	-					SILTY, MOIST, SOME			
	_					GRAVEL.			
	_					SILT - REDDISH BROWN, SOME SAND, GRAVEL, AND ROCKS.			
						SOME SAND, GRAVEL,			
	-					AND ROCKS			
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	-					BEDROCK@ 31-10"			
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START DATE: 4/15/09
COMPLETION DATE: 4/15/09
LOGGED BY: 8/51
METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: NA LATER TIME/DEPTH: N/A
LATER TIME/DEPTH: N/A
CAVE IN DEPTH: N/A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 09 DOOZ

LOCATION: PROPOSED SEPIMENT DEWATERING AREA

SURFACE ELEVATION: ~1,162

PIT DEPTH: 51-0"

DATE: 4/15/09

MSL	DEPTH FR	SAMP DEPTH			MUNSELL	DESCRIPTION OF THE STATE OF	01 . 00	LABORATORY	0.17 (D) D 10.710 ====
ELEV		INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	O - -					TOPSOIL - DARK BROWN, SILTY, MOIST, SOME ROCKS.			
	I I					SILT - REDDISH BROWN, SOME SAND AND ROCKS.			
	- 2 - 2							,	
	- - 3				đ		-	÷	
	- - 4 -		-						
.  -	- 5					BEDROCK@51-0"			
-	- 6								
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TEST PIT	DATA						WATERI	EVEL INFORMA	FION (Datum = SURF)

START DATE: 4/15/09

COMPLETION DATE: 4/15/09 LOGGED BY: BJSJ METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: N/A

LATER TIME/DEPTH: N/A

CAVE IN DEPTH: N/A

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING PROJECT NUMBER: 090002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ~1,152

PIT DEPTH: 6'-0"

DATE: 4/15/09

					1				
	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
	LND SURF	INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	- O					TOPSOIL - DARK BROWN,			
-						SILTY, SOME GRAVEL,			
						MOIST.			
	_								
-	1					SILT - BROWN, SOME			
-						SAND AND ROCKS.			
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START DATE: 4

COMPLETION DATE: 4 LOGGED BY: BJST

METHOD: BACKHOE CONTRACTOR: DANE CO. PARKS DEPT. DEPTH AT COMPLETION: NA LATER TIME/DEPTH: NA CAVE IN DEPTH: NA

#### Foth Van Dyke Associates, Inc.

LOG OF TEST PIT: TP-13

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 090002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: 4,154

PIT DEPTH: 3 '- 6"

DATE: 4/15/09

MSL	DEPTH FR	SAMP DEPTH		П	MUNSELL			LABORATORY	
	LND SURF	INTERVAL	TYPE		COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	- O					TOPSOIL - DARK BROWN, SILTY, SOME POCKS AND GRAVEL.			
	_					SILTY, SOME POCKS AND			
	-					GRAVEL,			
	-								
	1					SUT BOOK DOWN			
ŀ	-		II 8			SILT-ROCKY BROWN,			
	-					SOME SAND AND CLAY.			
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-	-					BEDROCK@31-6"			
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	\$400000 persons	START DATE: LETION DATE: LOGGED BY:	4/15/	109	<del>}</del>	D		COMPLETION:	
	COMP	LETION DATE:	4/15	100	7			R TIME/DEPTH:	
		METHOD:	BACK	LIA	F			R TIME/DEPTH: AVE IN DEPTH:	N/A N/A
	(	CONTRACTOR:	DANE	C	O. PARK	S DEPT.	0.7		

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING

PROJECT NUMBER: 090002

LOCATION: PROPOSE SEDIMENT DISPOSAL AREA

SURFACE ELEVATION: ~1,149

LATER TIME/DEPTH: N/A
LATER TIME/DEPTH: N/A
CAVE IN DEPTH: N/A

PIT DEPTH: 31-6"

DATE: 4/15/09

MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	The state of the s
ELEV		INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
1222						TOPSOIL - DARK BROWN,			
	O					TOPSOIL DAKE BIZOWN)			
	L					SILTY, MOIST, SOME			
						SILTY, MOIST, SOME' ROCKS AND GRAVEL.		i	
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						SILT- BROWN, ROCKY, SOME SAND AND CLAY,			
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1		START DATE: PLETION DATE: LOGGED BY:	4/15	10	9	D		COMPLETION:	NIA
1	COMP	LETION DATE:	4/15	1/0	29			R TIME/DEPTH:	NA
		LOGGED BY:	BJS	L				R TIME/DEPTH:	NA
-1		METHOD:	12ACK	140	DF.		C	AVE IN DEPTH:	N/A

METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

CLIENT: DANE CO.

PROJECT: STEWART LAKE DREDGING PROJECT NUMBER: 690002

LOCATION: PROPOSED SEDIMENT DEWATERING AREA

SURFACE ELEVATION: ~1,139

PIT DEPTH: 3'-0"

DATE: 4/15/09

						TOTAL SERVICE TO A RICEA			
MSL	DEPTH FR	SAMP DEPTH			MUNSELL			LABORATORY	
ELEV		INTERVAL	TYPE	#	COLOR	DESCRIPTION OF MATERIAL	CLASS	TESTS	SAMPLING NOTES
	- 0					TOPSOIL - DARK BROWN, SILTY, MOIST, SOME GRAYEL.			
	-					SILTY, MOIST, SOME			
	-					GRAVEL.			
	_					SIT - BROWN SOME			
	1					SILT- BROWN, SOME			
	- '					ROCKS AND BOULDERS.			
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START DATE: 4/15/09
COMPLETION DATE: 4/15/09
LOGGED BY: 8751
METHOD: BACKHOE

CONTRACTOR: DANE CO. PARKS DEPT.

DEPTH AT COMPLETION: LATER TIME/DEPTH:

LATER TIME/DEPTH: CAVE IN DEPTH:

### CONSTRUCTION DRAWINGS

**FOR** 

# STEWART LAKE HYDRAULIC DREDGE PROJECT

RFB No. 309014

# DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY & TRANSPORTATION

DANE COUNTY, WISCONSIN

JUNE, 2009

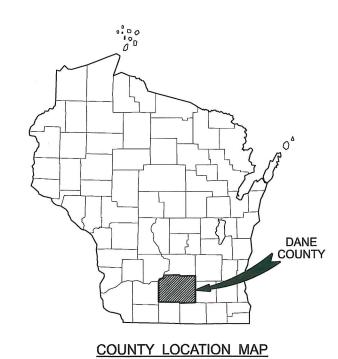




STEWART LAKE

SITE LOCATION

SITE LOCATION MAP



	STEWART LAKE PROJECT EGOATION WAT									
3	STEWART LAKE DREDGE PLAN									
4	CROSS SECTION LOCATION MAP									
5	LAKE BED CROSS SECTIONS									
6	LAKE BED CROSS SECTIONS	LAKE BED CROSS SECTIONS								
7	STEWART LAKE WATER DEPTH MAP									
8	CONCEPTUAL DREDGING & DEWATERING PROJECT LAYOUT									
9	DEWATERING BASIN CONCEPTUAL DESIGN CROSS SECTION									
10	SITE PREPARATION CONCEPTUAL CROSS SECTION FOR GEOTEXTILE TUBE DEPLOYMENT									
11	DETAILS WHAT HAVE CONSTRUCTION OF THE PROPERTY									
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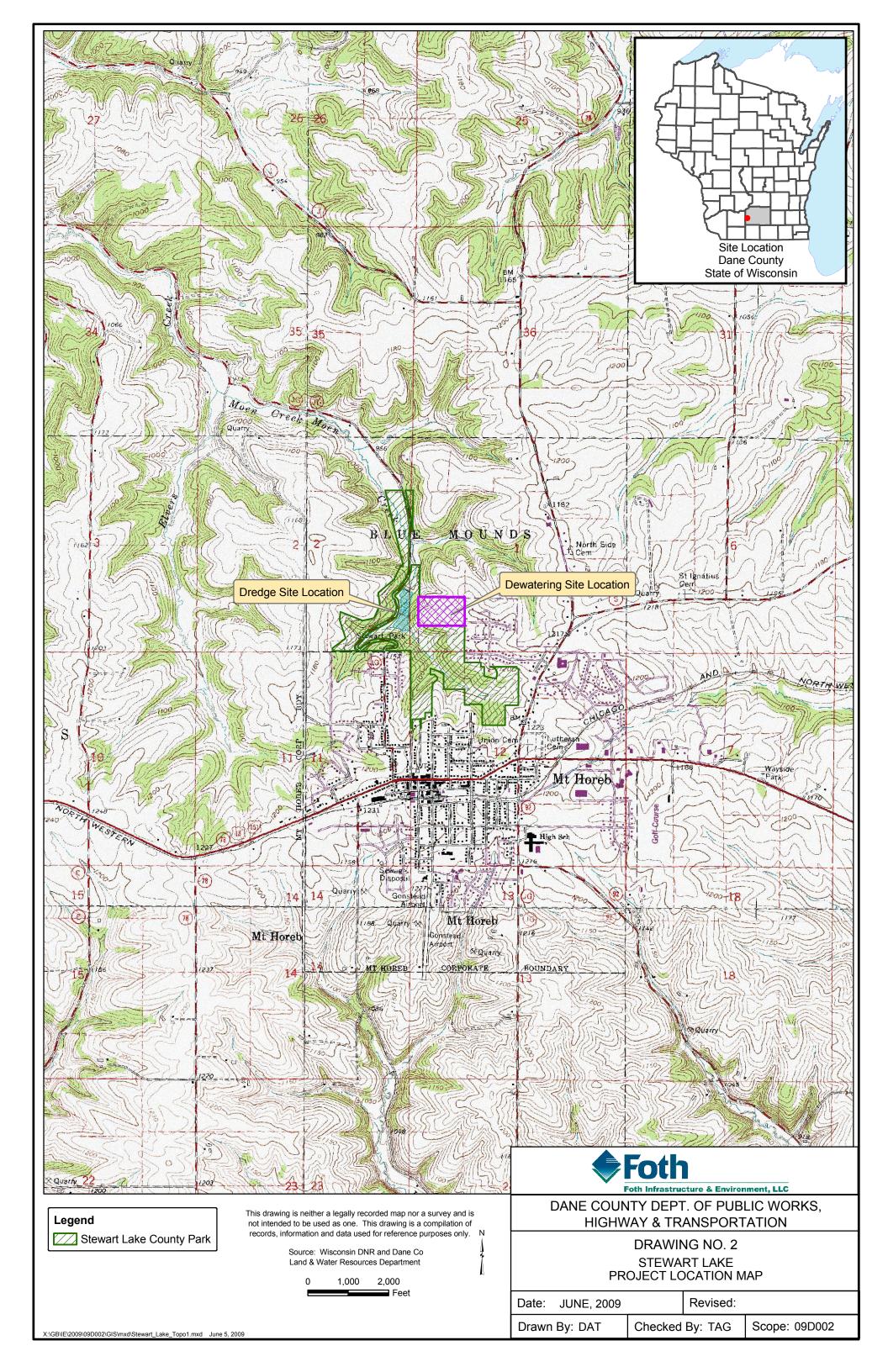
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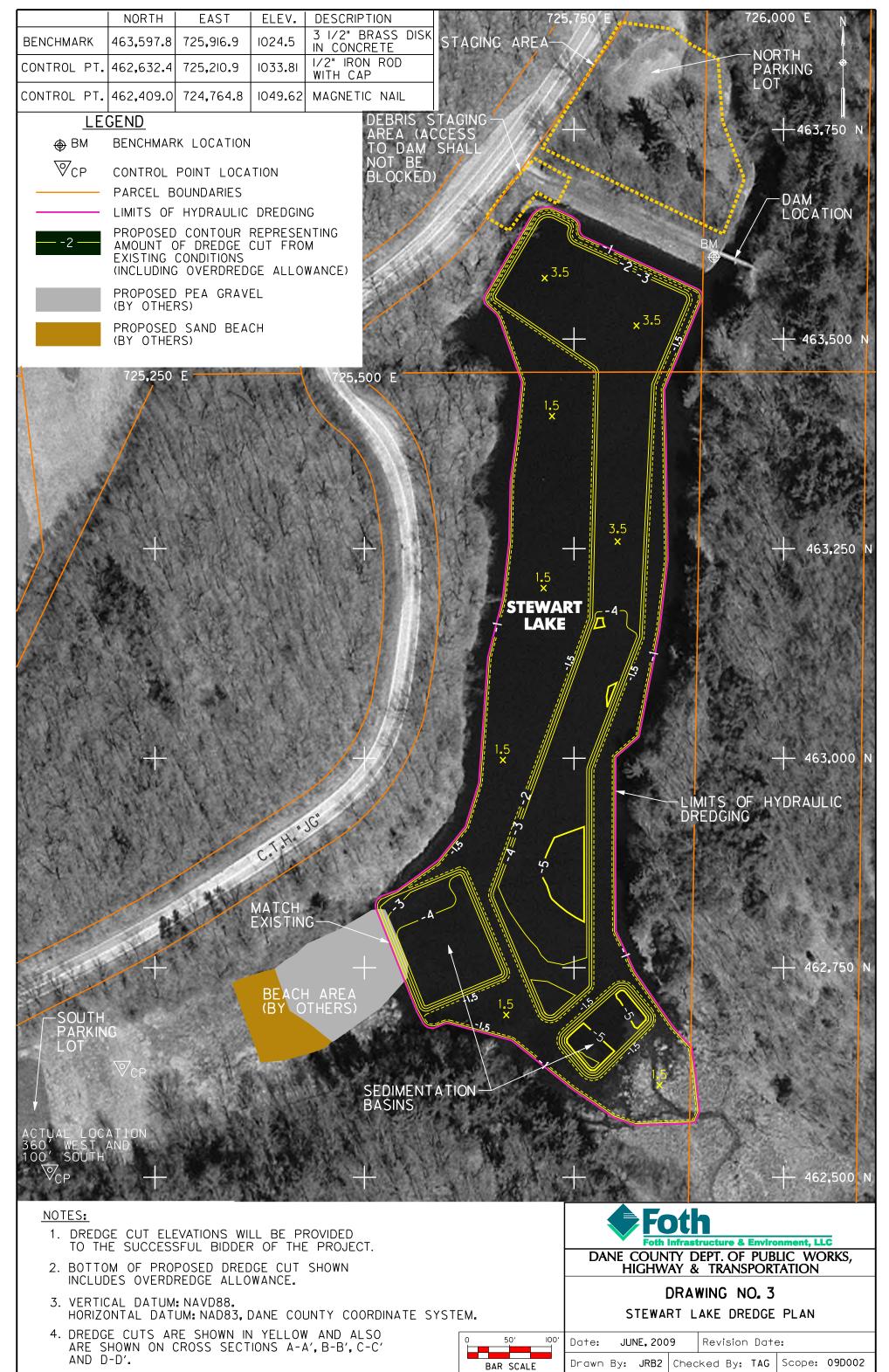
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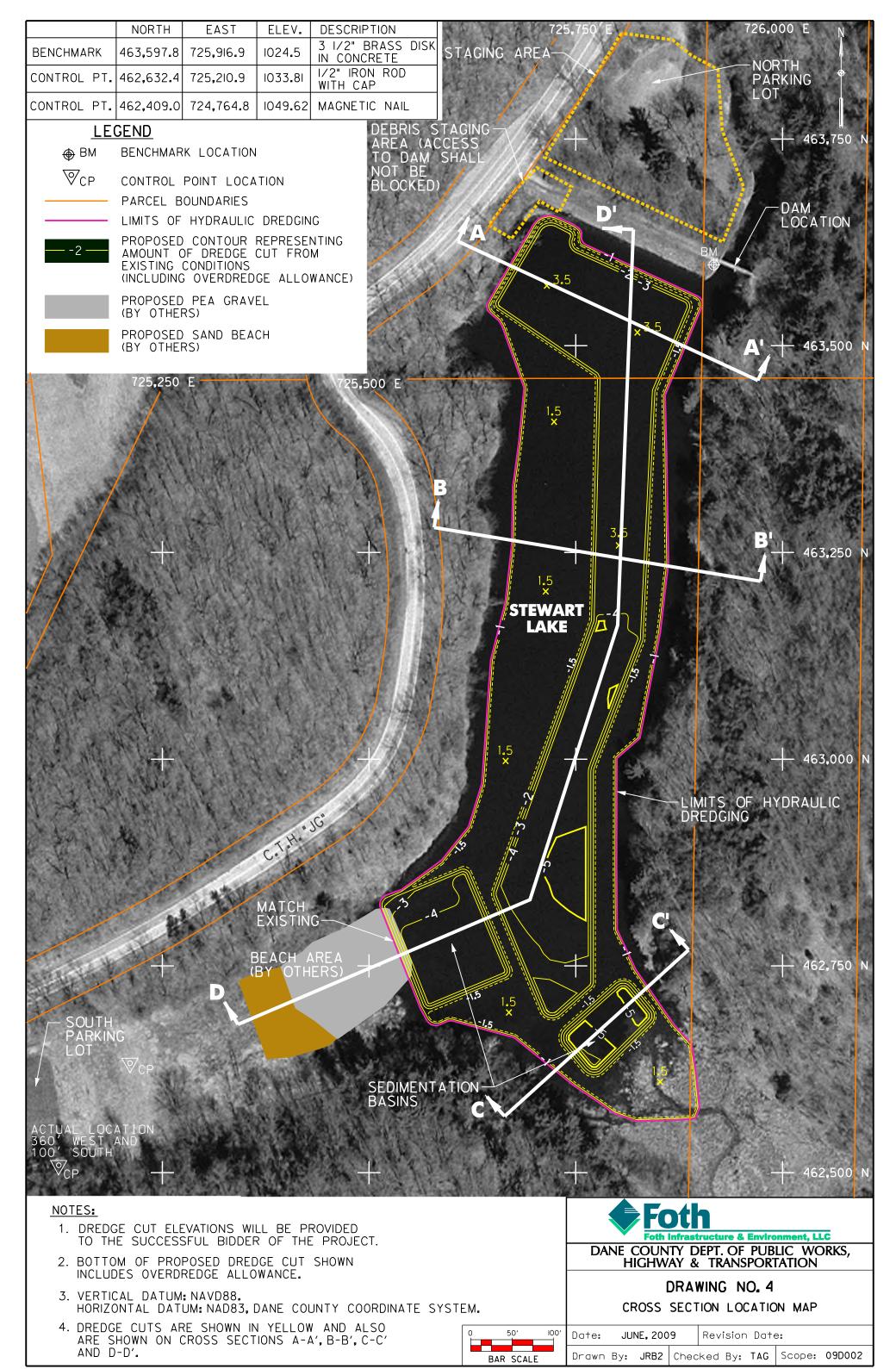
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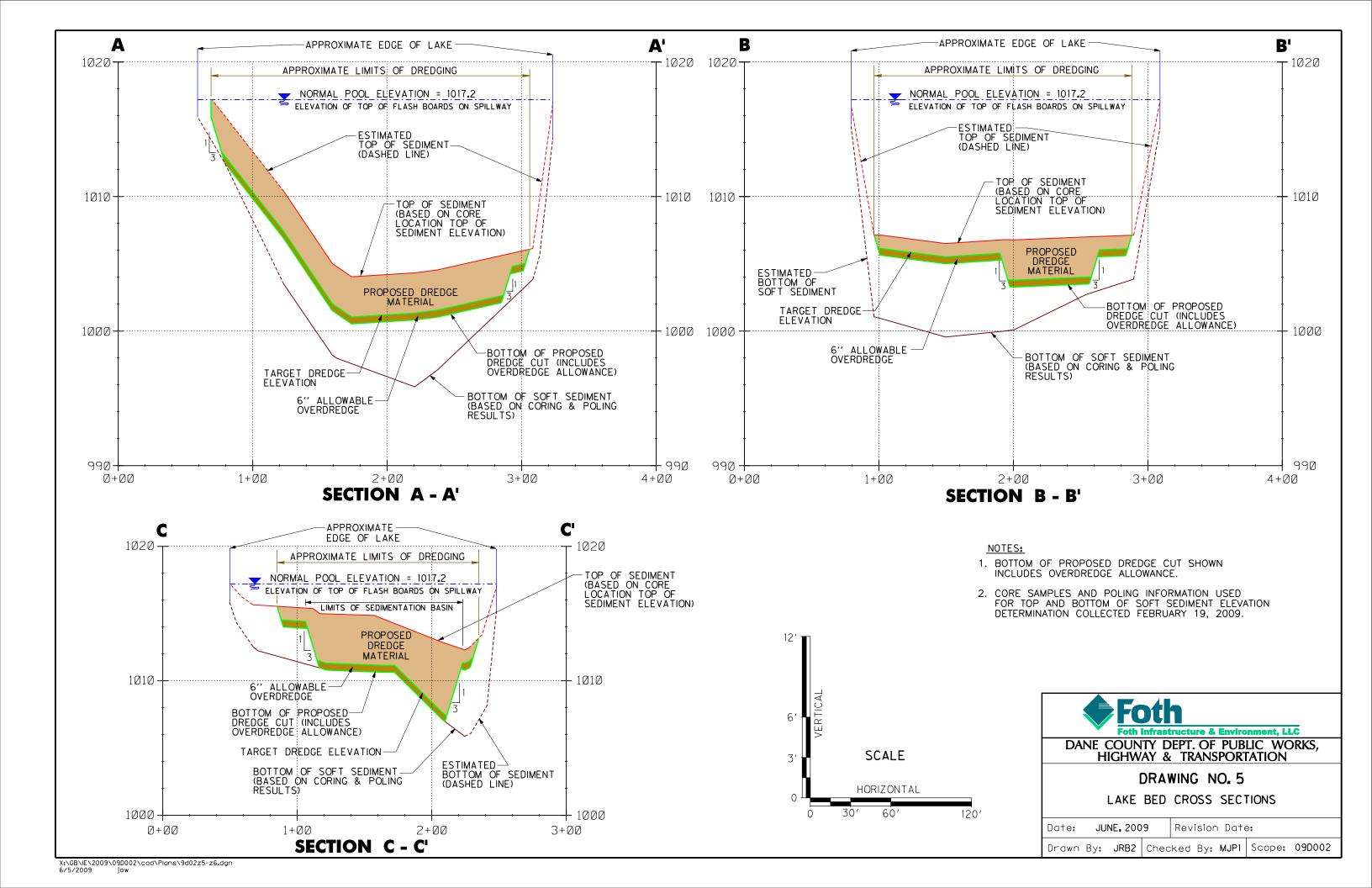
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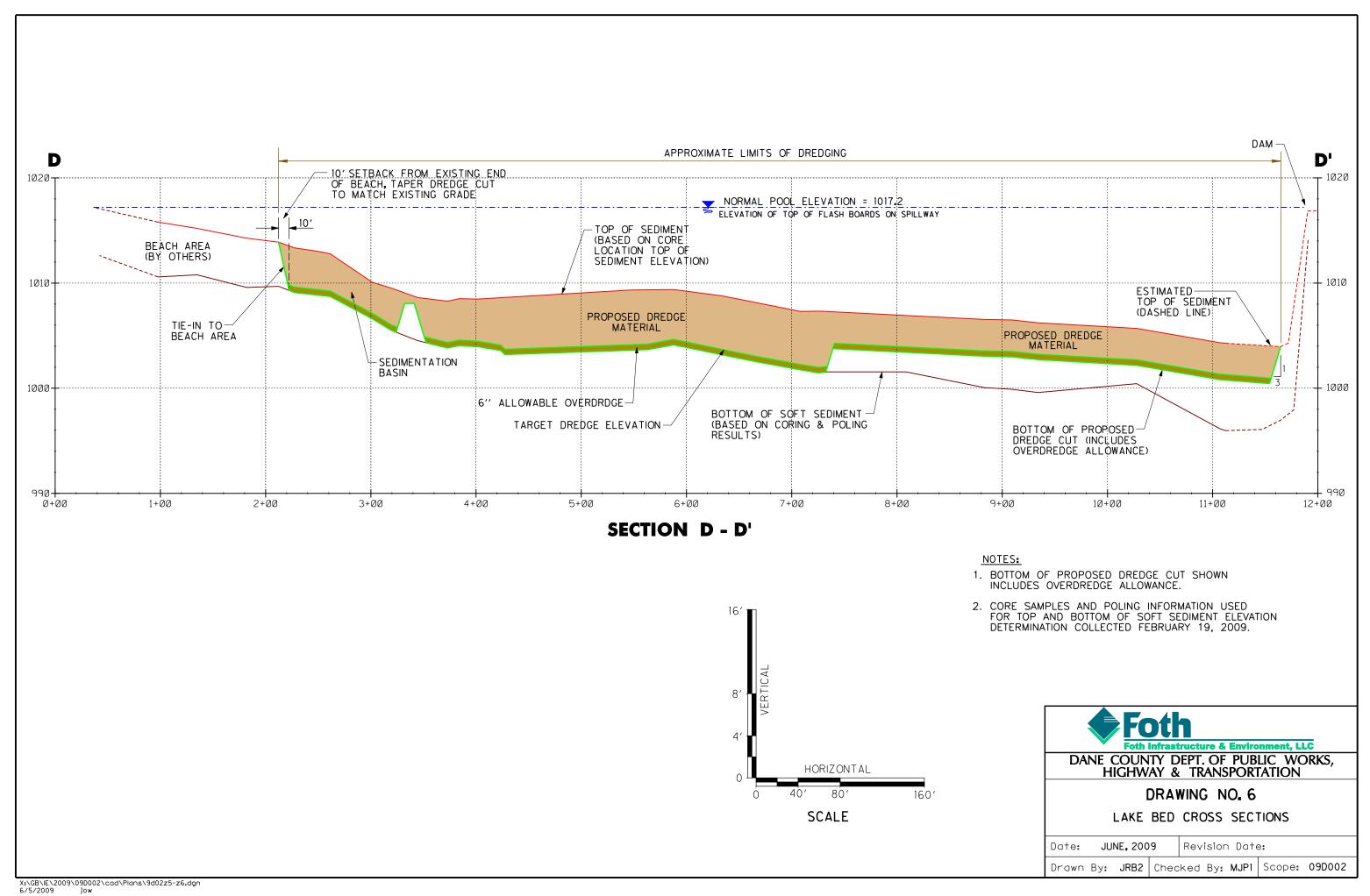
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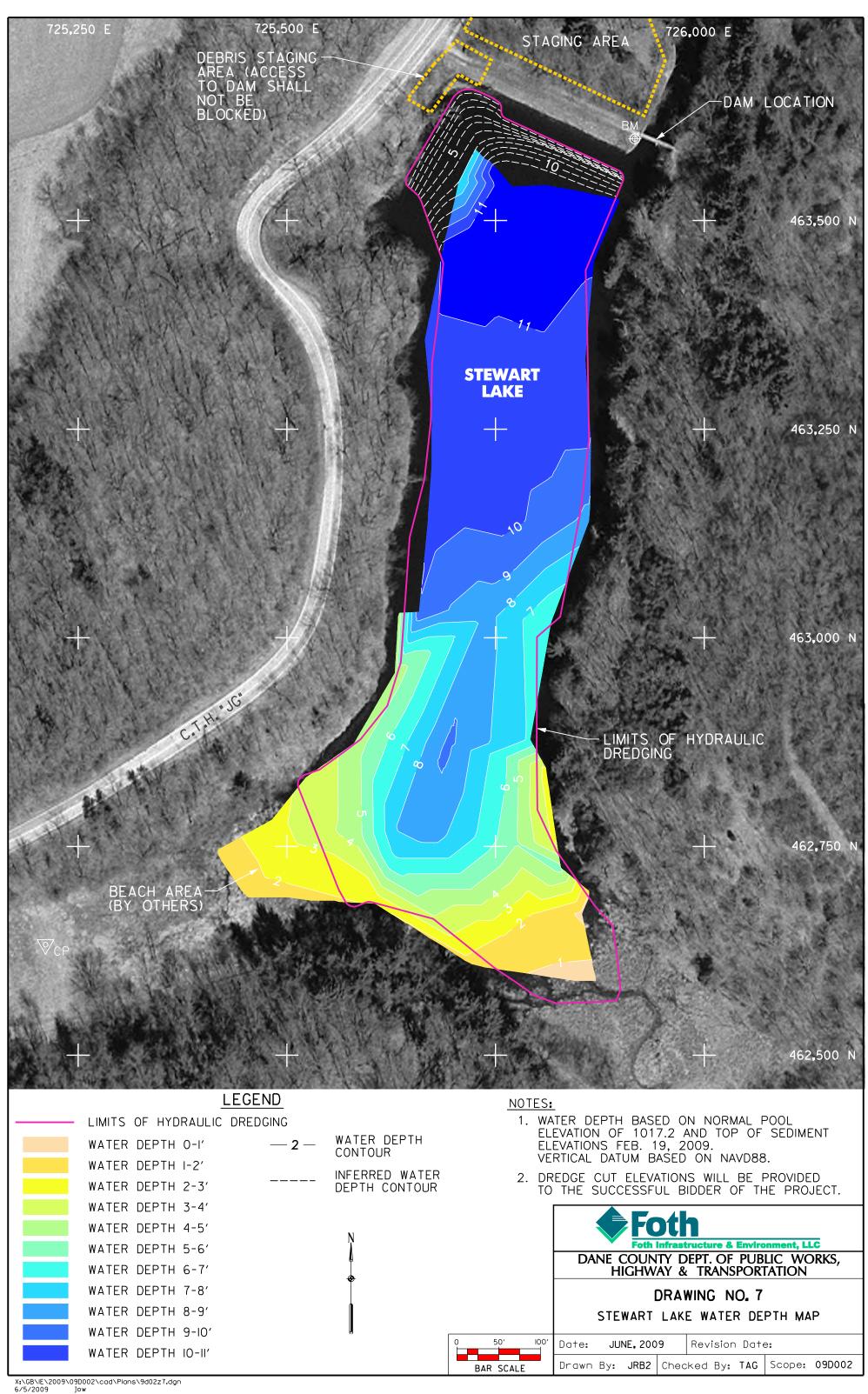


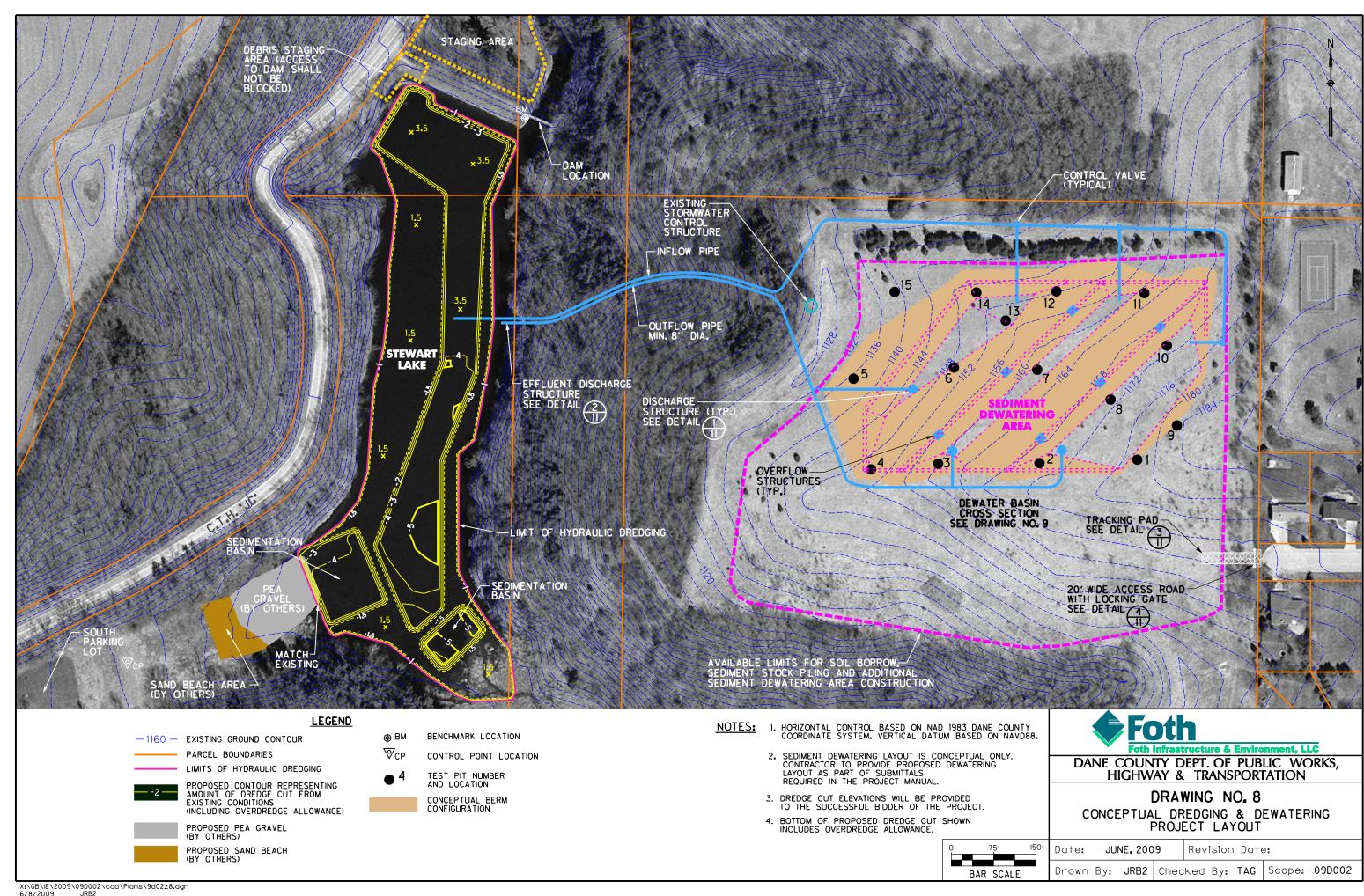


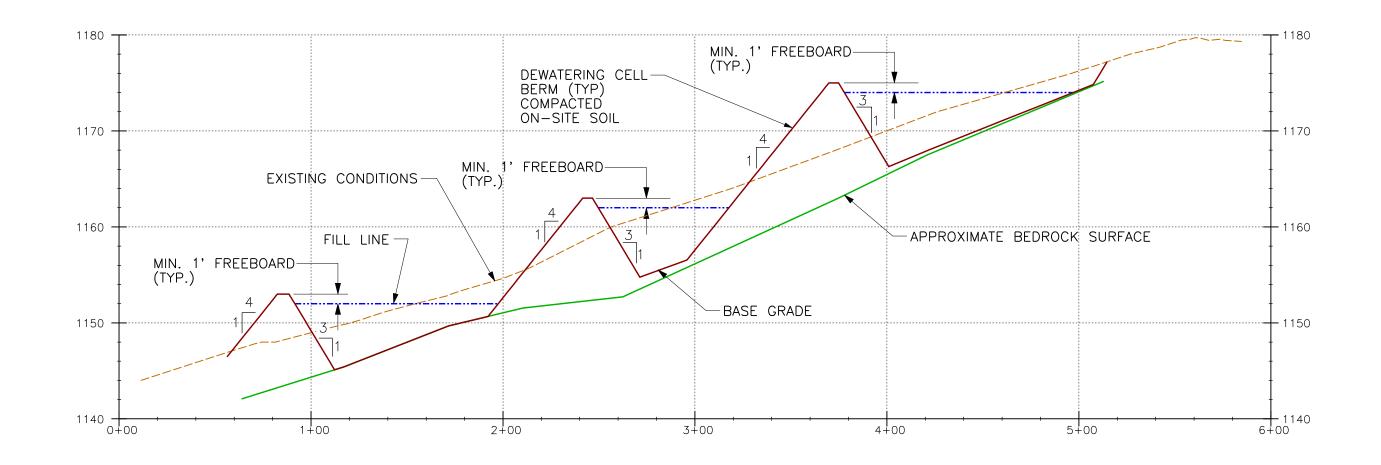






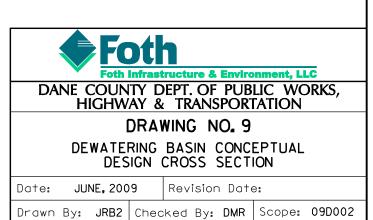


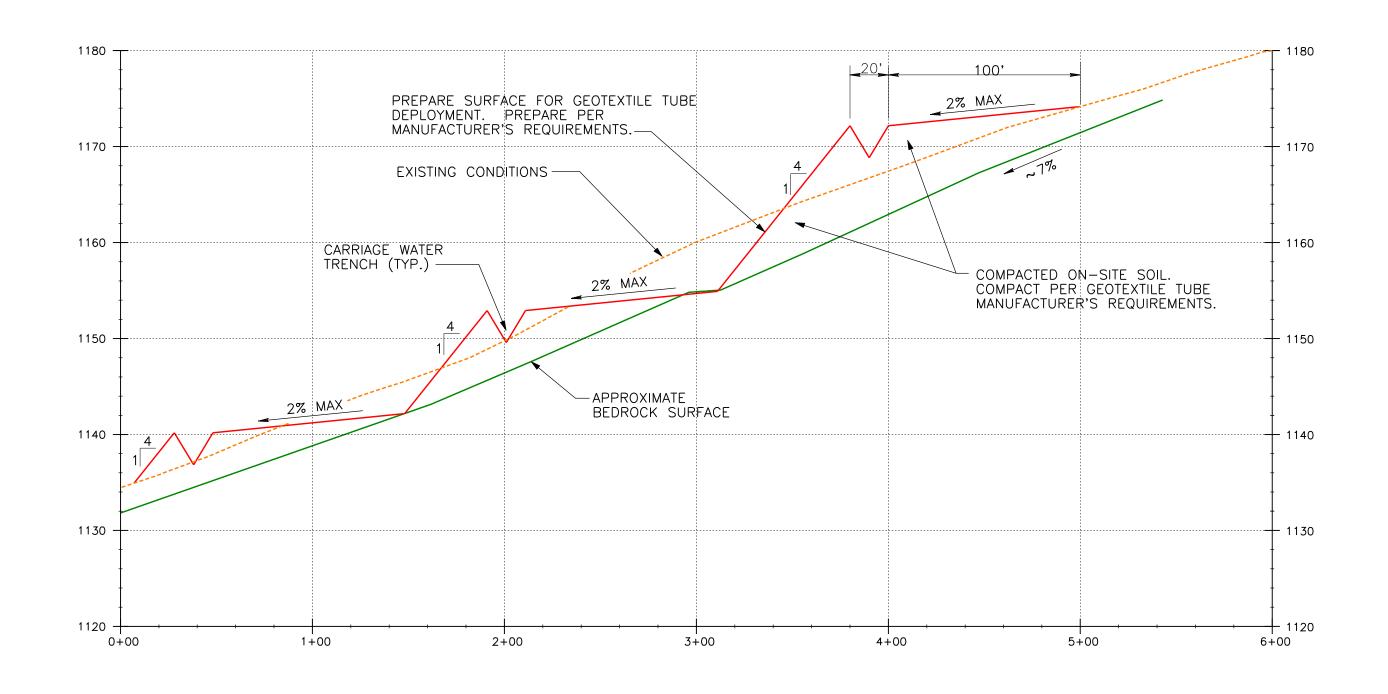




### NOTES:

- 1. DEWATERING BASIN TO PROVIDE A MINIMUM OF 1 FOOT OF FREEBOARD IN EACH CELL.
- 2. ACTUAL DEWATERING MEANS AND METHODS TO BE DETERMINED BY CONTRACTOR. MUST MEET PERMIT DISCHARGE STANDARDS.
- 3. STORAGE VOLUME OF DEWATERING BASIN AS SHOWN IS APPROXIMATELY 17,000 CUBIC YARDS. CONTRACTOR TO PROVIDE ADEQUATE STORAGE VOLUME AND SEDIMENT MANAGEMENT TO MEET SEDIMENT DEWATERING AND WPDES PERMIT REQUIREMENTS.
- 4. SLOPES ON DEWATERING CELL BERMS TO BE NO STEEPER THAN SHOWN.





### NOTES:

- 1. ACTUAL DEWATERING MEANS AND METHODS TO BE DETERMINED BY CONTRACTOR. MUST MEET PERMIT DISCHARGE STANDARDS.
- 2. SLOPES ON BERMS TO BE NO STEEPER THAN SHOWN.
- 3. 2% MAXIMUM LENGTH OF SLOPE TO BE MODIFIED TO MEET GEOTEXTILE TUBE MANUFACTURER'S REQUIREMENT.



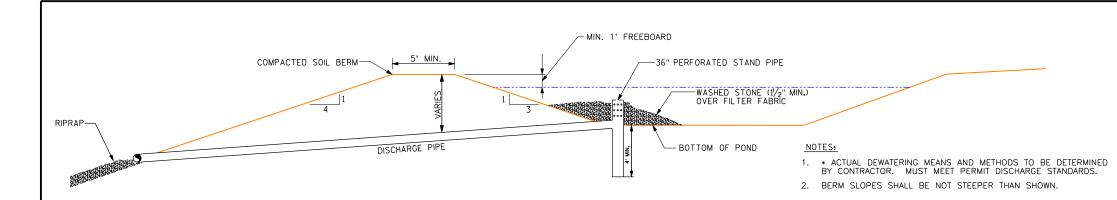
DRAWING NO. 10

SITE PREPARATION CONCEPTUAL CROSS SECTION FOR GEOTEXTILE TUBE DEPLOYMENT

Date: JUNE, 2009

Revision Date:

Drawn By: JRB2 | Checked By: DMR | Scope: 09D002



## TYPICAL DEWATERING BASIN DETAIL NOT TO SCALE

MIDPOINT OF WATER DEPTH

OUTFLOW DISCHARGE PIPE-

EFFLUENT DISCHARGE DETAIL

NOT TO SCALE

CONCRETE ANCHOR-

