

RFB NO. 317023



CONSTRUCTION DOCUMENTS PROJECT MANUAL

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,
HIGHWAY AND TRANSPORTATION

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

REQUEST FOR BIDS NO. 317023 LUSSIER COUNTY PARK BOAT LAUNCH LUSSIER COUNTY PARK 8587 SCHOEPP RD ROXBURY, WISCONSIN

Due Date / Time: **TUESDAY, JUNE 27, 2017 / 2:00 P.M.**

Location: **PUBLIC WORKS OFFICE**

Performance / Payment Bond: **100% OF CONTRACT AMOUNT**

Bid Deposit: **5% OF BID AMOUNT**

FOR INFORMATION ON THIS REQUEST FOR BIDS, PLEASE CONTACT:

RYAN SHORE, PROJECT MANAGER
TELEPHONE NO.: 608/266-4475
FAX NO.: 608/267-1533
E-MAIL: SHORE@COUNTYOFDANE.COM

TABLE OF CONTENTS FOR RFB NO. 317023

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

- Project Manual Cover Page
- Table of Contents
- Advertisement for Bids (Legal Notice)
- Best Value Contracting Application
- Instructions to Bidders
- Bid Form
- Fair Labor Practices Certification
- Sample Public Works Contract
- Sample Bid Bond
- Sample Performance Bond
- Sample Payment Bond
- Equal Benefits Compliance Payment Certification Form
- General Conditions of Contract
- Supplementary Conditions

DIVISION 01 - GENERAL REQUIREMENTS

- 01 00 00 – Basic Requirements
- 01 74 19 – Construction Waste Management, Disposal & Recycling

DIVISION 02 – DOCKS AND PIERS

- 02488 – Boarding Dock

DIVISION 20 - UTILITY AND STREET CONSTRUCTION

- 1 – Materials and Equipment
- 2 – Alignment and Grade
- 3 – Excavation and Preparation of Trench
- 4 – Pipe and Manhole Installation
- 5 – Backfilling
- 6 – Street Excavation, Grading and Base Course
- 7 – Concrete Curb and Gutter, Sidewalk, and Pavement
- 8 – Asphaltic Paving
- 9 – Restoration and Site Work
- 10 – Miscellaneous Requirements
- 11 – Measurement and Payment
- 12 – Special Provisions

VAULT TOILET BUILDING SPECIFICATIONS

DRAWINGS

Plot drawings on 11” x 17” (ANSI B) paper for correct scale or size.

- 1 – Title
- 2 – Standard Notes, Symbols, and Typical Sections
- 3 – Project Overview and Demolition Plan
- 4-5 – Boat Launch Details
- 6 – Boarding Dock Details
- 7 – Erosion Control Details

8-9 – Temporary Erosion Control Plan
10-11 – Site Grading Plan
12-13 – Permanent Erosion Control and Restoration Plan
14-15 – Bioretention Basin Layout and Details
16-21 – Plan and Profile
22-23 – Pavement Marking and Signage Plan
24-38 – Access Road – Cross Sections
39-40 – Launch Ramp – Cross Sections
41-43 – Parking Lot – Cross Sections
44-52 – Path – Cross Sections
53 – Huffcutt Bathroom Specifications

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., TUESDAY, JUNE 27, 2017

REQUEST FOR BIDS NO. 317023

LUSSIER COUNTY PARK BOAT LAUNCH

LUSSIER COUNTY PARK

8587 SCHOEPP RD

ROXBURY, WISCONSIN

Dane County is inviting Bids for construction services to build the Lussier County Park Boat Launch and associated designed features. Work will include roadway construction, boat ramp construction, and construction of stormwater management features. Only firms with capabilities, experience & expertise with similar projects should obtain this Request for Bids document & submit Bids.

Request for Bids document may be obtained after **2:00 p.m. on June 6, 2017** by downloading it from countyofdane.com/pwbids. Please call Ryan Shore, Project Manager, at 608/266-4475, or our office at 608/266-4018, for any questions or additional information.

All Bidders must be a registered vendor with Dane County & pay an annual registration fee & must be pre-qualified as a Best Value Contractor before award of Contract. Complete Vendor Registration Form at danepurchasing.com/Account/Login? or obtain one by calling 608/266-4131. Complete Pre-qualification Application for Contractors at countyofdane.com/pwht/BVC_Application.aspx or obtain one by calling 608/266-4029.

A pre-bid site tour will be held Thursday, June 15, 2017 at 1:00 p.m. at Lussier County Park, 8587 Schoepp Rd. Bidders are strongly encouraged to attend this tour.

PUBLISH: JUNE 6 & 13, 2017 - WISCONSIN STATE JOURNAL
JUNE 6 & 13, 2017 - THE DAILY REPORTER



DANE COUNTY DEPARTMENT of PUBLIC WORKS, HIGHWAY and TRANSPORTATION

County Executive
Joseph T. Parisi

1919 Alliant Energy Center Way ♦ Madison, Wisconsin 53713
Phone: (608) 266-4018 ♦ FAX: (608) 267-1533

Commissioner / Director
Gerald J. Mandli

BEST VALUE CONTRACTING APPLICATION

CONTRACTORS / LICENSURE APPLICANTS

The Dane County Department of Public Works requires all contractors to be pre-qualified as a best value contractor with the County prior to being awarded a contract. In addition, the County pre-qualifies potential contractors and sub-contractors who wish to work on County contracts. Subcontractors must become pre-qualified ten (10) days prior to commencing work under any Dane County Public Works Contract. Potential subcontractors are urged to become pre-qualified as early as possible. This document shall be completed, properly executed, along with the necessary attachments and additional information that the County requires for the protection and welfare of the public in the performance of a County contract.

Contractors or subcontractors of any tier who attain pre-qualification status will retain that status for a period of two (2) years from the date of qualification. Contractors shall notify the Dane County Department of Public Works, Highway & Transportation within fifteen (15) days of any changes to its business or operations that are relevant to the pre-qualification application. Failure to do so could result in suspension, revocation of the contractor's pre-qualification, debarment from County contracts for up to three (3) years and / or other sanctions available under the law.

No contracts will be awarded for construction work performed on Dane County projects unless the contractor is currently approved as a Wisconsin Trade Trainer or has applied for approval as an Apprenticeship Trade Trainer to the Wisconsin Department of Workforce Development and agrees to an acceptable apprenticeship program. If you are not currently approved as a Wisconsin Trade Trainer, or have not applied for approval as an Apprenticeship Trade Trainer, please contact the Department of Workforce Development - Bureau of Apprenticeship Standards at 608/266-3133 or visit their web site at: dwd.wisconsin.gov/apprenticeship/.

EXEMPTIONS

- Contractors who employ less than five (5) apprenticeable trade workers are not required to pre-qualify.
- Contractors performing work that does not apply to an apprenticeable trade, as outlined in Appendix A.
- The contractor / subcontractor provides sufficient documentation to demonstrate one or more of the following:
 - apprentices are not available in a specific geographic area;
 - the applicable apprenticeship program is unsuitable or unavailable; or
 - there is a documented depression of the local construction market which prevents compliance.

SEC.	PROOF OF RESPONSIBILITY	CHECK IF APPLICABLE
1	Does your firm possess all technical qualifications and resources, including equipment, personnel and financial resources, necessary to perform the work required for any project or obtain the same through the use of responsible, pre-qualified subcontractors?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
2	Will your firm possess all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, which are necessary for the type of work to be performed including, but not limited to, those for any type of trade work or specialty work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
3	Will your firm meet all bonding requirements as required by applicable law or contract specifications?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
4	Will your firm meet all insurance requirements as required by applicable law or specifications, including general liability insurance, workers compensation insurance and unemployment insurance requirements?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
5	Will your firm maintain a substance abuse policy for employees hired for public works contracts that comply with Wis. Stats. Sec. 103.503?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
6	Does your firm acknowledge that it must pay all craft employees on public works projects the wage rates and benefits required under Section 66.0903 of the Wisconsin Statutes?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
7	Will your firm fully abide by the equal opportunity and affirmative action requirements of all applicable laws, including County ordinances?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
8	In the past three (3) years, has your firm had control or has another corporation, partnership or other business entity operating in the construction industry controlled it? If so, please attach a statement explaining the nature of the firm relationship?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
9	In the past three (3) years, has your firm had any type of business, contracting or trade license, certification or registration revoked or suspended?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
10	In the past three (3) years, has your firm been debarred by any federal, state or local government agency?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
11	In the past three (3) years, has your firm defaulted or failed to complete any contract?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
12	In the past three (3) years, has your firm committed a willful violation of federal, state or local government safety laws as determined by a final decision of a court or government agency authority.	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
13	In the past three (3) years, has your firm been in violation of any law relating to your contracting business where the penalty for such violation resulted in the imposition of a penalty greater than \$10,000?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
14	Is your firm Executive Order 108 precertified with the State of Wisconsin?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
15	Is your firm an active Wisconsin Trade Trainer as determined by the Wisconsin Bureau of Apprenticeship Standards?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
16	Is your firm exempt from being pre-qualified with Dane County?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach reason for exemption.
17	Does your firm acknowledge that in doing work under any County Public Works Contract, it will be required to use as subcontractors only those contractors that are also pre-qualified with the County or become so ten days prior to commencing work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
18	Contractor has been in business less than one year?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
19	Is your firm a first time Contractor requesting a one time exemption, but, intend to comply on all future contracts and are taking steps typical of a "good faith" effort?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
20	Not applicable. My firm does not intend to work on Best Value Contracts. Note: Best Value Contracting is required to bid on most Public Works Contracts (if unclear, please call Jan Neitzel Knox 608-266-4029).	Yes: <input type="checkbox"/> No: <input type="checkbox"/>

SIGNATURE SECTION

Your firm's Officer, or the individual who would sign a bid and / or contract documents must sign this document.

I do hereby certify that all statements herein contained are true and correct to the best of my knowledge:

Signature

Date

Printed or Typed Name and Title

NAME AND ADDRESS OF CONTRACTOR	
Name of Firm:	
Address:	
City, State, Zip:	
Telephone Number:	
Fax Number:	
E-mail Address:	

REMEMBER!

Return all to forms and attachments, or questions to:

JAN NEITZEL KNOX
EMAIL: NEITZEL-KNOX@COUNTYOFDANE.COM
OFFICE: (608)266-4029, FAX: (608)267-1533

**DANE COUNTY DEPARTMENT OF PUBLIC WORKS,
HIGHWAY & TRANSPORTATION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713**

APPENDIX A

APPRENTICEABLE TRADES

Bricklayer
Carpenter
Cement Mason (Concrete Finisher)
Cement Mason (Heavy Highway)
Construction Craft Laborer
Data Communications Installer
Electrician
Elevator Mechanic / Technician
Environmental Systems Technician / HVAC Service Technician / HVAC Install & Service
Glazier
Heavy Equipment Operator / Operating Engineer
Insulation Worker (Heat & Frost)
Iron Worker (Assembler, Metal Buildings)
Painter / Decorator
Plasterer
Plumber
Roofer / Waterproofer
Sheet Metal Worker
Sprinkler Fitter
Steamfitter (Service & Refrigeration)
Taper & Finisher
Telecommunications (Voice, Data & Video) Installer / Technician
Tile Setter

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

1. GENERAL.....	1
2. DRAWINGS AND SPECIFICATIONS	1
3. INTERPRETATION	2
4. QUALIFICATIONS OF BIDDER (CONTRACTOR AND SUBCONTRACTOR)....	2
5. BID GUARANTEE	3
6. WITHDRAWAL OF BIDS.....	3
7. CONTRACT FORM.....	3
8. CONTRACT INTERESTS BY COUNTY PUBLIC OFFICIALS	3
9. EMERGING SMALL BUSINESS PROVISIONS	4
10. METHOD OF AWARD - RESERVATIONS	6
11. SECURITY FOR PERFORMANCE AND PAYMENTS	6
12. TAXES.....	6
13. SUBMISSION OF BIDS	7
14. SUBCONTRACTOR LISTING.....	7
15. ALTERNATE BIDS	7
16. INFORMATIONAL BIDS	8
17. UNIT PRICES.....	8
18. COMMENCEMENT AND COMPLETION	8
19. WORK BY OWNER	8
20. SPECIAL HAZARDS COVERAGE.....	8
FORM A	9
FORM B.....	10
FORM C.....	11
FORM D	12

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, at 1 p.m. at Lussier County Park, 8587 Schoepp Rd.. Attendance by all bidders is optional, however bidders and subcontractors are strongly encouraged to attend.
- D. 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 Contract, are enumerated in Document Index of these Construction Documents.

- B. Complete sets of Drawings and Specifications for all trades will be available 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.

3. INTERPRETATION

- A. No verbal explanation or instructions will be given in regard to meaning of Drawings or Specifications before Bid Due Date. Bidders shall bring inadequacies, omissions or conflicts to Owner or Architect / Engineer's attention at least ten (10) calendar days before Bid Due Date. 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 Architect / 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 no more than three (3) 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 with Bid. 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) business 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 Due Date.
- 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 (3) lowest qualified, responsible bidders, will be returned to their makers within three (3) business days after Bid Due Date. 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 Due Date, 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) calendar days after Bid Due 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 Due Date.

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 \$15,000.00 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 twenty-five (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 ten (10) business days of Bid Due Date 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 ten (10) business days after Bid Due Date. Bidder who fails to submit Emerging Small Business Report shall be deemed not responsive.
- D. **ESB Goal.** Goal of this project is ten percent (10%) ESB participation. 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 may solicit bids from this ESB listing: pdf.countyofdane.com/commissions/2013-2015_Targeted_Business_Directory.pdf.
- G. **ESB Certification.** All contractors, subcontractors and suppliers seeking ESB certification must complete and submit Emerging Small Business Report 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.
4. Following up on initial solicitations of interest by contacting ESBs within five (5) business days prior to Bid Due 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 Due Date.

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 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. Wisconsin Statute 77.54 (9m) allows building materials that become part of local unit government facilities to be exempt from sales & use tax. Vendors & materials suppliers may not charge Bidders sales & use tax on these purchases. This does not include highways, streets or roads. Any other Sales, Consumer, Use & other similar taxes or fees required by law shall be included in Bid.
- 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 may 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 due time to place designated in Invitation to Bid, and identified with project name, bid number, location, category of work being bid upon, Bid Due Date, name and address of bidder.
- G. Bidder shall be responsible for sealed Bid being delivered to place designated for Bid Due Date 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 or emailed 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 for General Construction, Plumbing, HVAC, and Electrical work proposed for this project to include committed prices for each subcontractor. List shall be placed in separate sealed envelope that must be clearly identified as "Major Subcontractor List", for named project and name of Bidder submitting it. County must receive envelope no later than date by which successful Bidder is required to submit his or her signed Contract, as established in Construction Documents.

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. Not Applicable

17. UNIT PRICES

A. Not Applicable

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 within time stated in Bid.

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".

19. WORK BY OWNER

A. Not Applicable.

20. SPECIAL HAZARDS COVERAGE

A. Not Applicable.

FORM A

**DANE COUNTY
EMERGING SMALL BUSINESS REPORT - CERTIFICATION**

In accordance with General Conditions of Contract, submit this Emerging Small Business Report within ten (10) days after Bid Due Date.

PROJECT NAME: _____

BID NO.: _____ BID DUE DATE: _____

BIDDER INFORMATION

COMPANY NAME: _____

ADDRESS: _____

TELEPHONE NO.: _____

CONTACT PERSON: _____

EMAIL ADDRESS: _____

FORM B

Page ___ of ___

DANE COUNTY

(Copy this Form as necessary to provide complete information)

EMERGING SMALL BUSINESS REPORT - INVOLVEMENT

COMPANY NAME: _____

PROJECT NAME: _____

BID NO.: _____ BID DUE DATE: _____

ESB NAME: _____

CONTACT PERSON: _____

ADDRESS: _____

PHONE NO & EMAIL.: _____

Indicate percentage of financial commitment to this ESB: _____ % Amount: \$ _____

ESB NAME: _____

CONTACT PERSON: _____

ADDRESS: _____

PHONE NO & EMAIL.: _____

Indicate percentage of financial commitment to this ESB: _____ % Amount: \$ _____

FORM C

Page ___ of ___

**DANE COUNTY
EMERGING SMALL BUSINESS REPORT - CONTACTS**

(Copy this Form as necessary to provide complete information)

COMPANY NAME: _____

PROJECT NAME: _____

BID NO.: _____ BID DUE DATE: _____

	<u>ESB FIRM NAME CONTACTED</u>	<u>DATE</u>	<u>PERSON CONTACTED</u>	<u>DID ESB BID?</u>	<u>ACC- EPT BID?</u>	<u>REASON FOR REJECTION</u>
1)	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____
3)	_____	_____	_____	_____	_____	_____
4)	_____	_____	_____	_____	_____	_____
5)	_____	_____	_____	_____	_____	_____
6)	_____	_____	_____	_____	_____	_____
7)	_____	_____	_____	_____	_____	_____
8)	_____	_____	_____	_____	_____	_____

FORM D

**DANE COUNTY
EMERGING SMALL BUSINESS REPORT - CERTIFICATION STATEMENT**

I, _____, _____ of
Name Title

_____ certify to best of my knowledge and
Company

belief that this business meets Emerging Small Business definition as indicated in Article 9 and
that information contained in this Emerging Small Business Report is true and correct.

Bidder's Signature

Date

Name of Bidding Firm: _____

BID FORM

BID NO. 317023

**PROJECT: LUSSIER COUNTY PARK BOAT LAUNCH
LUSSIER COUNTY PARK**

**TO: DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY &
TRANSPORTATION PROJECT MANAGER
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN 53713**

**NOTE: WISCONSIN STATUTE 77.54 (9M) ALLOWS FOR NO SALES & USE TAX ON
THE PURCHASE OF MATERIALS FOR COUNTY PUBLIC WORKS PROJECTS.**

BASE BID - LUMP SUM:

Dane County is inviting Bids for construction services to build the Lussier County Park Boat Launch and associated designed features. Work will include roadway construction, boat ramp construction, vault toilet construction, and construction of stormwater features. 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 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 stipulated sum of:

_____ and _____ /100 Dollars
Written Price

\$ _____
Numeric Price

ALTERNATE BID 1 - LUMP SUM:

Deduct price for vault toilet. Omit vault toilet structure construction from project scope.

_____ and _____ /100 Dollars
Written Price

\$ _____
Numeric Price (circle: Add or Deduct)

Dane County Parks must have this project completed by June 3, 2018. Assuming this Work can be started by August 28, 2017, what dates can you commence and complete this job?

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

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

(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 Bids Due Date to another bidder or competitor; that the above statement is accurate under penalty of perjury.

The undersigned further agrees to honor the Base Bid and the Alternate Bid(s) for sixty (60) calendar days from date of Award of Contract.

SIGNATURE: _____
(Bid is invalid without signature)

Print Name: _____ Date: _____

Title: _____

Address: _____

Telephone No.: _____ Fax No.: _____

Email Address: _____

Contact Person: _____

THIS PAGE IS FOR BIDDERS' REFERENCE AND NEED NOT BE SUBMITTED WITH BID FORM.

BID CHECK LIST:

These items **must** be included with Bid:

- | | | |
|---|-----------------------------------|---|
| <input type="checkbox"/> Bid Form | <input type="checkbox"/> Bid Bond | <input type="checkbox"/> Fair Labor Practices Certification |
| <input type="checkbox"/> Project Experience / Reference Summary | | <input type="checkbox"/> Waste Management Plan |

BIDDERS SHOULD BE AWARE OF THE FOLLOWING:

DANE COUNTY VENDOR REGISTRATION PROGRAM

Any person bidding on any County contract must be registered with the Dane County Purchasing Division & pay an annual registration fee. A contract will not be awarded to an unregistered vendor. Obtain a *Vendor Registration Form* by calling 608/266-4131 or complete a new form or renewal online at:

www.danepurchasing.com/registration

DANE COUNTY BEST VALUE CONTRACTING PRE-QUALIFICATION

Contractors must be pre-qualified as a Best Value Contractor with the Dane County Public Works Engineering Division before the award of contract. Obtain a *Best Value Contracting Application* by calling 608/266-4018 or complete one online at:

www.countyofdane.com/pwht/BVC_Application.aspx

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. Equal Benefits Compliance Payment Certification shall be submitted with final pay request. For more information:

www.danepurchasing.com/partner_benefit.aspx

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, APPLICANT or PROPOSER, which has a submitted a bid, application or proposal for a contract or agreement with the county of Dane.
- B. That BIDDER, APPLICANT or PROPOSER has (check one):

_____ not been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

_____ been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

Officer or Authorized Agent Signature Date

Printed or Typed Name and Title

Printed or Typed Business Name

NOTE: You can find information regarding the violations described above at: www.nlrb.gov and werc.wi.gov.

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

Include this completed Certification with your bid, application or proposal.

COUNTY OF DANE

PUBLIC WORKS CONSTRUCTION CONTRACT

Contract No. _____ Bid No. 317023

Authority: 2017 RES - _____

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 Assistant Public Works Director, 1919 Alliant Energy Center Way, Madison, WI 53713, desires to have CONTRACTOR provide construction services for the Lussier County Park Boat Launch, including Alternate Bid 1, ("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 and 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 Strand Associates Inc. (hereinafter referred to as "the Architect / Engineer"), and as enumerated in the Project Manual Table of Contents, all of which are made a part hereof and collectively evidence and constitute the Contract.

2. 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, and to make payments on account thereof as provided in Article entitled, "Payments to Contractor" of the General Conditions of Contract.

3. During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure equal employment opportunities. The CONTRACTOR agrees in accordance with Wisconsin 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) business 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.

11. CONTRACTOR must be pre-qualified as a Best Value Contractor with Dane County Public Works Engineering Division before award of Contract. Subcontractors must be pre-qualified ten (10) business days prior to commencing Work under this Contract.

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

Printed or Typed Name and Title

NOTE: If CONTRACTOR is a corporation, Secretary should attest. In accordance with IRS Regulations, unincorporated entities are required to provide either their Social Security or Employer Number in order to receive payment for services rendered.

* * * * *

This Contract is not valid or effectual for any purpose until approved by the appropriate authority designated below, and no work is authorized until the CONTRACTOR has been given notice to proceed by COUNTY'S Assistant Public Works Director.

FOR COUNTY:

Joseph T. Parisi, County Executive Date

Scott McDonell, County Clerk Date

AIA[®] Document A310[™] – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

BOND AMOUNT:**PROJECT:**

(Name, location or address, and Project number, if any)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, 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. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this _____ day of _____

_____	(Contractor as Principal)	(Seal)
(Witness)	_____	(Title)
_____	(Surety)	(Seal)
(Witness)	_____	(Title)

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

AIA[®] Document A312[™] – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

CONSTRUCTION CONTRACT

Date:

Amount:

Description:

(Name and location)

BOND

Date:

(Not earlier than Construction Contract Date)

Amount:

Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name _____
and Title: _____

Signature: _____

Name _____
and Title: _____

(Any additional signatures appear on the last page of this Performance Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

§ 1 The Contractor and 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 when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. 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;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 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 a 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 Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right 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, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven 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 Section 5.4, and the Owner refuses the payment 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.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, 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. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .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 Section 5; and
- .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.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 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, successors and assigns.

§ 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 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 a declaration of 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.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 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. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 **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.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

Sample

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

CONTRACTOR AS PRINCIPAL

SURETY

Company: _____

(Corporate Seal)

Company: _____

(Corporate Seal)

Signature: _____

Name and Title: _____

Address _____

Signature: _____

Name and Title: _____

Address _____

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.



AIA® Document A312™ – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

CONSTRUCTION CONTRACT

Date:

Amount:

Description:

(Name and location)

BOND

Date:

(Not earlier than Construction Contract Date)

Amount:

Modifications to this Bond: None See Section 18

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name _____
and Title: _____

Signature: _____

Name _____
and Title: _____

(Any additional signatures appear on the last page of this Payment Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:**OWNER'S REPRESENTATIVE:**

(Architect, Engineer or other party:)

§ 1 The Contractor and 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, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 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 Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 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 the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 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.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, 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.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 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. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 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 Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. 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.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

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

CONTRACTOR AS PRINCIPAL

Company: _____

(Corporate Seal)

SURETY

Company: _____

(Corporate Seal)

Signature: _____

Name and Title: _____

Address _____

Signature: _____

Name and Title: _____

Address _____

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

EQUAL BENEFITS COMPLIANCE PAYMENT CERTIFICATION FORM

PURPOSE

25.016(8) of the Dane County Ordinance requires that each contractor receiving payment for contracted services must certify that he or she has complied fully with the requirements of Chapter 25.016 "Equal Benefits Requirement" of the Dane County Ordinances. Such certification must be submitted prior to the final payment on the contract.

This form should be included with a copy of the final contract invoice forwarded to your contract representative at Dane County.

CERTIFICATION

I, _____ certify that
Printed or Typed Name and Title

Printed or Typed Name of Contractor

has complied fully with the requirements of Chapter 25.016 of the Dane County Ordinances "Equal Benefits Requirements".

Signed _____

Date _____

For questions on this form, please contact Chuck Hicklin at 608-266-4109 or your contract representative at Dane County.

GENERAL CONDITIONS OF CONTRACT

TABLE OF CONTENTS

1. CONSTRUCTION DOCUMENTS	2
2. DEFINITIONS	2
3. ADDITIONAL INSTRUCTIONS AND DRAWINGS	2
4. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES	3
5. CUTTING AND PATCHING.....	4
6. CLEANING UP	4
7. USE OF SITE.....	4
8. MATERIALS AND WORKMANSHIP	5
9. CONTRACTOR'S TITLE TO MATERIALS	5
10. "OR EQUAL" CLAUSE.....	5
11. PATENTS AND ROYALTIES.....	6
12. SURVEYS, PERMITS, REGULATIONS AND TAXES.....	7
13. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE.....	7
14. WEATHER CONDITIONS	8
15. PROTECTION OF WORK AND PROPERTY	8
16. INSPECTION AND TESTING OF MATERIALS	8
17. REPORTS, RECORDS AND DATA	9
18. CHANGES IN THE WORK.....	9
19. EXTRAS	10
20. TIME FOR COMPLETION.....	10
21. CORRECTION OF WORK.....	10
22. SUBSURFACE CONDITIONS FOUND DIFFERENT	11
23. RIGHT OF DEPARTMENT TO TERMINATE CONTRACT	11
24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES	11
25. PAYMENTS TO CONTRACTOR	12
26. WITHHOLDING OF PAYMENTS.....	13
27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE	14
28. PAYMENTS BY CONTRACTOR.....	14
29. CONTRACT SECURITY	14
30. ASSIGNMENTS.....	15
31. MUTUAL RESPONSIBILITY OF CONTRACTORS	15
32. SEPARATE CONTRACTS	15
33. SUBCONTRACTS	15
34. PUBLIC WORKS PROJECT MANAGER'S AUTHORITY	16
35. ARCHITECT / ENGINEER'S AUTHORITY	16
36. STATED ALLOWANCES	17
37. ESTIMATES OF QUANTITIES	17
38. LANDS AND RIGHTS-OF-WAY	17
39. GENERAL GUARANTEE.....	17
40. CONFLICTING CONDITIONS	18
41. NOTICE AND SERVICE THEREOF	18
42. PROTECTION OF LIVES AND HEALTH	18
43. AFFIRMATIVE ACTION PROVISION AND MINORITY / WOMEN / DISADVANTAGED BUSINESS ENTERPRISES	18
44. COMPLIANCE WITH FAIR LABOR STANDARDS	19
45. DOMESTIC PARTNERSHIP BENEFITS	19
46. USE AND OCCUPANCY PRIOR TO ACCEPTANCE	20
47. MINIMUM WAGES	20
48. CLAIMS	21
49. ANTITRUST AGREEMENT	21
50. INSURANCE.....	21
51. WISCONSIN LAW CONTROLLING	23

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 Manager 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 Manager is appointed by and responsible to Department. Public Works Project Manager 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 Manager 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.

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 omissions 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.

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, 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 Manager.
- 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 Manager 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 is 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 Manager's instructions require any work to be specially tested or approved, Contractor shall give Architect / Engineer and Public Works Project Manager 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 Manager 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 Manager 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 Manager 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 Manager'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) business 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 Manager 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) business 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) business 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) business 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 Manager.
- 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:

1. 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 labor 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 Manager.
- 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 Manager.

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.
- B. Submit these estimates for approval first to Architect / Engineer, then to Public Works Project Manager. 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.
- C. 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.
- D. Contractor shall submit for approval first to Architect / Engineer, and then to Public Works Project Manager 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.

- E. 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) business days from receipt of payment.
- F. Payments by County will be due within forty-five (45) business days after receipt by Department of Application and Certificate for Payment.
- G. 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 Manager find that progress of the Work corresponds with Construction Schedule. If Architect / Engineer and Public Works Project Manager 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.
- H. 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.
- I. County will make final payment within sixty (60) calendar days after final completion of the Work, and will constitute acceptance thereof. Submit Equal Benefits Compliance Payment Certification with final pay request. Payment may be denied if Certification is not included.
- J. 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.
- K. 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, workers, 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 (5th) business 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) business 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 MANAGER’S AUTHORITY

- A. Public Works Project Manager 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 Manager.

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.
 - 1. 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 Manager.

- D. Where guarantees or warranties 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 not 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) business 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 affect 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) business 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 Contract Compliance Officer results in final determination that matter adversely affects Contractor's responsibilities under this Contract, and which recommends termination, suspension or cancellation of this Contract, County may take such action.
- B. Contractor may appeal any adverse finding by Contract Compliance Officer as set forth in Dane County Ordinance 25.015(11)(c) through (e).
- C. Contractor shall post this statement in prominent place visible to employees: "As condition of receiving and maintaining contract with Dane County, this employer shall comply with federal, state and all other applicable laws prohibiting retaliation or union organizing."

45. DOMESTIC PARTNERSHIP BENEFITS

- A. Contractor agrees to provide same economic benefits to all of its employees with domestic partners as it does to employees with spouses, or cash equivalent if such benefit cannot reasonably be provided. Contractor agrees to make available for County inspection Contractor's payroll records relating to employees providing services on or under this Contract or subcontract. If any payroll records of Contractor contain any false, misleading or fraudulent information, or if Contractor fails to comply with provisions of Chapter 25.016,

Dane County Ordinances, contract compliance officer may withhold payments on Contract; terminate, cancel or suspend Contract in whole or in part; or, after due process hearing, deny Contractor right to participate in bidding on future County contracts for period of one year after first violation is found and for period of three years after second or subsequent violation is found.

46. USE AND OCCUPANCY PRIOR TO ACCEPTANCE

- A. Contractor agrees to use and occupancy of portion or unit of the Work before formal acceptance by Department, provided Department:
 - 1. Secures written consent of Contractor; except when in opinion of Public Works Project Manager, Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other Contract requirements.
 - 2. Secures endorsement from insurance carrier and consent of Surety permitting occupancy of building or use of the Work during remaining period of construction, or, secures consent of Surety.
 - 3. Assumes all costs and maintenance of heat, electricity and water.
 - 4. Accepts all work completed within that portion or unit of the Work to be occupied, at time of occupancy.

47. MINIMUM WAGES

- A. Contractor shall post, at appropriate conspicuous point on site of project, schedule showing all determined minimum wage rates for various classes of laborers and mechanics to be engaged in the Work under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by laborers and mechanics so engaged.
- B. Supplementary Conditions section in Construction Documents lists wage determinations required by State Law.
- C. If, after award of Contract, it becomes necessary to employ any person in trade or occupation not classified in wage determinations, such person shall be paid at not less than such rate as 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, worker 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 Statute 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 Assistant 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 Assistant Public Works Director the 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:
 - 1. 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 than \$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 50.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 50.A.2 & 50.A.3. 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) business days written notice has been received by Risk Manager."

B. Builder's Risk:

- 1. County shall provide Builder's Risk insurance coverage for its insurable interests in construction or renovation projects with completed value of \$500,000 or less. Therefore, if project completed value is more than \$500,000, Contractor shall obtain and maintain in force, at its own expense, Builder's Risk Insurance on all risks for amount equal to full completed value of covered structure or replacement value of alterations or additions. Any deductible shall not exceed \$25,000 for each loss. Policy shall include occupancy clause and list Dane County as loss payee.

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.

SUPPLEMENTARY CONDITIONS

1. APPLICATION & CERTIFICATE FOR PAYMENT

- A. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit partial and final Application & Certificate for Payment for work under said contract. Form shall provide similar information as shown on AIA G702™ and G703™ forms (samples shown below). Forms shall be submitted to Public Works Project Manager for approval.


AIA Document G702™ – 1992

Application and Certificate for Payment

TO OWNER:	PROJECT:	APPLICATION NO:	Distribution to:
		PERIOD TO:	OWNER <input type="checkbox"/>
		CONTRACT FOR:	ARCHITECT <input type="checkbox"/>
		CONTRACT DATE:	CONTRACTOR <input type="checkbox"/>
		PROJECT NOS:	FIELD <input type="checkbox"/>
			OTHER <input type="checkbox"/>

FROM CONTRACTOR: VIA ARCHITECT:

CONTRACTOR'S APPLICATION FOR PAYMENT
 Application is made for payment, as shown below, in connection with the Contract. AIA Document G703™, Continuation Sheet, is attached.

1. ORIGINAL CONTRACT SUM	\$	
2. NET CHANGE BY CHANGE ORDERS	\$	
3. CONTRACT SUM TO DATE (Line 1 + 2)	\$	
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)	\$	

5. RETAINAGE:

a. % of Completed Work (Columns D + E on G703)	\$	
b. % of Stored Material (Column F on G703)	\$	
Total Retainage (Lines 5a + 5b, or Total in Column I of G703)	\$	

6. TOTAL EARNED LESS RETAINAGE

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT

8. CURRENT PAYMENT DUE

9. BALANCE TO FINISH, INCLUDING RETAINAGE

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this month	\$	\$
TOTAL	\$	\$
NET CHANGES by Change Order	\$	\$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: _____ Date: _____
 By: _____
 State of: _____
 Country of: _____
 Subscribed and sworn to before me this _____ day of _____

Notary Public:
 My commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT
 In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT: _____ Date: _____
 By: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

AIA Document G702™ – 1992, Copyright © 1953, 1963, 1965, 1971, 1978, 1983 and 1992 by The American Institute of Architects. All rights reserved. WARNING: This AIA™ Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA™ Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce ten (10) copies of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, copyright@aia.org. ©1971 AIA/2004

Continuation Sheet

AIA Document G703™-1992, Application and Certificate for Payment, or G732™-2009, Application and Certificate for Payment, Construction Manager as Adviser Edition, containing Contractor's signed certification is attached. In tabulations below, amounts are in US dollars. Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:
APPLICATION DATE:
PERIOD TO:
ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (Not in D or E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C-G)	I RETAINAGE (if variable rate)
			FROM PREVIOUS APPLICATION (D-E)	THIS PERIOD				
GRAND TOTAL								

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.
AIA Document G703™ – 1992, Copyright © 1963, 1965, 1966, 1967, 1970, 1978, 1983 and 1992 by The American Institute of Architects. All rights reserved. WARNING: This AIA® Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA® Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce ten (10) copies of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, copyright@aia.org.

2. CONTRACTOR WAGE AFFIDAVIT

- A. 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 in form as hereinafter set forth in this section. Affidavit affirms that all persons employed by contractor or by any of contractor's subcontractors on such contract have been paid no less than minimum wages established under Dane County Ordinances, Chapter 40, Subchapter II (Minimum Wage Ordinance) and in effect at date of execution of contract, that full payment of wages earned has been made, and that no rebates either directly or indirectly have been made. Form of such affidavit is included in this section.
- B. Form should be included with a copy of the final contract invoice forwarded to your contract representative at Dane County.

SECTION 01 00 00
BASIC 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. Change Procedures
 6. Alternates
 7. Coordination
 8. Conferences
 9. Progress Meetings
 10. Submittal Procedures
 11. Proposed Products List
 12. Manufacturers' Instructions
 13. Manufacturers' Certificates
 14. Quality Assurance / Quality Control of Installation
 15. References
 16. Parking
 17. Staging Areas
 18. Protection
 19. Products
 20. Transportation, Handling, Storage and Protection
 21. Product Options
 22. Substitutions
 23. Starting Systems
 24. Demonstration and Instructions
 25. Contract Closeout Procedures
 26. Adjusting
 27. Operation and Maintenance Data
 28. Spare Parts and Maintenance Materials
 29. As-Built and Record Drawings and Specifications

1.2 SUMMARY OF THE WORK

- A. Project Description: Perform the Work as specified and detailed in Construction Documents package. Contractor to provide construction of launch ramp, construction of stormwater management system, construction of erosion control systems, and construction of other site work as described in construction documents.
- B. Work by Owner: Not applicable.

- C. Permits: Prior to commencement of the Work, Contractor to secure any and all necessary permits for completion of the Work and facility occupancy.
- D. Diggers Hotline:
 - 1. It is General Contractor's responsibility to contact Diggers Hotline to have all utility locations marked prior to excavation and planning an excavation in a timely manner so as not to delay the Work.
 - 2. Diggers Hotline shall also be used to obtain information on safe working clearances from overhead lines.
 - 3. Completely comply with all requirements of each affected utility company.
 - 4. It is General Contractor's responsibility to contact & hire private utility locating services if necessary.

1.3 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow work by Contractors or Subcontractors and access by Owner.

1.4 APPLICATIONS FOR PAYMENT

- A. Submit one (1) original copies with "wet" signatures of each application on AIA G702™ and G703™ forms or approved contractors invoice form.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly.
- D. Submit Applications for Payment to Public Works Project Manager for approval & processing for payment.

1.5 CHANGE PROCEDURES

- A. Contractor's costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from contingency allowance.

1.6 ALTERNATES

- A. Alternates quoted on Bid Form shall be reviewed and accepted or rejected at Owner's option.
- B. Coordinate related work and modify surrounding work as required.
- C. Schedule of Alternates:
 - 1. Alternate Bid 1 Vault Toilet Omission.
 - a. Omission of vault toilet structure construction from project scope.

1.7 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 building utilities.
- C. Coordinate space requirements and installation of mechanical and electrical work that are indicated diagrammatically on Drawings.
- D. Refer to Drawings for recommended work sequence and duration.
- E. Contractor shall provide Public Works Project Engineer with work plan that ensures the Work will be completed within required time of completion.
- F. Public Works Project Manager may choose to photograph or videotape site or workers as the Work progresses.

1.8 CONFERENCES

- A. There will be pre-bid conference for this project; see Instructions to Bidders.
- B. When required in individual Specification section, convene a pre-installation conference at project site prior to commencing work of Section.

1.9 PROGRESS MEETINGS

- A. Owner shall schedule and administer meetings throughout progress of the Work at minimum of one (1) per week.
- B. Owner shall preside at meetings, record minutes, and distribute copies within two (2) business days to those affected by decisions made.
- C. Attendance at progress meetings by General Contractor, subcontractors, or their authorized representative, is mandatory.
- D. Contractors shall give verbal reports of progress on the Work, discuss schedule for upcoming period and present all conflicts, discrepancies or other difficulties for resolution.
- E. Day & time of progress meetings to be determined at pre-construction meeting.

1.10 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, Subcontractor or supplier; 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.

1.11 PROPOSED PRODUCTS LIST

- A. Within fifteen (15) business days after date of Award of Contract, submit complete list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.

1.12 MANUFACTURERS' INSTRUCTIONS

- A. When specified in individual Specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

1.13 MANUFACTURERS' CERTIFICATES

- A. When specified in individual Specification sections, submit manufacturers' certificate to Public Works Project Manager for review, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.14 QUALITY ASSURANCE / QUALITY CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply fully with manufacturers' instructions.
- 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.

1.15 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 Manager before proceeding.

1.16 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel. Parking shall be available at the Work site.
- B. All contractors and their employees shall cooperate with General Contractor and others in parking of vehicles to avoid interference with normal operations and construction activities.
- C. Do not obstruct existing service drives and parking lots with equipment, materials and / or vehicles. Keep accessible for Owner's use at all times.

1.17 STAGING AREAS

- A. Coordinate staging areas with Public Works Project Manager prior to starting the Work.
- B. On-site space for use as staging areas and storage of materials is limited and will be apportioned among various Contractors as their needs dictate with due regard for storage requirements of each Contractor. Each Contractor shall be responsible for safety of equipment and materials that are stored on site.

1.18 PROTECTION

- A. Contractor shall protect from damage / injury all trees, shrubs, hedges, plantings, grass, mechanical, electrical & plumbing equipment, walks and driveways and pay for any damage to same resulting from insufficient or improper protection.
- B. Contractor shall provide and maintain barricades & signage to prohibit public access to construction site.

1.19 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.

1.20 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

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

1.21 PRODUCT OPTIONS

- A. Where definite material is specified, it is not intentional to discriminate against "equal" product made by another manufacturer. Intention is to set definite standard of material

quality. Should bidder choose to bid materials other than those specified, bidder shall submit said materials specifications to Public Works Project Manager for approval at least seven (7) business days prior to Bid Due Date.

- B. Products and materials that are not specified, but have been approved for use by Public Works Project Manager shall be identified in addenda to all bidding contractors.
- C. Requests for material or product substitutions submitted after Bid Due Date may be considered. Owner reserves right to approve or reject substitutions based on Specification requirements and intended use.

1.22 SUBSTITUTIONS

- A. Public Works Project Manager shall consider requests for Substitutions only within fifteen (15) calendar days after date of Public Works Construction Contract.
- B. Document each request with complete data substantiating compliance of proposed Substitution with Construction Documents.
- C. Submit three (3) copies of requests for Substitution for consideration. Limit each request to one (1) proposed Substitution.
- D. Substitutions shall not change contract price established at Bid Due Date.

1.23 STARTING SYSTEMS

- A. Provide written notification prior to start-up of each equipment item or system.
- B. Ensure that each piece of equipment or system is ready for operation.
- C. Execute start-up under supervision of responsible persons in accordance with manufacturers' instructions.
- D. Submit written report that equipment or system has been properly installed and is functioning correctly.

1.24 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of final inspection.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at designated location.
- C. Owner may choose to photograph or videotape demonstration session; demonstration and demonstrator shall be to level of satisfaction of Owner.

1.25 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 Public Works Project Manager's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Sum / Price, previous payments, and amount remaining due.

1.26 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.27 OPERATION AND MAINTENANCE MANUAL

- A. Provide two (2) bound, hard-copy operation and maintenance manuals that include all systems, materials, products, equipment, mechanical and electrical equipment and systems supplied and installed in the Work. Provide electronic version of operation and maintenance manual also.

1.28 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide Products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to the Work site and place in location as directed.

1.29 AS-BUILT AND RECORD DRAWINGS AND SPECIFICATIONS

- A. Contractor-produced Drawings and Specifications shall remain property of Contractor whether Project for which they are made is executed or not. Contractor shall furnish Architect / Engineer with original marked up redlines of Construction Documents' drawings and specifications that shall include all Addendums, Change Orders, Construction Bulletins, on-site changes, field corrections, etc. These are project As-Built Drawings & Specifications.
- B. Architect / Engineer shall update original Construction Documents to include all Addendums & any other changes including those provided by Contractor in As-Built Drawings & Specifications. These updates are project Record Drawings & Specifications.
- C. Architect / Engineer shall furnish Public Works Project Manager with Record Drawings as detailed in Professional Services Agreement.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT, DISPOSAL & RECYCLING

PART 1 GENERAL

1.1 SUMMARY

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

- B. Related Sections:
 - 1. Section 01 00 00 - Basic Requirements

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 Dane County Green Building Policy, Resolution 299, 1999-2000.

1.3 CONSTRUCTION AND / OR DEMOLITION WASTE MANAGEMENT

- A. All construction and demolition waste suitable for recycling may go to Dane County Construction & Demolition Recycling Facility located at 7102 US Hwy 12, Madison, located across from Yahara Hills Golf Course. This facility can receive mixed loads of construction and demolition waste. For complete list of acceptable materials see www.countyofdane.com/pwht/recycle/CD_Recycle.aspx.
- B. Dane County Landfill, also at 7102 US Hwy 12, Madison, must receive all other waste from this project. www.countyofdane.com/pwht/recycle/landfill.aspx.

1.4 WASTE MANAGEMENT PLAN

- A. Contractor shall develop Waste Management Plan (WMP) for this project. Dane County's Special Projects & Materials Manager may be contacted with questions. 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.

B. Contractor shall complete WMP and include cost of recycling / reuse in Bid. WMP will be submitted to Public Works Project Manager within fifteen (15) business days of Bid Due 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.

1.5 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.

1.6 RECYCLING

A. These materials may be recycled at Dane County Construction & Demolition Recycling Facility:

1. Wood.
2. Wood Pallets.
3. PVC Plastic (pipe, siding, etc.).
4. Asphalt & Concrete.
5. Bricks & Masonry.
6. Vinyl Siding.
7. Cardboard.
8. Metal.
9. Shingles.

B. These materials can be recycled elsewhere in Dane County area:

1. Fluorescent Lamps.
2. Foam Insulation & Packaging (extruded and expanded).
3. Carpet Padding.
4. Barrels & Drums.

C. All materials must be recycled at WDNR permitted waste processing facilities that adhere to all State Statutes.

1.7 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.

- C. Mixed loads of recycled materials are allowed only per instructions at www.countyofdane.com/pwht/recycle/CD_Recycle.aspx.

1.8 LISTS OF RECYCLING FACILITIES PROCESSORS AND HAULERS

- A. Refer to www.countyofdane.com/pwht/recycle/CD_Recycle.aspx for information on Dane County Construction & Demolition Recycling Facility.
- B. Web site www.countyofdane.com/pwht/recycle/categories.aspx lists current information for Dane County Recycling Markets. Contractors can also contact Allison Hackner at 608/266-4990, or local city, village, town recycling staff listed at site www.countyofdane.com/pwht/recycle/contacts.aspx. Statewide listings of recycling / reuse markets are available from UW Extension at <https://www.uwgb.edu/shwec/>.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

WASTE MANAGEMENT PLAN FORM



Contractor Name: _____

Address: _____

Phone No.: _____ Recycling Coordinator: _____

MATERIAL	ESTIMATED QUANTITY	DISPOSAL METHOD (CHECK ONE)		RECYCLING / REUSE COMPANY OR DISPOSAL SITE
Salvaged & reused building materials	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Wood	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Wood Pallets	_____ units	_____ Recycled	_____ Reused	Name: _____
PVC Plastic	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Asphalt & Concrete	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Bricks & Masonry	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Vinyl Siding	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Cardboard	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Metals	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Shingles	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Barrels & Drums	_____ units	_____ Recycled	_____ Reused	Name: _____
Glass	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Other	_____	_____ Recycled	_____ Reused	Name: _____
Other	_____	_____ Recycled	_____ Reused	Name: _____
Other	_____	_____ Recycled	_____ Reused	Name: _____

SECTION 02488

BOARDING DOCK

PART 1—GENERAL

1.1 SUMMARY

- A. This section is a Design/Build Specification and includes the design, manufacturing and installation of the floating boarding dock system as shown on the Drawings. No Alternative system shall be considered for this project without prior approval.

1.2 REFERENCES

- A. American Institute of Steel Construction (AISC) Manual of Steel Construction.
- B. American Society of Testing and Materials (ASTM).
- C. American Welding Society (AWS) Structural Welding Code.
- D. American Wood Protection Association (AWPA).

1.3 MANUFACTURER QUALIFICATIONS AND QUALITY ASSURANCE

- A. The Floating Dockage Manufacturer (herein referred to as the Manufacturer) shall not have less than five years continuous experience in site specific design, fabrication, and installation of floating dockage systems.
- B. The Manufacturer shall demonstrate to OWNER at least three successful floating dockage installations in a similar environment anchored with guide piles.
- C. The Manufacturer or CONTRACTOR shall provide at least one person who shall be present during installation of this work who shall be thoroughly familiar with the type of materials being installed, the requirements of this work and who shall direct the work.

1.4 SUBMITTALS

- A. Source Quality Control:
 - 1. Three copies of design calculations signed and sealed by the Dockage Designer (or another Licensed Professional Engineer, experienced in floating dock design) prior to installation. Design calculations shall clearly show the structural details, specified materials and performance of the system under design loadings are in complete conformance with the design criteria.
 - 2. Three copies of shop drawings and manufacturers' literature, signed and sealed by the Dockage Designer (or another Licensed Professional Engineer, experienced in floating dock design). Shop drawings shall include all information necessary for the fabrication of component parts of the structure. All drawings shall be accurately and completely dimensioned. Drawings shall indicate all relevant sizes and shall show thicknesses, gauges, finishes, materials, etc., of all items shown. Indicate size of members, type and location of shop and field connections and the type, size and extent of all welds. The following is a partial listing of details required for submittal:

- a. Cover sheet listing project, location, Owner, Manufacturer, and project design criteria.
 - b. Decking layout.
 - c. Connection details.
 - d. Typical dock sections.
 - e. Details of anchorage system.
 - f. Cleat location and connection details.
 - g. Details of flotation unit.
 - h. Rub rails and/or moldings.
3. Prior to final payment, submit three copies of complete Record Drawings.
 4. Prior to final payment, submit three copies of a complete Operations Manual, as a minimum, containing the following information:
 - a. Manufacturer's representative's name, address and phone number.
 - b. Location of anchorage and connections to dockage. Details and recommendations for moving or removing the docks.
 - c. Complete discussion of system maintenance recommendations.
 - d. Manufacturer data sheets for flotation units and other dockage system components.
 - e. Float test reports for encasement thickness and water absorption.
 - f. Design calculations.

1.5 WARRANTY

- A. CONTRACTOR shall execute and deliver to OWNER, before final payment, a written guarantee satisfactory to OWNER. The guarantee shall state that all labor and materials (including dockage and all associated work) furnished by CONTRACTOR are in accordance with the contract Drawings and Specifications, and authorized alterations and additions thereto; and that, should any defect develop during the contract guarantee period as hereinafter defined, due to improper materials, workmanship, arrangement or design, those defects will be corrected by CONTRACTOR without expense to OWNER.
- B. The Guarantee for all labor and materials except the flotation materials shall be for a period of five (5) years from the date in which the completed work is turned over to and accepted by OWNER. The guarantee for the flotation materials shall be for a period of ten (10) years. Individual five-year manufacturer's guarantees for materials and equipment may be provided to comply with the prime contractor's guarantee responsibilities.

1.6 SYSTEM DESCRIPTION

- A. Performance Requirements:
 1. The complete floating dockage system, gangways and anchorage shall be designed in accordance with ASCE Report No. 50 (Report on Small Craft Harbors, latest edition) except as modified herein. The system shall also prevent torsion, racking and twisting by providing sufficient built-in torsion resistance.
 2. Water Levels: Design the boarding dock system to function through the water level range shown on the drawings.
 3. Vertical Loading:
 - a. Dead load shall be the entire weight of the floating piers.
 - b. Live load for flotation calculations shall be not less than 30 pounds/square foot (psf) for floating piers.
 - c. Piers at dead loading in the water shall maintain a free board of 15 inches to 18 inches. Design freeboard shall be indicated in the shop drawings. The freeboard

on the overall dock system shall not vary more than 1–inch from the approved drawings. The slope shall not vary more than 1–inch in 10 feet. At the design load of dead load plus 30 psf live load, a free board of not less than 8 inches shall be maintained.

- d. In addition to the above, the end of the pier must be designed to withstand a 400 pound total live load 2 feet from the end without loss of free board of more than 4 inches.
 - e. A 200 lb load applied on one outer corner of the pier shall not cause a freeboard differential of more than 2 inches per 3 feet of width across the end of the pier. Structural members, deck surfaces, gangways, and ramps shall be designed with a uniform live load of 50 PSF. The decking and frame shall be designed to support a 400 pound concentrated load acting on a one square foot area. Allowable deflection under design loading is $L/180$ for gangways and ramps.
4. Horizontal Loading:
 - a. Uniform wind load perpendicular to the dock: 20 psf.
 - b. Boat profile height for design wind loading shall be 3 feet.
 - c. Design for impact of a 25 foot boat striking the end of the dock at an angle of 10 degrees to the centerline of the dock at a velocity of 2 knots (3 feet per second) or less.
 - d. The structure and system shall be designed to withstand a sustained wave height of 1 foot.
 5. Cleats shall be designed to withstand a 1,500-pound mooring line load in any direction.
 6. Hinged floating dock module connections shall be designed to transmit a 3,000-pound load across the connection. The connections shall be designed such that the individual dock sections can be easily separated for system removal.
 7. Anchorage System Criteria
 - a. The floating dock system shall be anchored with a post and sleeve anchorage system. Dockage manufacturer is responsible for the design of the inboard pile sleeves and the post/pile pipe size and embedment. Minimum pipe size is 3 inch diameter.
 - b. Dock framing shall be sufficiently braced at the pile guide location.
 - c. Anchorage posts/piles shall be driven or augered into the lake bottom using an auger tip on the anchor pipe.

PART 2–PRODUCTS

2.1 MATERIALS

A. Structural:

1. Composite decking shall be Moisture Shield, 2x6, Walnut color, or equal.
2. Structural steel shall conform to the requirements of the standard specification for structural steel, ASTM A36. All steel for the floating dockage shall be hot dip galvanized in accordance with the requirements of ASTM A123. All steel structural members shall be galvanized after fabrication. Minimal field cutting, welding or drilling will be allowed, if acceptable to ENGINEER. Steel surfaces exposed by cutting, welding or drilling shall be coated with a zinc rich cold galvanizing compound.
3. Side skirt lumber shall be Western Red Cedar, No. 1 grade.
4. Hardware - bolts, lag bolts, screws, flat washers and lock washers shall be of the type and size best suited for the intended use. Low carbon bolts shall conform to the requirements for Grade A bolts, ASTM A325 or A449. All fasteners and miscellaneous

hardware shall be zinc or cadmium coated in accordance with the requirements of ASTM A153.

B. Flotation:

1. Expanded polystyrene encased all around with suitable polyethylene.
2. Encasement Material shall meet the following requirements:
 - a. One piece rotationally molded Linear Low Density Polyethylene or High Density Polyethylene appropriate for a marine environment.
 - b. Nominal thickness shall be .150 inch or greater.
 - c. Encasement shall consist of virgin material, black in color, minimum 2% carbon black and UV stabilized.
 - d. Minimum tensile strength = 2,500 psi (ASTM D-638).
 - e. Minimum Density = 0.937 g/cc (ASTM D-1505).
 - f. Brittleness Temperature of -75 Degrees C (ASTM D-746).
 - g. Exceed the Falling Dart Impact Test (ASTM D1998-04).
 - h. Minimum Flexural Modulus = 100,000 psi (ASTM D-790).
3. Flotation material shall be closed cell polystyrene. Polystyrene shall have a minimum density of approximately 0.9 pounds per cubic foot. Water absorption shall be less than 3 pounds per cubic foot at 7 days when tested by the Hunt absorption test.
4. Flotation material shall completely fill the encasement. No voids or air gaps will be permitted.
5. Flotation units shall be manufactured in a fashion to allow full bearing of the float on the structural frame in both vertical and lateral directions. Connections of flotation units shall be designed so that the floating dock acts as a single unit.

C. Other Materials:

1. Cleats shall be galvanized heavy-duty cast or gray iron. Mounting bolts shall be recessed to prevent bolt heads from chafing lines. Cleats shall be bolted to the structural frame.
2. Dock bumpers shall be a non-marring type, a minimum of 2 inches across consisting of marine grade extruded vinyl. The material shall be tough and tear-resistant and maintain flexibility to a temperature of 10 degrees Fahrenheit. Color shall be UV stabilized white.
3. All other materials, not specifically described, but required for a complete and proper installation of floating dockage, shall be designed in accordance with ASCE Report No. 50 (Report on Small Craft Harbors, latest edition) except as modified herein.

2.2 CONSTRUCTION

- A. Truss cage type dockage units shall be equipped with timber side-skirts which provide complete enclosure of the pier framing, with not less than 12 inches of skirt in the vertical dimension. The timber skirt shall be fastened to the pier frame at maximum of 4 feet on center.
- B. Decking shall be fastened to the structural frame with bolts or screws. Nails will not be permitted. There shall be at least one fastener at every structural cross support with two at the end of each board. Fasteners shall be of a protected metal compatible with the material in the structural frame.
- C. Decking shall be placed perpendicular to the longitudinal axis of the dock with 1/8-inch gaps between individual decking boards.

- D. All joints and connections between floating structures must be capable of transmitting all loads and forces imposed upon the structures. Connections shall not protrude above the level of the deck. Provide transition or cover plates at connections as necessary to provide an acceptable walking surface over the joints.
- E. Structures are to be factory assembled in the largest possible shippable units. Modular structures must be designed for quick and easy assembly and disassembly.
- F. Dock bumpers shall be provided around all docks. Corners shall be protected by molded corner guards and not by mitering or bending the extruded vinyl guards.

PART 3-EXECUTION

3.1 WORKMANSHIP

- A. Dock sections shall be completely prefabricated by the dock manufacturer and delivered ready for direct unloading into the water. All workmanship shall be first class in all respects. Any units not representing a finished and acceptable appearance will be rejected.
- B. All steel members shall be free from twists, bends, distortions and open joints. All steel construction shall be free of sharp edges and burrs. Ends of exposed steel members shall be rounded or beveled. All coping and mitering shall be done with care. Projecting materials and burrs that would prevent bearing of the various members on each other shall be removed.
- C. All drilling and cutting of steel done after galvanizing (if acceptable to ENGINEER) shall be painted with a zinc rich cold galvanizing compound. All welds over galvanized material shall be thoroughly cleaned and coated with two coats of cold galvanizing compound.
- D. All welding shall conform to the requirements of the AWS. Welds shall be a solid and homogeneous part of the metals joined and shall be free from pits or scale, and shall be of areas and length required to develop the required strength for the intended use. Welders shall meet the American Welding Society (AWS) certification for work performed on this project.
- E. All bolts, nuts and washers shall be set square with connecting structural members and the nuts shall be drawn up tight. Lock washers or other devices or techniques shall be used to prevent nuts from loosening after being properly tightened.
- F. Deck screws shall be set so the heads are just below the surface.

END OF SECTION

DIVISION 20
STANDARD SPECIFICATIONS FOR UTILITY AND STREET CONSTRUCTION
IN
WISCONSIN

TABLE OF CONTENTS

Pages
Through

SECTION 1	MATERIALS AND EQUIPMENT	1
1.1	GENERAL	1
1.1.1	REFERENCED SPECIFICATIONS	1
1.1.2	MATERIAL STANDARDS	1
1.2	PIPE	6
1.2.1	REINFORCED CONCRETE PIPE	6
1.2.4	SOLID WALL PVC	8
1.2.7	STEEL OR ALUMINUM CORRUGATED PIPE	8
1.2.10	PVC PIPE (AWWA)	9
1.2.11	PVC PIPE (SDR-PR).....	9
1.2.12	PVC PIPE (SCHEDULE PIPE)–LESS THAN 4 INCHES	9
1.2.20	MISCELLANEOUS PIPE	9
1.4	PRECAST REINFORCED CONCRETE MANHOLES.....	10
1.5	STORM SEWER INLETS	12
1.6	MASONRY	12
1.7	MANHOLE AND INLET CASTINGS.....	12
1.8	FRAME/CHIMNEY SEAL.....	12
1.9	JOINT SEALING FOR MANHOLES AND APPURTENANCES	13
1.9.1	MORTAR.....	13
1.9.2	PREFORMED FLEXIBLE JOINT SEALANT.....	13
1.9.3	O-RINGS	13
1.10	AGGREGATE SLURRY (FLOWABLE) BACKFILL	13
1.11	EROSION CONTROL PRODUCTS.....	13
1.11.1	EROSION MATS	13
1.11.2	SILT FENCE	14
1.11.3	SOIL STABILIZER	14
1.11.4	INLET PROTECTION	14
1.11.5	STONE TRACKING PADS AND TIRE WASHING STATION	14
1.11.6	DITCH CHECKS	14
1.11.7	MULCHING	14
1.11.8	VEGETATIVE BUFFER FOR CONSTRUCTION SITES.....	14
1.11.9	TEMPORARY SEEDING	14
1.13	SPECIAL MATERIALS AND EQUIPMENT	14
SECTION 2	ALIGNMENT AND GRADE	15
2.1	GENERAL	15
2.2	DEVIATIONS OCCASIONED BY UNDERGROUND FACILITIES	15
2.3	CAUTION IN EXCAVATION	15
2.4	SUBSURFACE EXPLORATION	15
SECTION 3	EXCAVATION AND PREPARATION OF TRENCH.....	15
3.1	GENERAL EXCAVATION.....	15

TABLE OF CONTENTS

		Pages Through
3.2	EXCAVATION TO GRADE	15
3.3	DEWATERING	16
3.4	WIDTH OF TRENCH	17
3.5	ROCK EXCAVATION, UTILITIES	18
3.6	BLASTING	19
3.7	SPECIAL BEDDING	19
	SECTION 4–PIPE AND MANHOLE INSTALLATION	19
4.1	GENERAL	19
4.2	MATERIAL INSPECTION	19
4.3	BEDDING AND COVER	19
4.4	PIPE LAYING	21
4.7	PORTABLE TRENCH BOX	21
4.8	MANHOLES.....	21
4.9	STORM SEWER INLETS	22
4.10	MASONRY	22
4.11	ABANDONING UTILITIES	22
4.12	CONNECTIONS TO AND MODIFICATIONS OF STRUCTURES AND MAINS.....	22
	SECTION 5–BACKFILLING	23
5.1	BACKFILL MATERIAL	23
5.2	GRANULAR BACKFILL	23
5.3	PLACEMENT.....	23
5.4	BACKFILL CONSOLIDATION.....	24
5.5	MAINTENANCE OF SURFACE.....	24
	SECTION 6–STREET EXCAVATION, GRADING AND BASE COURSE.....	24
6.1	GENERAL	24
6.2	CLEARING AND GRUBBING	25
6.3	COMMON EXCAVATION	25
6.4	ROCK EXCAVATION, STREETS.....	26
6.5	BORROW EXCAVATION	26
6.6	EXCAVATION BELOW SUBGRADE.....	26
6.7	GEOTEXTILES.....	26
6.8	PREPARATION OF FOUNDATION	26
6.9	CRUSHED AGGREGATE BASE COURSE	26
	SECTION 7–CONCRETE CURB AND GUTTER, SIDEWALK, AND PAVEMENT.....	27
7.1	GENERAL	27
7.2	CONCRETE	27
7.3	CURB AND GUTTER.....	28
7.4	CONCRETE SIDEWALK AND DRIVEWAYS	29
7.5	CONCRETE PAVEMENT FOR ROADWAYS	30
	SECTION 8–ASPHALTIC PAVING	30
8.1	GENERAL	30
8.2	ADJUSTING CASTINGS	30
8.3	ASPHALTIC CONCRETE PAVING.....	30
8.4	TACK COAT.....	31
8.5	PAVEMENT STRIPING	31
	SECTION 9–RESTORATION AND SITE WORK.....	31
9.1	SCOPE	31

TABLE OF CONTENTS

		Pages Through
9.2	SEEDING AND SODDING.....	32
9.2.1	SEED RESTORATION	32
9.3	MISCELLANEOUS RESTORATION ITEMS	32
9.4.3	STRUCTURAL GEOGRID	32
SECTION 10–MISCELLANEOUS REQUIREMENTS.....		33
10.1	GRADE STAKES AND PROPERTY STAKES	33
10.2	TESTING PIPELINES.....	33
10.2.1	GENERAL	33
10.3	TRAFFIC CONTROL	33
10.4	EROSION AND SEDIMENT CONTROL	34
10.4.1	GENERAL	34
10.4.2	EROSION MAT	34
10.4.3	SILT FENCE	35
10.4.4	SOIL STABILIZER	35
10.4.5	INLET PROTECTION	35
10.4.6	STONE TRACKING PADS AND TIRE WASHING.....	35
10.4.7	DITCH CHECKS	36
10.4.8	MULCHING	36
10.4.9	VEGETATIVE BUFFER	36
10.4.10	SEEDING FOR EROSION CONTROL.....	36
10.4.11	SEDIMENT TRAPS AND SEDIMENT BASINS	36
10.4.12	PERMIT REQUIREMENTS.....	36
10.5	MISCELLANEOUS WORK.....	37
SECTION 11–MEASUREMENT AND PAYMENT		37
11.1	GENERAL	37
11.2	UTILITY CONSTRUCTION.....	37
11.4	INLET LEADS.....	38
11.5	MANHOLES	38
11.7	STORM SEWER INLETS	38
11.8	ROCK EXCAVATION, UTILITIES	38
11.9	SPECIAL BEDDING AND CONCRETE CRADLE.....	38
11.10	GRANULAR BACKFILL	39
11.12	DEWATERING	39
11.14	EROSION AND SEDIMENT CONTROL	39
11.17	CLEARING AND GRUBBING	39
11.18	COMMON EXCAVATION	39
11.19	ROCK EXCAVATION, STREETS.....	40
11.20	BORROW EXCAVATION	40
11.21	EXCAVATION BELOW SUBGRADE.....	40
11.22	GEOTEXTILES.....	40
11.23	BASE COURSE.....	40
11.24	SALVAGED ASPHALT PAVEMENT	40
11.25	CONCRETE	41
11.26	CURB AND GUTTER	41
11.27	CONCRETE SIDEWALK AND DRIVEWAYS	41
11.28	ASPHALTIC CONCRETE PAVING.....	41
11.29	PAVEMENT STRIPING	42

TABLE OF CONTENTS

	Pages Through
11.30 SEEDING AND SODDING.....	42
11.31 MISCELLANEOUS RESTORATION	42
11.32 BOULDER WALLS	42
11.33 CUT BLOCK MODULAR RETAINING WALLS.....	42
11.34 PLANTINGS	42
11.35 DUST CONTROL.....	42
11.36 SPECIAL ITEMS OF WORK, MATERIAL, AND EQUIPMENT	43
11.37 MISCELLANEOUS WORK.....	43
SECTION 12–SPECIAL PROVISIONS	44
12.1 1.2 PIPE.....	44
12.2 1.2.1 REINFORCED CONCRETE PIPE	44
12.3 1.7 MANHOLE AND INLET CASTINGS	44
12.4 4.3 BEDDING AND COVER.....	44
12.5 6.1 STREET CONSTRUCTION-GENERAL	44
12.6 6.9 CRUSHED AGGREGATE BASE COURSE	44
12.7 7.4 CONCRETE SIDEWALK AND DRIVEWAY APRONS.....	45
12.8 8.3 ASPHALTIC CONCRETE PAVEMENT.....	45
12.9 9.1 RESTORATION	45
12.10 10.3 TRAFFIC CONTROL.....	45
12.11 10.4.12 PERMIT REQUIREMENTS	45
12.12 11.18 COMMON EXCAVATION.....	46
12.13 EXISTING UTILITIES.....	47
12.14 CONCRETE TESTING-CURB AND GUTTER, SIDEWALK, AND DRIVEWAY APRONS	47
12.15 EBS BACKFILL.....	48
12.16 SILT LOG.....	48
12.17 CONCRETE PAD AND ELECTRICAL PEDESTAL REMOVAL.....	48
12.18 FINAL RESTORATION	48
12.19 BIORETENTION BASIN.....	48
12.20 HERBACEOUS PLUGS.....	50
12.21 PAVEMENT MARKINGS AND SIGNAGE	58
12.22 TREE AND BRUSH REMOVAL	59

SECTION 1–MATERIALS AND EQUIPMENT

1.1 GENERAL

Materials provided shall be suitable for the conditions in which they are being installed and used. CONTRACTOR shall review installation requirements of the Contract with material suppliers and incorporate any additional installation requirements necessary to meet the required use within the price bid for the Work.

All material shall conform to the type, size, and shape shown on the Drawings and as specified.

All material in contact with potable water shall meet NSF Standards 60 and 61.

All pipe and materials used in performance of the Work shall be clearly marked as to strength, class, or grade. Pipe and materials not so marked shall be subject to rejection.

When requested by ENGINEER, material suppliers shall furnish certificates of compliance indicating that all tests required by the various Standards have been conducted and that the test results comply with the Standards.

1.1.1 REFERENCED SPECIFICATIONS

Unless the text indicates otherwise (e.g., see Materials Standards), Standard Specifications shall refer to Division 20 Standard Specifications for Utility and Street Construction in Wisconsin.

WisDOT Specifications in the Standard Specifications shall refer to the *State of Wisconsin Department of Transportation, Division of Highways, Standard Specifications for Highway and Structure Construction, Latest Edition*.

Conservation Practice Standards in the Standard Specifications shall refer to *Wisconsin Department of Natural Resources Conservation Practice Standards–Construction Site and Sediment Control*.

1.1.2 MATERIAL STANDARDS

This listing of Material Standards is provided for convenience only and may not be all inclusive.

AASHTO	M36	Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains.
	M148	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
	M167	Standard Specifications for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches.
	M252	Standard Specifications for Corrugated Polyethylene Drainage Pipe.
	M294	Standard Specifications for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in) Diameter.
ACI	211.1	Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
	305.1	Specification for Hot Weather Concreting.

	306.1	Standard Specification for Cold Weather Concreting.
ANSI	Z60.1	American Standard for Nursery Stock.
ASME	B16.1	Cast Iron Pipe Flanges and Flanged Fittings Classes 25, 125, and 250.
ASTM	A48	Standard Specification for Gray Iron Castings.
	A126	Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
	A240	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
	A479	Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
	A536	Standard Specification for Ductile Iron Castings
	A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
	B62	Standard Specification for Composition Bronze or Ounce Metal Castings.
	B88	Standard Specification for Seamless Copper Water Tube.
	C14	Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe.
	C32	Standard Specification for Sewer and Manhole Brick (Made From Clay or Shale).
	C33	Standard Specification for Concrete Aggregates.
	C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
	C90	Standard Specification for Loadbearing Concrete Masonry Units.
	C139	Standard Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
	C140	Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
	C150	Standard Specification for Portland Cement.
	C270	Standard Specification for Mortar for Unit Masonry.
	C301	Standard Test Methods for Vitrified Clay Pipe.
	C425	Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings.

	C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
	C470	Standard Specification for Molds for Forming Concrete Test Cylinder Vertically.
	C478	Standard Specification for Precast Reinforced Concrete Manhole Sections.
	C497	Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
	C507	Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe.
	C655	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe.
	C700	Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated.
	C828	Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines.
	C913	Standard Specification for Precast Concrete Water and Wastewater Structures.
	C923	Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
	C969	Standard Practice for Infiltration and Exfiltration Testing of Installed Precast Concrete Pipe Sewer Lines.
	C990	Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
	C1103	Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.
	C1214	Standard Test Method for Concrete Pipe Sewerlines by Negative Air Pressure (Vacuum) Test Method.
	C1244	Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill.
	C1433	Standard Specifications for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers.
	C1628	Standard Specification for Joints for Concrete Gravity Flow Sewer Pipe, Using Rubber Gaskets.
	C1677	Standard Specification for Joints for Concrete Box, Using Rubber Gaskets.
	D698	Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³)).
	D1557	Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³)).
	D1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
	D1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.

	D2152	Standard Test Method for Adequacy of Fusion of Extruded Poly (Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion.
	D2240	Standard Test Method for Rubber Property–Durometer Hardness.
	D2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
	D2321	Standard Practice for Underground Installation of Flexible Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
	D2339	Standard Test Method for Strength Properties of Adhesives in Two-Ply Wood Construction in Shear by Tension Loading.
	D2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
	D2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
	D2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
	D2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
	D2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
	D2672	Standard Specification for Joints for IBS PVC Pipe Using Solvent Cement.
	D2680	Standard Specification for Acrylonitrile Butadiene Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping.
	D2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
	D3034	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
	D3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
	D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
	D3350	Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
	D3965	Standard Classification System and Basis for Specifications for Rigid Acrylonitrile Butadiene Styrene (ABS) Materials for Pipe and Fittings.
	D4101	Standard Specification for Polypropylene Injection and Extrusion Materials.
	D4475	Standard Test Method for Apparent Horizontal Shear Strength of Pultruded Reinforced Plastic Rods By The Short-Beam Method.
	F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
	F593	Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.

	F594	Standard Specification for Stainless Steel Nuts.
	F679	Standard Specification for Poly (Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings.
	F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.
	F1417	Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air.
AWWA	C104	Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
	C105	Polyethylene Encasement for Ductile-Iron Pipe Systems.
	C110	Ductile-Iron and Gray-Iron Fittings.
	C111	Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
	C115	Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges.
	C150	Thickness Design of Ductile-Iron Pipe.
	C151	Ductile-Iron Pipe, Centrifugally Cast, for Water.
	C153	Ductile-Iron Compact Fittings.
	C300	Reinforced Concrete Pressure Pipe, Steel Cylinder Type.
	C301	Prestressed Reinforced Concrete Pressure Pipe, Steel Cylinder Type.
	C302	Reinforced Concrete Pressure Pipe, Noncylinder Type.
	C500	Metal-Seated Gate Valves for Water Supply Service.
	C502	Dry-Barrel Fire Hydrants.
	C504	Rubber-Seated Butterfly Valves.
	C507	Ball Valves, 6 Inches Through 48 Inches (150 mm Through 1,200 mm).
	C508	Swing-Check Valves for Waterworks Service, 2-In. Through 24-In. (50-mm Through 600-mm) NPS
	C509	Resilient-Seated Gate Valves for Water Supply Service.
	C600	Installation of Ductile-Iron Water Mains and Their Appurtenances.

	C605	Underground Installation of PVC Pressure Pipe and Fittings for Water.
	C651	Disinfecting Water Mains.
	C800	Underground Service Line Valves and Fittings.
	C900	PVC Pipe and Fabricated Fittings, 4 Inches Through 12 Inches (100 mm through 300 mm), for Water.
	C901	Polyethylene (PE) Pressure Pipe and Tubing, 1/2 in. (13 mm) Through 3 in. (76 mm), for Water Service.
	C905	Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 Inches through 48 Inches (350 mm through 1,200 mm).
	C906	Polyethylene (PE) Pressure Pipe and Fittings, 4 In. (100 mm) Through 63 In. (1575 mm) for Water Distribution and Transmission.
	C907	Injection-Molded Polyvinyl Chloride (PVC) Pressure Fittings, 4 IN. through 12 IN. (100 mm through 300 mm), for Water, Wastewater, and Reclaimed Water Service.
	M55	PE Pipe-Design and Installation.

1.2 PIPE

The type of pipe to be used in the Project shall be as specified in the Standard Applications table in the **SPECIAL PROVISIONS** or as shown on the Drawings.

Rigid pipes are defined as pipe manufactured of such materials as concrete or clay.

Thermoplastic pipe shall be defined as pipe manufactured of such materials as PVC or other plastics.

1.2.1 REINFORCED CONCRETE PIPE

Reinforced concrete pipe shall meet ASTM C76 for circular pipe, ASTM C507 for elliptical pipe, ASTM C655 for D-load pipe, or ASTM C1433 for box culvert pipe.

Not more than one lift hole per length of pipe shall be used in storm sewer. Lift holes will not be permitted in sanitary sewers.

Reinforced concrete pipe shall be of the class as shown on the Drawings or in the **SPECIAL PROVISIONS**, but shall be at least Class III minimum and shall have a minimum "B" wall construction. All reinforced concrete pipe used in the Work shall be of adequate strength to support the construction and trench loads applied. All reinforcing cages shall be circular; elliptical reinforcement will not be permitted. Reinforcing cage shall extend to the full width into the bell end of the pipe and to within 1 inch of the spigot end of the pipe.

All reinforced concrete pipe and fittings shall be provided with joints and gaskets which meet ASTM C1628 for sanitary sewer and ASTM C443 for storm sewer. Joints for sanitary sewer shall be sealed with rubber gaskets of either continuous O-ring or profile cross section. Joints for storm sewer shall be sealed with rubber gaskets having a continuous O-ring cross section. Joints for elliptical pipe shall be sealed with an application of a trowelable bitumastic joint sealant on the inside of the joint. All pipe shall be specifically built to fit the gasket used.

Nonstandard pipe lengths may be used at manholes and structures as necessary to allow them to be located at the locations identified on the Drawings. Reinforced concrete bends, tees, and reducers shall be manufactured to provide for the required transitions as shown on the Drawings. Sufficient additional reinforcement shall be added at the spring lines and top and bottom of the pipe to prevent shearing after installation. Repairs to complete fabricated pipe fittings shall be such that the completed unit shall have the same strength as that of the remainder of the pipe barrel and the concrete used to complete the section shall not spall or separate.

All pipe shall have smooth interior wall. Sanitary sewer pipe shall be provided with either a smooth exterior wall (i.e., no bell), or with an R-4 big bell joint.

Joints for all smooth exterior wall reinforced concrete sanitary sewer pipe (except where open cut is not allowed) shall be provided with an external bitumastic wrap, Mac Wrap, or equal. Wrap shall be minimum 12 inches wide and shall be secured on the pipe with a minimum of one stainless steel band seal connector on each side of the joint.

Acceptance of reinforced concrete pipe shall be on the basis of plant load-bearing tests, material tests, and inspection of manufactured pipe for visual defects and imperfections.

All reinforced concrete pipe used for sanitary sewer shall be vacuum tested from end to end at the factory in accordance with ASTM C1214. Test result, date, pipe class, date of manufacture, and individualized pipe i.d. shall be clearly marked on each pipe. Written vacuum test results for each pipe i.d. shall be kept and submitted to ENGINEER. ENGINEER shall be provided an opportunity to observe all tests.

Cement used in the manufacture of reinforced concrete pipe shall meet the requirements of ASTM C150 Standard Specification for Portland Cement for Type II cement.

A three-edge bearing test shall be conducted by the manufacturer according to ASTM C497 as proof of design by determining the ultimate load capacity of the pipe. One segment of pipe from each pipe class must pass the three-edge bearing test such that the load required to produce the ultimate load exceeds the load rating of the pipe. The test results shall be maintained in a log and provided to OWNER. Manufacturer shall also maintain concrete cylinder testing data and quality control records to verify that pipe meets the required ASTM standards.

An alkalinity test shall be conducted on the concrete mixture used for each type and class of reinforced concrete pipe used in the project. The alkalinity test shall be conducted according to ASTM C497 and the alkalinity of all concrete mixtures shall be equal to or greater than 0.2 grams of CaCO_3 equivalent reactivity per gram of concrete. The manufacturer shall complete the alkalinity tests.

The costs of the tests shall be incidental to the pipe cost. CONTRACTOR shall include all such costs in the price bid for the Work. CONTRACTOR shall submit a signed, dated, and certified copy of the test data to OWNER (in a format acceptable to OWNER) for review prior to delivering any pipe to the project site. No additional compensation will be made to CONTRACTOR for the required testing.

The pipe leakage shall not exceed 150 gallons/day/inch inside diameter/mile of pipe. The manufacturer shall provide a written and signed statement indicating the pipe meets this criterion.

CONTRACTOR shall provide written certification that pipe meets the standards herein.

1.2.4 SOLID WALL PVC

Polyvinyl Chloride (PVC) pipe shall meet the requirements of ASTM D3034 for pipe sizes 4 inches through 15 inches and ASTM F679 for pipe sizes 18 inches through 60 inches.

PVC material for ASTM D3034 pipe shall have cell classification 12454 or 12364 as defined in ASTM D1784 with a modulus of elasticity of 400,000 psi or 440,000 respectively. Pipe stiffness shall be minimum 46 psi when tested in accordance with ASTM D2412. Pipe shall have a maximum standard dimension ratio (SDR) of 35.

PVC material for ASTM F679 pipe shall have cell classification 12454 or 12364 as defined in ASTM D1784. Pipe stiffness shall be a minimum 115 psi when tested in accordance with ASTM D2412.

Pipe and fittings shall be the product of one manufacturer and the manufacturer shall have experience records substantiating acceptable performance of the pipe and fittings to be furnished. The minimum wall thickness of fittings shall be the same as the pipe to which it connects.

Acceptance of piping and fittings shall be subject to tests conducted by an approved testing agency in accordance with ASTM D3034 and/or ASTM F679.

Fittings such as saddles, elbows, tees, wyes, and others shall be of material and construction corresponding to and have a joint design compatible with the adjacent pipe. Approved adapters shall be provided for transitions to other types of pipe.

Joints shall be of the elastomeric type for pipes 4 inches or larger and elastomeric or solvent cement for pipes less than 4 inches.

Elastomeric joints shall be a bell and spigot joint conforming to ASTM D3212 sealed by a rubber gasket conforming to ASTM F477 so that the assembly will remain watertight under all conditions of service, including the movements resulting from the expansion, contraction, settlement, and deformation of the pipe. Bells shall be formed integrally with the pipe and shall contain a factory-installed positively restrained gasket.

Solvent cement joints shall be assembled using solvent cement obtained from the pipe manufacturer, which conforms to the requirements of ASTM D2564.

The assembled joint shall pass the performance tests as required in ASTM D3212.

1.2.7 STEEL OR ALUMINUM CORRUGATED PIPE

Corrugated pipe composed of corrosion-protected steel or of aluminum shall meet the requirements of AASHTO M36 and of structural steel plate shall meet the requirements of M167. Pipe provided shall be new and free of defects and scale. Pipe and fittings that are dented, deformed, or have damaged coatings shall be removed from the site at CONTRACTOR's expense.

The average inside diameter of circular pipe shall not vary more than 1/2 inch or 1%, whichever is greater, from the nominal diameter.

The span and rise dimensions shall not vary more than 1 inch or 2% of the equivalent circular diameter, whichever is greater.

Coupling bands shall conform to AASHTO M36 and shall be made of the same base metal as the pipe. The bands shall not be less than 7 inches wide for diameters of 8 inches to 30 inches, inclusive; not less than 12 inches wide for pipe with diameters 36 inches to 60 inches, inclusive; and not less than

24 inches wide for pipe with diameters greater than 60 inches. Such bands shall be so constructed as to lap on an equal portion of each of the pipe sections to be connected and preferably shall be connected at the ends by galvanized angles having minimum dimensions of 2 by 2 by 3/16 inches.

All connections shall be shop fabricated where possible.

All cuts in corrugated pipe and pipe arch shall be saw cut. Connections cut in the field shall be saw cut with a saddle connection of 16 gauge material bolted on the corrugated pipe with 1/2-inch-diameter galvanized bolts.

1.2.10 PVC PIPE (AWWA)

AWWA PVC pressure rated pipe shall conform to the requirements of AWWA C900 for pipe from 4 inches through 12 inches and AWWA C905 for pipe from 14 inches through 36 inches. Pipe shall be furnished with integral elastomeric bell and spigot joints.

PVC pipe outside diameter shall conform to ductile iron pipe sizes (DIPS). The type of PVC material, nominal pipe size, standard dimension ratio, and pressure rating shall be not less than pressure class 235 and not greater than dimension ratio 18.

Markings on the pipe shall include the following: Nominal pipe size, type of plastic pipe material, DR number, AWWA Designation with which the pipe complies, manufacturer's name, and the seal or mark of the laboratory making the evaluation of the suitability of the pipe for the transport of potable water.

1.2.11 PVC PIPE (SDR-PR)

Standard dimension ratio PVC pressure rated pipe shall conform to the requirements of ASTM D2241 (SDR-PR) for pipe from 4 inches through 12 inches. Pipe shall be furnished with integral elastomeric bell and spigot joints. Spigot end shall conform to ASTM D2241. Bell end shall conform to ASTM D3139. Gaskets shall meet ASTM F477.

PVC pipe outside diameter shall conform to galvanized iron or steel pipe sizes (IPS). The type of PVC material, nominal pipe size, standard dimension ratio, and pressure rating shall be not less than pressure class 200 and not greater than standard dimension ratio (SDR) 21.

Markings on the pipe shall include the following: Nominal pipe size, type of plastic pipe material, SDR number, pressure class rating, manufacturer's name, and the seal or mark of the laboratory making the evaluation of the suitability of the pipe for the transport of potable water.

1.2.12 PVC PIPE (SCHEDULE PIPE)–LESS THAN 4 INCHES

PVC Schedule pipe less than 4 inches in diameter shall conform to the requirements of ASTM D1785 for Schedules 40, 80, or 120. Pipe shall be solvent weld type conforming to ASTM D2855 with bell conforming to ASTM D2672. Pressure rating for pipe supplied shall be minimum 150 psi. PVC pipe diameter shall conform to galvanized iron or steel pipe sizes (IPS).

1.2.20 MISCELLANEOUS PIPE

Piping needed for repair or reconstruction of existing utilities and appurtenances shall be of the same type and strength as the existing. The type of jointing used in repair and reconstruction shall be reviewed by ENGINEER. Special fittings shall be furnished and installed as necessary for repair, reconstruction, or connection of existing facilities.

All special fittings on or for connection to utilities shall be specifically built for the type of gasket used. Special fittings shall have joints of the same type as the utility to which the connection is being made.

When sanitary sewer construction is within 50 feet of a potable well, 200 feet of a municipal well, or as requested by ENGINEER, a water main equivalent pipe shall be used. To transition from water main equivalent pipe to pipe normally supplied, a transition pipe with suitable joints to mate the two different pipes shall be supplied. No field-constructed transitions will be allowed unless reviewed by ENGINEER and approved by OWNER. Construction shall not proceed until proper transition pipe is supplied.

1.4 PRECAST REINFORCED CONCRETE MANHOLES

Unless otherwise required in the **SPECIAL PROVISIONS**, all manhole sections including risers, flat slab tops, conical tops, base sections, steps, and adjusting rings shall be precast reinforced concrete. Reinforced concrete manhole sections shall conform to ASTM C478. Manhole construction shall conform to Drawing 01-975-43A.

Lengths of manhole riser (barrel) shall be furnished in such combinations as to conveniently make up the depth of the manhole. A maximum of two handling holes per length of riser will be permitted.

Standard sewer and water manholes shall be constructed with eccentric cone top section and water main valve manholes shall be constructed with a concentric cone top section for 48-inch-diameter barrel sections. For other diameters the top section shall be a cone section, if available, or flat slab. Concrete adjusting rings shall be furnished to set the manhole casting to established grade. Valves and cleanout piping connections shall be centered below the casting.

Drop entrances to sanitary sewer manholes shall be installed where indicated on the Drawings and as shown on Drawing 01-975-43A. Drop entrances shall be of the same diameter as the sewer main from sizes 8 inches through 18 inches. For larger diameters, the drop shall be 18 inches unless otherwise specified in the **SPECIAL PROVISIONS** or shown on the Drawings. Drop entrances for storm sewer manholes are not required.

The interior bottom of sanitary sewer and storm sewer manholes shall be constructed of concrete benches which shall be precast or poured-in-place in the field. Benches shall extend to the top of each pipe to a maximum height of 42 inches. Flow lines shall be made smooth with uniform curves to promote flow through the manhole.

All joints between manhole pipe sections and top shall be tongue-and-groove conforming to ASTM C443. Manhole joints shall be sealed with circular O-ring or preformed flexible joint sealant as specified herein.

Manhole connections for sanitary sewer mains shall be made using flexible, watertight connections, PSX Press Seal, Kor-N-Seal, or equal, for sewers up through 18-inch diameter. All other sanitary sewer manhole connections shall be made with A-Lok, PSX Press Seal, Kor-N-Seal, or equal. Manhole connections for all other piping shall be made with A-Lok, PSX Press Seal, Kor-N-Seal, or concrete grout.

Manhole bottoms for sanitary sewer shall be monolithically precast with the bottom section for manholes up through 6-foot diameter. Bottoms for larger diameter manholes shall be precast but need not be monolithically cast with the bottom section. All other manhole bottoms shall be either poured-in-place or precast concrete.

Manhole bottoms for air release manholes, force main cleanout manholes and water system valve manholes shall have an 18-inch-diameter sump hole. Sump hole shall have a solid concrete bottom where groundwater is above the bottom of the manhole.

Manholes shall be furnished of minimum diameters as shown on Drawing 01-975-43A. Manholes shall be furnished large enough to provide a minimum distance, between adjacent pipe, measured tangentially along the inside face of the manhole, equal to one-half the outside diameter of the intersecting sewer pipe. In any event, manholes shall be furnished in the diameter necessary to accommodate intersecting sewer pipe and the pipe to manhole connection as proposed for use.

Steps shall be installed in all sewer manholes by the manufacturer as shown on Drawing 01-975-43A and shall be cast iron conforming to ASTM A48, Class 30B or steel reinforced plastic conforming to ASTM A615, Grade 60 and ASTM D4101, Type II, Grade 49108 as shown on the Drawings. Manhole steps shall be spaced 16 inches on center with an allowable tolerance of ± 1 inch. Steps shall be embedded into the riser or conical top section wall a minimum of 3 inches.

Precast reinforced concrete manhole risers and tops shall be tested in accordance with ASTM C497. Precast reinforced concrete manhole risers and tops meeting the strength requirements will be considered acceptable and shall be stamped with an appropriate monogram. When requested, copies of test reports shall be submitted to ENGINEER before the manhole sections are installed in the Project. Final acceptance will be made after field inspection upon delivery to the jobsite.

Precast reinforced concrete manhole sections shall be subject to rejection for failure to conform to any of the Specification requirements. In addition, individual sections of manhole risers and tops may be rejected because of any of the following reasons:

- a. Fracture or cracks passing through the wall, except for a single end crack that does not exceed the depth of the joint.
- b. Defects that indicate imperfect proportioning, mixing, and molding.
- c. Surface defects indicating honey-combed or open texture.
- d. Damaged ends, where such damage would prevent making a satisfactory joint.
- e. Manhole steps out of line, or not properly spaced.
- f. Noticeable infiltration into manhole.
- g. Variation in diameter of the manhole section of more than 1% from the nominal diameter.
- h. Any continuous crack having a surface width of 0.01 inch or more and extending for a length of 12 inches or more regardless of position in the section wall.

Each precast reinforced concrete manhole riser and top section shall be clearly marked with the name or trademark of the manufacturer and the date of manufacture. This marking shall be indented into the manhole section or shall be painted thereon with waterproof paint.

Precast concrete adjusting rings for standard manholes shall have an inside diameter of 26 inches, be not less than 2 inches nor more than 6 inches high, and shall have a wall thickness of 6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring. The joints between rings and between rings and castings shall be sealed with preformed flexible joint sealant as specified herein.

1.5 STORM SEWER INLETS

All inlets shall meet the requirements of ASTM C913. Construction shall conform to Drawing 01-975-41A. Inlets, in general, shall be rectangular in shape and shall be constructed of precast or poured-in-place concrete.

1.6 MASONRY

Concrete block shall meet the requirements of ASTM C139.

The face size of stretcher units shall be 7 5/8 inches by 15 5/8 inches. Variations in the face size shall be within the limits permitted by the above standards. Special shapes and sizes shall be furnished and installed as necessary.

Sewer brick shall conform to ASTM C32. All sewer brick shall be Grade SS and manhole brick shall be Grade MS. Sewer brick shall be installed as shown on the Drawings furnished by ENGINEER and as required in the construction of sewer appurtenances.

1.7 MANHOLE AND INLET CASTINGS

All manhole and inlet castings shall be gray iron and meet the requirements of ASTM A48. Unless otherwise shown on the Drawings or specified in the **SPECIAL PROVISIONS**, standard manhole castings shall be Neenah R1550 with machined frame, Type B solid lid, concealed pick holes and self-sealing gaskets, East Jordan Iron Works, or equal. Floodproof castings shall be Neenah R1916 C with machined frame, type B solid lid, concealed pick holes and self-sealing gaskets, East Jordan Iron Works, or equal.

Inlet castings for locations with curb and gutter shall be Neenah R3067 with type L grates on slopes and type R grates at low points, East Jordan Iron Works, or equal. For driveway areas, inlet castings shall be Neenah R3290 with Type A grates, East Jordan Iron Works, or equal.

1.8 FRAME/CHIMNEY SEAL

Where required by the **SPECIAL PROVISIONS** or shown on the Drawings, CONTRACTOR shall provide internal manhole frame chimney seal. The seal shall be made of a rubber type product, with a minimum thickness of 3/16 inches, a minimum unstretched width of 8 inches and be extruded or molded from a high-grade rubber compound conforming to the applicable requirements of ASTM C923. The bands used for compressing the sleeve against the manhole shall be fabricated from stainless steel conforming to ASTM A240, Type 304, for sheet and ASTM A479, Type 304, for rods. Any screws, bolts, or nuts used on these bands shall be stainless steel conforming to ASTM F593 and F594, Type 304. The internal seal or its appurtenances shall not extend far enough into the manhole opening to restrict entry into or exit from the manhole.

Manhole frame-chimney seals shall be designed to prevent the leakage of water into the manhole at the area of the joint between the manhole frame and chimney continuously throughout a 20-year design life. The seal shall remain flexible, allowing repeated vertical movements of the frame because of frost lift, ground movement, or other causes of up to 2 inches and/or repeated horizontal movements of the frame because of thermal movement of the pavement or other causes of up to 1/2 inch, both rates of movement occurring at rates not less than 0.10 inch per minute. If the seal is an internal seal, it and its appurtenances shall not extend far enough into the manhole opening to restrict entry or exit from the manhole.

The seal shall be made of only materials that have been successfully used in sanitary sewer construction for at least 10 years and have proven to be resistant to sanitary sewage; corrosion or

rotting under wet or dry conditions; the gaseous environment in sanitary sewers and at road surfaces including common levels of ozone, carbon monoxide and other trace gases at the sites of installations; the biological environment in soils and sanitary sewers; chemical attacks by road salts, road oil and common street spillages or solvents used in street construction or maintenance; the temperature ranges, variations and gradients in and between manhole frames and chimneys in the climate of the location of construction; variations in moisture conditions and humidity; fatigue failure caused by a minimum of 30 freeze-thaw cycles per year; or vibrations because of traffic loadings; fatigue failure because of repeated variations of tensile, compressive and shear stresses and repeated elongation and compression; and any combination of the foregoing. The materials used shall be compatible with each other and the manhole materials.

1.9 JOINT SEALING FOR MANHOLES AND APPURTENANCES

Unless modified by the **SPECIAL PROVISIONS**, the type of material to be used to seal joints between manhole barrels, cone sections, tops, adjusting rings, castings, and other appurtenances shall be as specified in the Standard Specifications or as shown on the Drawings.

1.9.1 MORTAR

Mortar shall meet the requirements of ASTM C270. Mortar shall be one part Portland cement and 2 1/4 parts washed mortar sand.

1.9.2 PREFORMED FLEXIBLE JOINT SEALANT

Prefomed flexible joint sealant shall be EZ Stik, Kent Seal, Ram Nek, or equal, meeting the requirements of ASTM C990.

1.9.3 O-RINGS

O-rings shall meet the requirements of ASTM C443.

1.10 AGGREGATE SLURRY (FLOWABLE) BACKFILL

Aggregate slurry (flowable) backfill shall consist of fine and coarse aggregate conforming to ASTM C33. Coarse aggregate shall be size number 67 and fine aggregate shall be size number 4. The material shall be mixed with water to provide an approximate 3-inch slump. The mix shall be deposited in the trench from ready-mix concrete transit mix trucks and shall be consolidated using concrete vibrators or vibratory plate compactors.

1.11 EROSION CONTROL PRODUCTS

Erosion control products shall be listed in the *Erosion Control Product Acceptability List for Multi-Modal Applications* (PAL) of the Wisconsin Department of Transportation. CONTRACTORS may obtain copies of the PAL and PAL qualification procedures from the WisDOT Bureau of Highway Construction.

1.11.1 EROSION MATS

Erosion mat products shall be selected from the PAL in conformance with criteria specified in Conservation Practice Standard 1052 (Non-channel Erosion Mat) and 1053 (Channel Erosion Mat).

Unless designated on the Drawings or specified in the **SPECIAL PROVISIONS**, CONTRACTOR may furnish any prequalified erosion mat product of the class and type listed in the PAL.

A 300 mm by 300 mm sample of a product proposed for erosion mat may be required to verify that it is prequalified. When a sample is required, it shall be accompanied by the manufacturer's literature for the proposed product.

1.11.2 SILT FENCE

Silt fence shall conform to Conservation Practice Standard 1056–Silt Fence. Silt fence shall conform to Table 2 of Conservation Practice Standard 1056.

Furnish wrapping on each roll of fabric to protect the fabric from ultraviolet radiation and from abrasion during shipping and handling. Keep geotextile dry until installed.

1.11.3 SOIL STABILIZER

Soil stabilizer shall be Type A or Type B. Type A is either a cementitious soil binder added to wood cellulose fiber mulch or a bonded fiber matrix. Type B is a water-soluble anionic polyacrylamide meeting requirements specified in Conservation Practice Standard 1050–Land Application of Anionic Polyacrylamide. CONTRACTOR shall provide soil stabilizer products from the PAL.

1.11.4 INLET PROTECTION

Inlet protection shall conform to Conservation Practice Standard 1060–Storm Drain Inlet Protection for Construction Sites. Manufactured bags shall conform to Table 1 of Conservation Practice Standard 1060.

1.11.5 STONE TRACKING PADS AND TIRE WASHING STATION

Stone tracking pads and tire washing stations shall conform to Conservation Practice Standard 1057–Stone Tracking Pad and Tire Washing.

1.11.6 DITCH CHECKS

Ditch checks shall conform to Conservation Practice Standard 1062–Ditch Check (Channel).

1.11.7 MULCHING

Mulching for construction sites shall conform to Conservation Practice Standard 1058–Mulching for Construction Sites.

1.11.8 VEGETATIVE BUFFER FOR CONSTRUCTION SITES

Vegetative buffer shall conform to Conservation Practice Standard 1054–Vegetative Buffer for Construction Sites.

1.11.9 TEMPORARY SEEDING

Temporary seeding for construction site erosion control shall conform to Conservation Practice Standard 1059–Seeding for Construction Site Erosion Control.

1.13 SPECIAL MATERIALS AND EQUIPMENT

See **SPECIAL PROVISIONS** for items of material and equipment specific to the Project.

SECTION 2—ALIGNMENT AND GRADE

2.1 GENERAL

Utility lines shall be laid and installed to the lines and grades specified with valves, fittings, manholes, and other appurtenances at the specified locations; spigots centered in bells; and all manholes and riser pipes plumb.

Unless otherwise noted in the **SPECIAL PROVISIONS** or on the Drawings, service lines shown on the Drawings are approximate. ENGINEER will assist CONTRACTOR in staking the actual locations in the field.

Staking shall be completed in conformance with Division 1 of the Specifications.

2.2 DEVIATIONS OCCASIONED BY UNDERGROUND FACILITIES

Wherever significant obstructions not shown on the Drawings are encountered during the progress of the Work, CONTRACTOR shall proceed in accordance with the General Conditions to notify owners and protect the facilities. Existing items unnecessarily damaged during the performance of the Work shall be repaired and replaced at the expense of CONTRACTOR.

2.3 CAUTION IN EXCAVATION

CONTRACTOR shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures may be determined and shall be held responsible for the repair of such structures when broken or otherwise damaged because of carelessness on its part.

2.4 SUBSURFACE EXPLORATION

Whenever, in the opinion of ENGINEER, it is necessary to explore and excavate to determine the location of existing underground facilities, CONTRACTOR shall make explorations and excavations for such purposes. If CONTRACTOR is asked to perform additional Work in making the explorations and excavations, extra compensation will be allowed as specified in the General Conditions.

SECTION 3—EXCAVATION AND PREPARATION OF TRENCH

3.1 GENERAL EXCAVATION

The trench shall be dug so that the utilities can be laid to the alignment and depth specified. Unless otherwise allowed by ENGINEER, trenches shall not be excavated more than 100 feet in advance of pipe laying. Earth excavation shall include all excavation except rock as hereinafter defined. Included in earth excavation shall be removal of street paving of all types, existing structures, existing improvements and trees smaller than 4 inches in diameter measured 4 feet above the ground, all as necessary to complete the pipe installation.

3.2 EXCAVATION TO GRADE

The trench shall be finished to the depth necessary to provide a uniform and continuous bearing and support for the pipe on the bedding material provided at every point between bell holes. Any part of the bottom of trench excavated below the specified grade shall be corrected with bedding material, thoroughly compacted in place. The bedding shall be shaped and finished with hand tools to fit the bottom quadrant to the pipe.

If, in the opinion of ENGINEER, unstable soil conditions are encountered at subgrade, CONTRACTOR shall replace the unstable soil with special bedding. CONTRACTOR shall be allowed extra compensation for the special bedding, unless the unstable soil conditions are caused by CONTRACTOR's failure to adequately dewater the trench, in which case CONTRACTOR shall bear the entire cost.

All excavated material shall be piled in a manner that will not endanger the Work. Stockpiles not for immediate backfilling shall have silt fences placed around their perimeter for erosion control. The Work shall be conducted in such a manner that pedestrian and motor traffic is not unnecessarily disrupted. Fire hydrants, valve boxes and manholes shall be left unobstructed. Gutters shall be kept clear or other satisfactory provisions made for street drainage, and natural water courses shall not be obstructed.

Excavated material designated by ENGINEER as being undesirable for backfilling and all surplus excavated material shall be immediately removed as excavation progresses. All such material shall be disposed of in an environmentally safe manner in accordance with local, state, and federal regulations. No such materials shall be disposed of in wetlands, floodplains, or other environmentally sensitive areas. Disposal sites are also subject to approval of OWNER. All undesirable and surplus material disposed of must be leveled off and graded to rough elevations as determined by OWNER. Appropriate erosion control measures shall be provided and maintained at disposal sites until disposal is complete and the disposal site is permanently stabilized.

CONTRACTOR shall remove bituminous pavement and road surface as a part of the trench excavation. The width of pavement removed shall be the minimum possible, and acceptable, for convenient and safe installation of utilities and appurtenances.

All bituminous pavement shall be cut on neat, straight lines and shall not be damaged beyond the limits of the trench.

Where it is necessary to trench through concrete pavement, a strip shall be sawed and removed in such a manner as not to disturb the remainder of the pavement. Paving and undermining of existing concrete pavement shall be prevented by CONTRACTOR. If CONTRACTOR unnecessarily removes or damages pavement or surfaces beyond limits acceptable to ENGINEER, such pavement and surfaces shall be replaced or repaired at the expense of CONTRACTOR.

3.3 DEWATERING

CONTRACTOR shall, at its own expense, keep the excavation clear of water while structures and appurtenances are being built, utilities are being installed, and fill and backfill is being compacted. CONTRACTOR shall at all times have on hand sufficient pumping equipment and machinery in good working condition for all ordinary emergencies, including power outages, and shall have available at all times competent workers for the operation of the pumping equipment. The dewatering systems shall not be shut down between shifts, on holidays or weekends, or during Work stoppages.

All dewatering shall be done in accordance with applicable federal, state, and local code requirements.

Under no conditions shall the Work be laid in or under water. No water shall flow over the Work until the joints are complete or the concrete has set. Wherever necessary, CONTRACTOR shall excavate in advance of the completed Work, lead the water into sumps or pump wells, and provide erosion control measures to prevent water or sediment damage.

The expense for making all extra excavations necessary to prevent water from interfering with the proper construction of the Work and for forming of all dams, digging sumps or pump wells, bailing and pumping, and erosion control shall be borne by CONTRACTOR. Any permits necessary for the dewatering operations shall be obtained and paid for by CONTRACTOR. No extra payment will be

made for dewatering of the trench whether accomplished by the use of sumps and pumps, well point systems, or deep wells.

CONTRACTOR's dewatering system shall ensure that soils within the trench will not be destabilized by hydrostatic uplift pressures from adjacent groundwater. If conditions warrant, CONTRACTOR shall furnish and install well point systems or deep wells. Spacing and depth of well points or wells shall be adequate to lower the piezometric level to at least 2 feet below the bottom of the excavation. Additional lowering shall be provided as necessary to create a stable subgrade. The control of groundwater shall be such that softening or heaving of the bottom of excavations or formation of quick conditions or boils shall be prevented. Dewatering systems shall be designed and operated to prevent the migration or removal of soils. In areas where rock is encountered, the water level shall be kept at or below top of rock but at least 6 inches below bottom of concrete. Additional rock shall be removed as needed to provide clearances.

CONTRACTOR shall take all necessary precautions during the dewatering operation to protect adjacent structures against subsidence, flooding, or other damage. The dewatering system shall be installed and operated so that the groundwater level outside the excavation is not reduced to the extent that would damage or endanger adjacent structures or property. Any such facilities and structures damaged shall be repaired or replaced to the satisfaction of their owner.

Prior to dewatering, CONTRACTOR shall take into account the effect of its proposed dewatering operation on existing private water supply systems and shall make arrangements with property owners for protecting their supplies or providing alternative supply. If CONTRACTOR's dewatering operation adversely affects private water supply systems, CONTRACTOR shall provide property owners with alternative potable and nonpotable supplies until dewatering operations are ceased and groundwater levels return to normal. If the water in private water supply wells is contaminated through no fault of CONTRACTOR after restoration of original groundwater levels, OWNER will provide measures to restore water potability. CONTRACTOR is responsible for restoration of the water supply, not its potability after restoration.

In areas where continuous operation of dewatering pumps is necessary, CONTRACTOR shall avoid noise disturbance to nearby residences and businesses to the greatest extent possible by using electric driven pumps, intake and exhaust silencers, or housing to minimize noise.

The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted fill or backfill, and prevent floatation or movement of all structures and pipelines.

3.4 WIDTH OF TRENCH

CONTRACTOR shall be responsible for determining and providing the minimum width necessary to provide a safe trench in accordance with current OSHA standards and all other applicable standards. The top width of trench excavation shall be kept as narrow as is reasonably possible and acceptable to minimize pavement damage. Pay items related to maximum trench widths shall not limit CONTRACTOR's responsibility to provide safe trench conditions.

Width of Trench–Rigid Pipe: The width of trench below the outside top of the pipe shall be as shown in the following table for the sizes listed. A minimum clearance of 8 inches between the outside of the pipe barrel and the trench wall at the pipe spring line shall be maintained to allow for bedding and haunching. If sheeting is used and is going to remain in place, the trench width shall be measured as the clear distance between inside faces of the sheeting. Otherwise, the trench width shall be based on the width between stable trench walls after sheeting is removed.

MAXIMUM WIDTH OF TRENCH BELOW TOP OF PIPE

Nominal Pipe Diameter (Inches)	Trench Width (Inches)
4	30
6	30
8	36
10	36
12	36
15	36
18 and larger	SEE SPECIAL PROVISIONS

Where the width of trench below the outside top of the pipe barrel cannot be otherwise maintained within the limits shown above, CONTRACTOR, at its own expense, shall furnish an adequate pipe installation for the actual trench width which will meet design conditions. This may be accomplished by furnishing higher class bedding, a stronger pipe, concrete cradle, cap or envelope or by driving sheeting prior to excavation to subgrade. Removal of sheeting below the top of the pipe, if allowed by ENGINEER, shall be gradual during backfilling.

If the maximum trench width is exceeded for any reason other than by request of ENGINEER, the concrete cradle, cap, sheeting, bedding or the stronger pipe shall be placed by CONTRACTOR at its own expense. Where the maximum trench width is exceeded at the written request of ENGINEER, the concrete cradle, cap, sheeting, bedding or stronger pipe will be paid for on the basis of the price bid.

Width of Trench—Thermoplastic and Ductile Iron Pipe: The trench width for flexible pipe shall be minimum three times the pipe outside diameter or the maximum trench width specified for rigid pipe, whichever is greater. A minimum clearance of 8 inches between the outside of the pipe barrel and the trench wall at the pipe spring line shall be maintained to allow for bedding and haunching.

3.5 ROCK EXCAVATION, UTILITIES

Rock excavation for utilities shall include all hard, solid rock ledges, bedded deposits and unstratified masses and all conglomerate deposits or any other material so firmly cemented that in the opinion of ENGINEER it is not practical to excavate and remove same with a 225-net flywheel horsepower trench backhoe or equal, except after continuous drilling and blasting. Soft or disintegrated rock which can be removed with a pick, loose, shaken or previously broken rock, or rock which may fall into the excavation from outside the limits of excavation will not be classified as rock excavation. Rock excavation shall also include all rock boulders necessary to be removed having a volume of 2 cubic yards or more.

When rock is encountered, it shall be stripped of earth and ENGINEER or OWNER's representative notified and given proper time to evaluate same before removal. Any rock removed which has not been measured by ENGINEER or OWNER's representative will not be classified as rock excavation.

The depth of trench in rock shall be 6 inches below the lowest outside bottom of the pipe.

All rock excavated from the trench shall be classified as undesirable backfill material and shall be disposed of as specified in the Excavation to Grade section. All trenches in rock shall be backfilled with bedding, cover, and backfill material furnished by CONTRACTOR.

3.6 BLASTING

Blasting for rock excavation will be permitted only after securing the written approval of OWNER and only after proper precautions are taken for the protection of persons or property. The hours of blasting will be fixed by OWNER. Any damage caused by blasting shall be repaired by CONTRACTOR at its expense. CONTRACTOR's method and procedure of blasting shall conform to state laws and municipal ordinances.

CONTRACTOR shall provide a copy of Blaster License as required by the licensing agencies to OWNER prior to commencement of blasting.

3.7 SPECIAL BEDDING

Special bedding shall consist of stone material and filter fabric as described herein. Where the bottom of the trench at subgrade is found to be unstable or of unsuitable material, which in the opinion of ENGINEER should be removed, CONTRACTOR shall excavate and remove such unstable or unsuitable material to the trench width and to a depth of 2 feet. The excavated area shall be lined with filter fabric, Mirafi 140 N, US Fabrics US 120NW, Propex Geotex 401, or equal, and backfilled with bedding material in maximum 12-inch layers. At subgrade the filter fabric shall be wrapped over the special bedding with an 18-inch overlap. Bedding material shall then be placed over the special bedding to support the piping. See Dewatering and Excavation to Subgrade sections for additional conditions.

SECTION 4—PIPE AND MANHOLE INSTALLATION

4.1 GENERAL

Prior to commencing pipe laying, CONTRACTOR shall notify ENGINEER of the intended date for starting Work. ENGINEER may request at CONTRACTOR's expense the removal and relaying of pipe which was installed prior to notification of ENGINEER.

Proper implements, tools, and facilities shall be provided and used by CONTRACTOR for the safe and convenient prosecution of the Work. All pipe, fittings, and appurtenances shall be carefully lowered into the trench piece-by-piece with a crane, rope, or other suitable tools or equipment, in such manner as to prevent damage to materials. Under no circumstance shall pipe be dropped or rolled into the trench.

Materials shall be as shown on the Drawings or as specified herein.

4.2 MATERIAL INSPECTION

CONTRACTOR shall inspect the pipe, fittings, and appurtenances for defects when delivered to the jobsite and prior to lowering into the trench. Defective material shall be removed from the jobsite. All material shall be clean and free of deleterious substances prior to use in the Work.

4.3 BEDDING AND COVER

Immediately prior to placing the pipe, the trench bottom shall be shaped by hand to fit the entire bottom quadrant of the pipe. If pipe is of the bell-and-spigot type; bell holes shall be provided to prevent the bell from supporting the backfill load. Bell holes shall be large enough to permit proper making of the joint, but not larger than necessary to make the joint. All adjustments to line and grade must be done by scraping away or filling in bedding material under the body of the pipe. Any fill used must be bedding material. If necessary to obtain uniform contact of the pipe with the subgrade, a template shall be used to shape the bedding material. All pipe shall be bedded in bedding material at least 4 inches thick.

CONTRACTOR shall perform all necessary excavation and shall furnish all necessary material to provide this bedding.

Bedding material shall be hard and durable and shall be made by crushing sound limestone or dolomite ledge rock, or crushed gravel aggregate. Bedding material shall conform to the requirements of ASTM C33.

PERCENTAGE BY WEIGHT PASSING INDICATED SIEVE

Size	2 1/2 IN	2 IN	1 1/2 IN	1 IN	3/4 IN	1/2 IN	3/8 IN	No. 4	No. 8	No. 16	No. 30	No. 100	No. 200
57			100	95-100		25-60		0-10	0-5				
8						100	85-100	10-30	0-10	0-5			
9						100	75-100	0-25	0-5				
10							100	85-100				10-30	

All rigid sewer pipe and related appurtenances shall be bedded and covered in accordance with the Class B bedding detail as shown on Drawing 01-975-43A. Bedding material shall conform to Size No. 8 or No. 9. With pipes greater than 15 inches, Size No. 57 may be used.

Concrete and other rigid pipe used in nonsanitary sewer applications (sanitary sewer applications, if allowed by the **SPECIAL PROVISIONS**) may be bedded using the Class C bedding detail as shown on Drawing 01-975-43A. Bedding material shall conform to Size No. 8 or No. 9. With pipes greater than 15 inches, Size No. 57 may be used.

No material native to the trench shall be used for bedding material.

CONTRACTOR shall provide ENGINEER with a sieve analysis of the bedding material for review prior to starting construction.

Material which is to be placed from the bedding material to 1 foot above the top of the pipe shall be termed cover material. All trenches shall be backfilled by hand to 1 foot above the top of the pipe with cover material. Cover material shall be deposited in the trench for its full width on each side of the pipe, fittings and appurtenances simultaneously in 6-inch layers and shall be compacted using hand tamping bars and/or mechanical tampers. CONTRACTOR shall use special care in placing cover material to avoid injury to or movement of the pipe. Cover material shall consist of durable granular particles ranging in size from fine to a maximum size of 3/4 inches. Unwashed bank run sand and crushed bank run gravel will be considered generally acceptable cover material. Cover material shall generally conform to the following gradation specifications:

COVER MATERIAL GRADATION

Sieve Size	Percentage by Weight Passing
1 inch	100
3/4 inches	85 to 100
3/8 inches	50 to 80
No. 4	35 to 65
No. 30	--
No. 40	15 to 30
No. 200	5 to 15

Native trench materials may be used for cover material if they substantially conform to the above gradation specifications and a suitable credit is extended to OWNER.

All bedding materials may be substituted for cover material when requested by CONTRACTOR except where polyethylene encasement is used. In such case, only those bedding materials specifically noted for polyethylene encasement may be used.

4.4 PIPE LAYING

All pipe shall be laid accurately to the line and grade as designated. Preparatory to making pipe joints, all surfaces of the portions of the pipe to be joined or of the factory-made jointing material shall be clean and dry. Lubricants, primers, adhesives, and other joint material shall be used and installed as recommended by the pipe or joint manufacturer's specifications. The jointing materials or factory-fabricated joints shall then be placed, fitted, joined, and adjusted in such a workmanlike manner as to obtain the degree of watertightness specified. Pertinent specifications from the joint and pipe manufacturer which outline procedures to be followed in making the joint shall be furnished to ENGINEER.

Wyes, tees, and special fittings shall be installed as called for on the Drawings, or as requested by ENGINEER. Wyes, tees, and special fittings, shall, in general, be jointed with the same type of joint as used in the pipe.

In joining two dissimilar types of pipe, manufactured adapters and fittings shall be used. Adapters and fittings shall be configured to maintain invert elevations at same level.

Joint deflections shall not exceed the limits established by the pipe manufacturer for the pipe and joint being used.

Joints that are damaged because of carelessness, improper handling, or failure to prevent imperfections in manufacture shall be subject to rejection and gaskets shall be subject to rejection whenever they show surface cracking, tears, or splice separation.

At times when pipe laying is not in progress, the open ends of pipe shall be closed with plugs to prevent the entry of foreign material. All foreign material shall be removed from the pipe prior to acceptance.

After placing a length of pipe in the trench, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with specified backfill material tamped around it except at the bells. Trenches shall be kept water-free during bedding, laying and jointing, and for as long a period as necessary to permit proper execution of the Work.

Pipe shall be brought home by using a cross member and levers or jacks. It will not be permissible to push pipe home with motor-powered excavation equipment.

4.7 PORTABLE TRENCH BOX

Whenever a portable trench box or shield is used, special precautions shall be taken so as not to pull already jointed pipe apart or leave voids around the pipe wall. Whenever possible, the bottom edge of the box shall be kept at a level approximately even with the top of pipe. Cover material shall be placed to at least the top of pipe before moving the box ahead.

4.8 MANHOLES

Manholes shall be installed in accordance with Drawing 01-975-41A for storm sewer, Drawing 01-975-42A for water main, and Drawing 01-975-43A for sanitary sewer. Manholes shall be plumb with any steps aligned and openings located over steps. For sanitary sewers, openings shall be located over the bench and not the sewer flow line itself.

All manholes shall be made watertight and shall show no visible signs of leakage at the time of final review and within the correction period. Any leakage shall be sealed from the exterior of the manhole.

4.9 STORM SEWER INLETS

Storm sewer inlets shall be installed in accordance with Drawing 01-975-41A. Inlets shall be set to the line and grade as furnished by ENGINEER. The outside end of the lift hole shall be covered with filter fabric to prevent the entrance of fines into the inlet.

Inlets shall be connected to the storm sewer main either at manholes, at wye branches in the main, or to other inlets, all as shown on the Drawings. Minimum size of inlet lead pipe shall be 12 inches.

Storm inlets shall be backfilled to undisturbed soil and at least 2 feet along connecting piping with bedding material.

4.10 MASONRY

No masonry shall be laid when the temperature of the outside air is below 40°F unless all masonry materials are heated and protected against freezing.

Only enough mortar shall be mixed that can be conveniently used before it reaches initial set. Retempering of mortar will not be permitted.

4.11 ABANDONING UTILITIES

Utilities to be abandoned shall, unless otherwise noted on the Drawings or in the **SPECIAL PROVISIONS**, be abandoned in place. Open ends of pipes shall be plugged with 12 inches of concrete. Manhole barrels, valve boxes and other such structures shall be removed to a point 3 feet below existing or final ground surface, whichever is lower, and shall then be filled with backfill material compacted to that of the trench backfill. An approximate 9-inch-diameter opening shall be made in the bottom of the structure to allow for groundwater movement.

4.12 CONNECTIONS TO AND MODIFICATIONS OF STRUCTURES AND MAINS

Unless otherwise noted on the Drawings or in the **SPECIAL PROVISIONS**, openings in existing structures to allow for connection of mains shall be core drilled, and the mains themselves shall be connected by use of watertight connections as specified in the Standard Specifications. Flow channels in the bottoms of existing structures shall be modified as necessary to provide smooth transition for incoming flow and/or orientation of mains. These modifications may include breaking out and reforming flow channels. See **SPECIAL PROVISIONS** for any additional requirements.

Where mains, new and existing, are to intersect, dog house manholes shall be provided to facilitate connection and to gain access to the intersecting mains. Manholes shall be provided at the manufacturing plant with arched openings in lower barrel section to span each of the intersecting mains. Reinforcing shall be cut and bent back. In the field, manhole shall be set on concrete blocks, with reinforcing provided according to Drawing 01-975-41A, 42A, or 43A for the bottom slab. Concrete shall be poured under and around the manhole to seal all openings, cover and adhere to the slab and bent reinforcement, and provide for benches or fillets in the manhole. Sanitary and storm sewer mains shall be kept intact until the bench or fillet is poured. Then the top of pipe to springline shall be removed to provide access. See **SPECIAL PROVISIONS** for any additional requirements.

SECTION 5–BACKFILLING

5.1 BACKFILL MATERIAL

Backfill shall be that material placed between the top of cover material to the subgrade for placement of restoration materials. Backfill for storm inlets shall be bedding material.

When the type of backfill material is not otherwise specified or shown on the Drawings, CONTRACTOR may backfill with the excavated material, provided that such material consists of loam clay, sand, gravel, or other materials which, in the opinion of ENGINEER, are suitable for backfilling.

All backfill material shall exceed 35°F and be free from frost, cinders, ashes, refuse, vegetable or organic matter, boulders, rocks, or stone, frozen lumps, or other material which in the opinion of ENGINEER is unsuitable. From 1 foot above the top of the pipe to the trench subgrade, well-graded material containing stones up to 8 inches in their greatest dimension may be used, unless otherwise specified in the **SPECIAL PROVISIONS**. Care should be taken in backfilling so as not to damage the installed pipe.

In refilling the trench, if there is not sufficient material excavated therefrom suitable for refilling, CONTRACTOR shall, without extra compensation, furnish the deficiency. Where indicated on the Drawings, fill shall be provided over projecting conduits. Such fill shall be free of large boulders, and the top 6 inches shall be of suitable material to fit the adjoining ground.

5.2 GRANULAR BACKFILL

When called for on the Drawings, in the **SPECIAL PROVISIONS**, or requested by ENGINEER, backfill material shall be granular and shall consist of durable particles ranging in size from fine to coarse in a substantially uniform combination. Sufficient fine material shall be present to fill all the voids in the coarse material. No stones over 3 inches or clay lumps shall be present. Unless otherwise allowed by ENGINEER, granular backfill shall generally conform to the following gradation specification:

GRANULAR BACKFILL

Sieve Size	Percentage by Weight Passing
3 inches	100
2 inches	95 to 100
No. 4	35 to 60
No. 200	5 to 10

5.3 PLACEMENT

All trenches shall be backfilled using specified material so that excessive lengths of trench are not left open. In general the backfilling operation shall proceed so that no more than 100 feet of trench is open behind the pipe laying operation.

Backfill shall be left below the original surface to allow for placement of restoration materials including pavement, base course, concrete, topsoil, sod, plus any pavement replacement specified in accordance with the Asphaltic Paving section herein. When settlement occurs, CONTRACTOR shall restore the surface improvements at its expense to maintain the finished surface.

5.4 BACKFILL CONSOLIDATION

Unless specifically deleted in the **SPECIAL PROVISIONS**, all trenches shall be consolidated as specified in this section for the entire depth and width of the trench.

Consolidation shall be achieved by use of smooth surface vibratory compactors or backhoe-operated hydraulic compactors for granular materials and rotating sheepsfoot-type mechanisms for loam/clay soils. The lift height shall not exceed 8 inches for walk-behind, hand-operated, vibratory compactors and sheepsfoot. Lift height shall not exceed 24 inches for self-propelled vibratory drum or backhoe-operated hydraulic compactors. Smaller lift heights shall be provided as necessary to achieve the degree of compaction specified.

Unless specified otherwise in the **SPECIAL PROVISIONS**, backfill material beneath paved areas or future paved areas and within 5 feet of paved areas or future paved areas shall be consolidated as follows: Within 3 feet of the surface 95% of maximum dry density, below 3 feet from the surface to 1 foot above the pipe 90% of maximum dry density, as determined by the modified Proctor Test (ASTM D1557).

Unless otherwise specified in the **SPECIAL PROVISIONS**, backfill material placed in all other areas shall be compacted to the point where no additional consolidation can be observed from the compaction and backfill equipment being used.

Backfill material not meeting the compaction specification shall be recompacted by CONTRACTOR at no cost to OWNER. Cost for additional testing on recompacted material shall be at CONTRACTOR's expense.

5.5 MAINTENANCE OF SURFACE

CONTRACTOR shall maintain all backfilling, resurfacing, repaving, and other surface improvements constructed under this Contract. CONTRACTOR shall, upon proper notice from OWNER, make all repairs in surfaces of trenches and excavations. All expenses incurred by OWNER and/or CONTRACTOR in making repairs and all expenses in maintaining trench and excavation surfaces shall be at the expense of CONTRACTOR regardless of the material used in backfilling trench excavations. OWNER reserves the right to make all emergency repairs necessary to make safe all streets and walks at the expense of CONTRACTOR regardless of the material used in backfilling trench excavations. A maintenance guarantee fund, if specified in the **SPECIAL PROVISIONS**, will be withheld from the final amount due CONTRACTOR for a period of 6 months after acceptance of the Work to assure such maintenance.

CONTRACTOR shall be responsible for controlling dust dispersion during utility and street construction. Remedial actions required as a result of inadequate dust control shall be CONTRACTOR's responsibility. To control dust, CONTRACTOR shall apply calcium chloride or ammonium lignin sulfonate in 12 to 14% solution or other dust control palliative acceptable to OWNER. Prior to application of dust palliative, the street shall be graded smooth.

SECTION 6—STREET EXCAVATION, GRADING AND BASE COURSE

6.1 GENERAL

The Work under this section includes all clearing, grubbing, excavation, grading, base course, and other miscellaneous items of Work required for restoration of utility construction Work and for street construction as shown on the Drawings and included in the Specifications.

Unless otherwise specified, all street construction Work shall conform to the WisDOT Specifications as amended herein. Street construction shall mean street, roadway, parking lot, driveway, and similar type construction.

See **SPECIAL PROVISIONS** for availability of water for use in street construction.

6.2 CLEARING AND GRUBBING

In general, allowable tree removals shall be those trees which are necessary to remove for utility and street construction within the right-of-way or easement areas. Actual allowable tree removals will be determined in the field by OWNER. All trees and brush outside the right-of-way or easement areas shall be protected by CONTRACTOR, unless otherwise allowed by OWNER.

For utility construction, trees and brush to be removed outside the immediate trench area shall be cut flush with the ground surface or pushed over for all brush and for all trees 12-inch Diameter Breast Height (DBH) or less measured 4.5 feet aboveground. Trees in excess of 12-inch DBH shall be cut to within 6 inches of the ground surface. Trees that are pushed over shall have their stumps removed and disposed of off-site.

Trees and brush, including stumps within the trench area and within areas of street, sidewalk, bike path and driveway construction shall be removed from the site and disposed of.

6.3 COMMON EXCAVATION

All street excavation shall be performed as called for in Section 205 of the WisDOT Specifications and as herein modified.

The following items of Work shall be included in common excavation:

- a. The excavation to subgrade elevations as detailed in the Drawings including road bed areas, terraces, paths, driveways, and other miscellaneous surface improvements.
- b. Removal (and stockpiling, if the use of salvaged topsoil is required) of topsoil from all cut areas and fill areas within a 1:1 slope of finished street, sidewalks, bike paths, driveways, and other miscellaneous surface improvements.
- c. The preparation, grading, compaction, and proof-rolling of subgrade areas for roadbed, paths, driveways, and other miscellaneous surface improvements to the elevations detailed on the Drawings.
- d. Excavation and grading required to realign and/or create ditch lines and drainage ways to route drainage to or from storm facilities as shown on the Drawings, or as necessary to maintain positive drainage.
- e. Removal of temporary backfill placed in new utility trenches above the subgrade.
- f. The removal and disposal of all undesirable and surplus materials.

Common excavation may be completed as part of utility construction prior to initiating general street excavation activities.

All subgrade areas in streets and parking lots, including utility trench restoration areas, shall be proof-rolled with a heavily loaded triaxle dump truck or other similar equipment requested by

ENGINEER prior to the placement of any fill materials or base course. ENGINEER must be present during proof-rolling to review the Work necessary for the stabilization of any unstable areas identified.

Saw cuts shall be made in existing pavement, driveways, curb and gutter, and sidewalks to allow restoration to neat straight lines. Saw cuts damaged during construction shall be recut prior to beginning restoration.

6.4 ROCK EXCAVATION, STREETS

Rock excavation for streets shall include removal of rock to subgrade elevations. Rock for excavation purposes shall be as defined in the Rock Excavation, Utilities section. Such rock shall be classified as undesirable backfill and disposed of in accordance with the Excavation to Grade section.

6.5 BORROW EXCAVATION

CONTRACTOR shall salvage suitable materials from utility and street construction activities to provide fill for street construction. Where sufficient quantities of materials suitable for street construction are not available from areas of the site, CONTRACTOR shall perform borrow excavation to make up the deficit in accordance with Section 208 of the WisDOT Specifications.

6.6 EXCAVATION BELOW SUBGRADE

ENGINEER may request the excavation of unsuitable materials in areas of unstable subgrade. The excavation of such materials, except in areas where CONTRACTOR has completed utility construction or placed street fill, shall be measured by ENGINEER for payment.

The excavation and replacement of unstable utility trench backfill and/or street fill placed by CONTRACTOR shall be at CONTRACTOR's expense.

Base course placed on unstable foundation shall be removed and replaced at CONTRACTOR's cost following excavation of the affected area.

Where requested by ENGINEER in the field, excavation below subgrade areas shall be lined with geotextile material and backfilled with 3-inch crushed stone dense graded base as specified herein.

6.7 GEOTEXTILES

Geotextile shall be placed as requested by ENGINEER to stabilize street subgrade areas. Construction fabric shall be Mirafi 600X, Propex 2006, or equal. Any alternate fabric must have ENGINEER's approval prior to use. Construction fabric shall be installed in accordance with the manufacturer's recommendations. Vibratory compaction shall not be used in the compaction of base course in areas where construction fabrics are used.

6.8 PREPARATION OF FOUNDATION

The subgrade shall be graded and rolled to provide uniform density and shall comply with the profile and cross sections contained in the Drawings. All Work shall comply with Section 211 of the WisDOT Specifications.

6.9 CRUSHED AGGREGATE BASE COURSE

Crushed aggregate base course shall consist of crushed stone and be furnished in accordance with Section 305 of the WisDOT Specifications. Crushed aggregate base course shall be placed directly on subgrade areas or on top of salvaged asphaltic millings. CONTRACTOR shall supply ENGINEER with

a current sieve analysis of the material prior to use. The material furnished shall be uniformly graded and shall conform to ASTM C33.

For street construction, base course shall be placed to the thickness shown on the standard sections. Where standard sections are not provided, a minimum of 9 inches of base course shall be provided. Base course thickness for utility trench patches in street areas shall match existing base course thickness with 12 inches minimum. The top 4 inches of base course shall be 1 1/4-inch dense grade base. The remaining base course shall be 1 1/4-inch dense grade base **OR** 3-inch dense grade base. The term Breaker Run Stone where referred to in the Drawings, Specifications, and Bid, shall mean 3-Inch Crushed Stone Dense Graded Base, unless otherwise stated in the **SPECIAL PROVISIONS**.

The finished new base course shall be wetted, fine-graded, and compacted with a self-propelled hydrostatic-drive vibratory roller in preparation for placement of new pavement. CONTRACTOR shall maintain the finished surface until pavement is placed.

SECTION 7—CONCRETE CURB AND GUTTER, SIDEWALK, AND PAVEMENT

7.1 GENERAL

The Work under this division includes the construction or reconstruction of all concrete improvements required for utility or street construction as shown on the Drawings and as specified. CONTRACTOR shall schedule its Work to comply with the Traffic Control section of Division 1.

Unless otherwise specified, all street construction Work shall conform to the WisDOT Specifications as amended herein.

7.2 CONCRETE

All concrete shall conform to the requirements as called for in Section 501 of the WisDOT Specifications, unless otherwise specified. All concrete shall be normal set air-entrained concrete with water-reducing agent with Type 1 cement capable of producing a minimum compressive strength of 4,000 psi in 28 days. Concrete shall be Grade A-FA unless otherwise specified.

As soon after finishing operations as the free water has disappeared, the concrete surface shall be sealed by spraying on a uniform coating of curing material to provide a continuous water impermeable film on the entire concrete surface.

Liquid curing compounds shall conform to the requirements of AASHTO Designation M148, Type 2, White Pigmented.

The material shall be applied to form a uniform coverage at the rate of not less than 1/2 gallon per 100 square feet of surface area.

Within 30 minutes after the forms have been removed, the edges of the concrete shall be coated with the curing compound, applied at the same rate as on the finished surface.

CONTRACTOR shall erect and maintain suitable barricades to protect the new concrete. Where it is necessary to provide for pedestrian traffic, CONTRACTOR shall construct adequate crossings. Crossing construction shall be such that no load is transmitted to the new concrete.

Any part of the Work damaged or vandalized prior to final acceptance shall be repaired or replaced at the expense of CONTRACTOR.

Pedestrian traffic shall not be permitted over new concrete prior to 72 hours after application of curing material. Vehicular traffic shall not be permitted over newly placed concrete until a minimum compressive strength of 3,000 psi has been achieved.

When the atmospheric temperature exceeds 80°F during concrete placement, ACI 305.1 shall apply in addition to all other sections of the Specifications.

Cold weather concreting shall conform to the requirements of ACI 306.1 and all other sections of the Specifications. Cold weather is defined as a period when, for more than 3 successive days, the average daily temperature drops below 40°F. The average daily temperature is the average of the highest and lowest temperature during the period from midnight to midnight. When temperatures above 50°F occur during more than one-half of any 24-hour period, the period will no longer be regarded as cold weather.

The temperature of the delivered concrete shall not exceed 85°F.

Care shall be exercised to keep mixing time and elapse time between mixing and placement at a minimum. Ready-mix trucks shall be dispatched in a timely manner to avoid delay in concrete placement, and the Work shall be organized to use the concrete promptly after arrival at the jobsite.

The subgrade, forms, and reinforcing shall be sprinkled with cool water just prior to placement of concrete. Prior to placing concrete, there shall be no standing water or puddles on the subgrade.

If approved by ENGINEER, an admixture for retarding the setting of the concrete may be used.

Concrete shall be thoroughly tamped to remove all voids. The exposed surface shall be thoroughly troweled and finished with a brush at right angles to vehicular or pedestrian traffic. All edges shall be rounded with a 1/4-inch-radius edger. Honeycombed areas shall be pointed and rubbed with mortar to provide a void-free surface.

Before final finishing, a 10-foot straight edge shall be used to check the surface. Any areas showing a variation of more than 1/4 inch from the straight edge shall be corrected. Final finishing shall be delayed a sufficient time so that excess water and grout will not be brought to the surface.

7.3 CURB AND GUTTER

Curb and gutter where required for street construction, site Work construction, or for restoration of utility construction shall be placed using forms or a machine to the dimensions and shape shown. Where curb and gutter details are not provided, curb and gutter shape and dimensions shall match existing adjacent curb and gutter. The base course beneath the curb and gutter shall be trimmed or filled as necessary to provide a full depth of curb and gutter as shown on the Detail Drawings. In the absence of Detail Drawings, depth shall be to the adjacent street subgrade with a minimum 4 inches. Prior to placement of concrete, the base shall be thoroughly compacted and moistened.

Where forms are used, they shall be of metal and of sufficient strength to resist distortion or displacement. Forms shall be full depth of the Work. Facing boards, if used, shall be built to obtain the cross section called for on the Detail Drawings. Forms shall be securely staked and held firmly to line and grade. Forms shall be cleaned thoroughly and oiled before reuse.

All curved curb and gutter shall form smooth curves and shall not be a series of chords. Radius forms shall be used for all curved curb and gutter where the radius of curvature is 100 linear feet or less.

Driveway openings in the curb line will be staked by ENGINEER in the field. The details for concrete gutter sections through a driveway are shown on the Detail Drawings.

A 3/4-inch expansion joint filler shall be placed through the curb and gutter at the radius points of all intersection curbs at storm inlets and at a maximum interval of 100 feet. This expansion joint filler shall extend through the entire thickness of concrete and shall be perpendicular to the surface and at right angles to the line of the curb and gutter.

At intervals of not more than 10 feet, a contraction joint shall be tooled to a depth of one-fifth of the total concrete thickness with a 1/4-inch-radius jointer. The contraction joint shall be at right angles to the line of the curb and gutter.

If machine-formed curb and gutter is placed by CONTRACTOR, CONTRACTOR shall create a plane of weakness at all joints that is sufficient to cause contraction cracking at the joints.

CONTRACTOR may saw contraction joints. The depth of cut shall be a minimum of one-fifth of the total concrete thickness. Sawing shall be done as soon as practicable after the concrete has set sufficiently to preclude raveling during the sawing and before any shrinkage cracking takes place in the concrete. If this results in random cracking, CONTRACTOR will be required to tool the contraction joints as specified above.

Steel separator plates of a section conforming to the curb and gutter as shown on the Detail Drawings shall be placed directly opposite all contraction joints in abutting street pavement. After separator plates have been removed, the edges of the joints shall be rounded with a 1/4-inch-radius edge. The use of steel separator plates at other locations will not be allowed.

7.4 CONCRETE SIDEWALK AND DRIVEWAYS

Concrete sidewalk and driveway construction required for a street or site work construction or for restoration of utility construction shall be placed using forms or machines to the dimensions and thicknesses shown. Where details are not provided, match existing, but sidewalks shall be no less than 5 inches thick and driveways shall be no less than 7 inches thick.

The subgrade shall be thoroughly compacted and finished to a trim firm surface. All soft or unsuitable material shall be removed and replaced with suitable material.

A minimum 4-inch-thick layer of sand, sand and gravel, or base course shall be placed under all sidewalks and driveways. This material shall be thoroughly moistened and compacted before the concrete is placed.

Where forms are used, they shall be of metal or wood and shall be of sufficient strength to resist distortion or displacement. They shall be full depth of the Work and shall be securely staked to hold the required line and grade. Where machines are used, concrete mixture shall be controlled to prevent distortion from sloughing.

Concrete sidewalk shall be segmented into 5-foot-long rectangular blocks with tooled joints. Concrete driveways shall be segmented into uniform rectangular blocks with tooled joints at a maximum spacing of 10 feet in each direction. The joint must extend at least one-fifth of the total thickness of concrete. The edges of the sidewalk along forms and joints shall be rounded with an edging tool of 1/4-inch radius. All joints shall be at right angles to the centerline of the sidewalk.

A 1/2-inch-thick asphaltic expansion joint filler shall be placed at sidewalk-driveway intersections, at sidewalk-sidewalk intersections, at the intersection with new or existing curb and gutter, around all castings, and at maximum 40-foot intervals in sidewalks.

Sidewalk cross slope shall be 1/4 inch per foot unless otherwise noted in the Drawings or requested by ENGINEER. Handicap ramps shall have a maximum slope of 1:12 and be provided with a truncated dome patterned surface meeting ADA requirements.

7.5 CONCRETE PAVEMENT FOR ROADWAYS

All concrete pavement work shall be completed in conformance with Sections 415 and 416 of the WisDOT Specifications.

SECTION 8--ASPHALTIC PAVING

8.1 GENERAL

The Work under this division includes asphaltic concrete pavement and other miscellaneous items and Work required for utility or street construction as shown on the Drawings and included in the Specifications for paving.

Unless otherwise specified, all paving shall conform to the WisDOT Specifications as amended by these Specifications and by the **SPECIAL PROVISIONS**.

ENGINEER may request samples of asphaltic concrete for testing. CONTRACTOR shall cut samples from the finished pavement where requested by ENGINEER and patch the sample area. Samples for sieve analysis and asphalt content will be taken by ENGINEER prior to placement.

8.2 ADJUSTING CASTINGS

Where upper layer paving is completed in the following construction season, castings shall initially be set to the finished lower layer, grade before lower layer is placed. Where upper layer paving and lower layer paving are completed in the same construction season, castings shall be adjusted to final grade prior to paving.

Where adjustments are required, they shall not be made more than 48 hours prior to the anticipated time of paving. CONTRACTOR shall furnish Class 1 barricades with flashers on all adjusted castings until paving has been completed.

Internal chimney seals, where required, shall be installed after castings have been adjusted to finished grade.

Valve boxes shall be adjusted by turning the box. The valve box shall be seated on the adjusting threads to prevent future settlement. The box shall be adjusted to conform to the finished pavement and shall be plumb to allow valve operation. OWNER shall be contacted by CONTRACTOR to check operation of valve after box adjustment and prior to paving.

8.3 ASPHALTIC CONCRETE PAVING

This Work shall include the construction of asphaltic concrete surface layer for areas to be paved including utility trench restoration and new street construction. All Work shall be performed in accordance with Sections 450, 455, 460, and 465 of the WisDOT Specifications, including applicable Standard Special Provisions, and as modified by **SPECIAL PROVISIONS**.

Asphaltic mix shall be LT 58-28 S for both lower layer and upper layer, unless otherwise specified otherwise in the **SPECIAL PROVISIONS**.

Aggregate for both lower layer and upper layer shall be 12.5 mm (1/2-inch nominal), unless otherwise specified in the **SPECIAL PROVISIONS**. Aggregates for upper layers less than 1.75 inches thick shall be 9.5 mm (3/8-inch nominal).

Prior to the commencement of paving, mix designs and aggregate sieve analysis shall be submitted to ENGINEER.

The pavement structure for street areas and driveways shall be in accordance with the standard sections. Where standard sections are not provided, the minimum pavement structure shall consist of 2 1/4 inches of asphaltic concrete lower layer material and 1 3/4 inches of asphaltic concrete upper layer for street and parking lot construction and 2 1/2 inches of upper layer material for bike paths, sidewalks, and asphalt driveways. Pavement thickness for trench restoration shall match adjacent pavement thickness or minimum thickness as specified for street construction, whichever is greater.

8.4 TACK COAT

Unless otherwise specified in the **SPECIAL PROVISIONS** or shown on the Drawings, CONTRACTOR shall provide tack coat between all layers of new asphalt and on existing pavement to be overlaid with new asphalt. Tack coat shall meet the requirements of Section 455 of the WisDOT Specifications.

8.5 PAVEMENT STRIPING

Where required on the Drawings or in the **SPECIAL PROVISIONS**, CONTRACTOR shall provide painted pavement markings.

Two-way traffic shall be maintained at all times.

Centerline marking shall be double 4-inch solid yellow line placed at the marked centerline.

Traffic lane marking shall be single 4-inch broken white line placed 12 feet from median curb flange or as shown, or requested by ENGINEER. Turning-lane markings and crosswalk markings shall be 8 inches and 6 inches solid white, respectively. Stop bars shall be 18 inches solid white.

All markings shall be applied in accordance with Sections 646 and 647 of the WisDOT Specifications and the Manual on Uniform Traffic Control Devices.

Markings shall be placed at locations noted within 1-inch tolerance.

SECTION 9—RESTORATION AND SITE WORK

9.1 SCOPE

The Work under this portion of the Contract includes finished grading, seeding, sodding, miscellaneous restoration, and other miscellaneous items of Work outside of the areas to be paved.

CONTRACTOR shall proceed with restoration of property and cleanup of all disturbed areas concurrently with the installation of utilities and street construction.

Where restoration is included as a portion of a Bid item, the estimated cost of restoration and cleanup, up to a maximum of 15% of each Bid item, may be withheld until final cleanup of the Work in each Bid item.

Unless otherwise specified, all restoration Work shall conform to the WisDOT Specifications and the **SPECIAL PROVISIONS**.

See **SPECIAL PROVISIONS** for availability of water for use in restoration and site Work.

9.2 SEEDING AND SODDING

Seeding and sodding shall be completed in all areas disturbed by construction other than areas with finished gravel, brick, asphalt, concrete, or decorative landscape treatments.

9.2.1 SEED RESTORATION

Unless otherwise shown on the Drawings or specified in the **SPECIAL PROVISIONS**, all areas disturbed by construction shall be restored with seed restoration. Prior to seeding, disturbed areas shall be graded to subgrade for placement of topsoil.

Topsoil shall consist of salvaged topsoil or hauled-in topsoil provided and placed in accordance with Section 625 of the WisDOT Specifications. Topsoil shall be placed to a uniform depth of 6 inches in place.

All areas requiring terrace restoration that do not require sod restoration shall be restored by seed restoration. Seed restoration shall consist of placing and grading topsoil, seeding, fertilizing, and mulching.

Seed materials and placement shall conform to Section 630 of the WisDOT Specifications for No. 40 seed unless otherwise requested by ENGINEER. CONTRACTOR shall not be responsible for watering unless otherwise specified in the **SPECIAL PROVISIONS**. Mulching shall conform to Section 627 for straw mulch.

9.3 MISCELLANEOUS RESTORATION ITEMS

CONTRACTOR shall be responsible for the proper replacement of all damaged street and highway signs and markers at all times during construction. Repair or replacement of signs shall be subject to review of ENGINEER and applicable local, state, and federal highway departments before final acceptance of the Work.

CONTRACTOR shall restore all culverts removed, damaged, or disturbed during construction to their original condition or they shall be replaced. Mailboxes shall be restored to their original locations and height. Light poles and power poles shall be restored to their original location. Underground improvements, such as water main, gas main, telephone or electric lines or drain tiles shall be restored to original condition. At all locations where utilities cross, compacted backfill shall be used from the bottom of the excavation to the top of the highest conduit. All street improvements, fences, walkways, and home and yard improvements, if destroyed, damaged, or removed, shall be replaced to original condition or better.

Where construction interrupts existing private or public sewer and water systems, it shall be CONTRACTOR's responsibility to maintain these systems or provide alternative means until the new system is placed in operation or until final acceptance of the Work, whichever occurs first. No bypassing of untreated wastewater will be allowed.

9.4.3 STRUCTURAL GEOGRID

Geogrid shall be a product with a regular grid structure of a select high-density polyethylene or polypropylene resin, UX1500MSE, as manufactured by Tensar Corporation, or equal.

Minimum allowable junction strength of the geogrid, per G.R.I.–GG2, shall be equal to, or greater than, 90% of the ultimate strength of the geogrid as per G.R.I.–GG1.

The geogrid soil reinforcement shall be laid horizontally on compacted backfill. Place the next course of modular concrete facing units over geogrid. The geogrid shall be pulled taut and anchored prior to backfill placement on the geogrid.

Geogrid reinforcement shall be continuous throughout the embedment length(s). Spliced connections between shorter pieces of geogrid will not be allowed.

SECTION 10–MISCELLANEOUS REQUIREMENTS

10.1 GRADE STAKES AND PROPERTY STAKES

CONTRACTOR shall furnish and place in position all items necessary to control the horizontal and vertical accuracy of the Work including lasers, batterboards, string lines, plummets, and graduated poles.

Where lasers are used, CONTRACTOR shall check the Work against intermediate grade stakes. Prior to initial use of the laser, CONTRACTOR shall set up laser on ground surface and check line and gradient controls. Lasers not functioning properly shall be immediately removed.

If existing property stakes, not within the limits of the trench or street slope limits, are removed or damaged by CONTRACTOR, CONTRACTOR shall bear the cost of replacement. Replacement shall be made by a legal survey performed by a licensed Land Surveyor hired by OWNER. Cost for survey shall be deducted from the Contract Price.

10.2 TESTING PIPELINES

10.2.1 GENERAL

CONTRACTOR shall conduct testing on all new pipe lines as specified below.

Utility installations that fail to meet the test limits shall be repaired in a manner acceptable to ENGINEER. In general, defective pipe installations should be uncovered and relaid, with new pipe if necessary, to repair the defect. Under no circumstances shall defects be sealed from the interior of the pipe, and only where specifically allowed by ENGINEER, shall defects be sealed from the exterior of the pipe.

10.3 TRAFFIC CONTROL

CONTRACTOR shall conduct its Work to minimize disruption of traffic on the jobsite and on adjacent streets and alleys. Where construction is in an area having only one vehicular access, CONTRACTOR shall conduct its Work to avoid or minimize blockage of such access. Blocking of streets or providing detours shall only be done if allowed in the **SPECIAL PROVISIONS**. Safe access shall be provided at all times for local traffic when CONTRACTOR is not working. CONTRACTOR shall keep local police and fire departments informed as to traffic access status as the Work proceeds.

CONTRACTOR shall furnish and install all necessary flagmen, barricades, signs, warning lights, and appurtenances to provide for safe and convenient control of traffic throughout the Project site. Barricading, signing and flagging shall be accomplished in strict accordance with the Manual on Uniform Traffic Control Devices and the WisDOT Specifications.

10.4 EROSION AND SEDIMENT CONTROL

10.4.1 GENERAL

Soil disturbances shall be controlled to minimize erosion and sediment movement. This Work shall include, but not be limited to, furnishing, installing, and maintaining silt fences, stone tracking pads, sediment traps, sediment basins, ditch checks, inlet protection, erosion mats, and temporary seeding. All labor, tools, equipment, and incidentals shall be provided to complete the Work.

Soil stabilization measures for erosion and sediment control shall consider the time of the year, the size of area being disturbed, and the site conditions. Temporary or permanent measures shall be applied as needed.

Soil erosion and sediment control features shall be constructed prior to any soil disturbances.

CONTRACTOR shall provide a "qualified" inspector to inspect erosion control and sediment controls once in place. Inspector shall have prior experience with and knowledge of installation and maintenance of erosion and pollution controls. Unless stricter requirements are mandated by DNR or by any local permits, project site erosion control inspection shall be conducted every 7 days and after each 1/2-inch rainfall, or greater. CONTRACTOR shall maintain hard copies of the inspection reports for the duration of the Project.

Any necessary repairs to erosion and sediment control facilities shall be provided within 24 hours to all corrective measures noted on the inspection reports to address pollution issues. CONTRACTOR shall submit to OWNER a written notice stating the times, dates and actions taken to rectify the defective erosion and sediment controls.

CONTRACTOR shall also make any necessary additions for erosion and sediment control as may result from on-site conditions or the progress of the Work or as may be required by DNR or OWNER.

Disturbed areas shall be stabilized with temporary or permanent measures within 14 calendar days of the soil disturbance or redisturbance.

All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization is achieved or after the temporary measures are no longer needed. All sediment accumulated in temporary and permanent facilities shall be removed and properly disposed of and the area restored.

10.4.2 EROSION MAT

Erosion mats shall be installed in accordance with manufacturer's requirements and with Conservation Practices Standards 1052 and 1053.

Place erosion mats immediately after seeding operations have been completed. Before mat placement, remove all material or clods over 1 1/2 inches in diameter and all organic material or other foreign material which may interfere with the mat bearing completely on the soil.

Any small stones or clods which prevent contact of the mat with the soil shall be pressed in the soil with a small lawn-type roller or by other means. The mat shall have its lateral edge so impressed in the soil so as to permit runoff water to flow over it.

The matting strips shall be rolled on or laid in direction of flow. Spread mat evenly and smoothly in a natural position without stretching and with all parts bearing on soil. Place blanket with netting on top.

Overlap adjacent strips at least 4 inches. Overlap strip ends at least 10 inches. Make overlaps with upgrade section on top.

Bury upgrade end of each strip of fabric or blanket at least 6 inches in a vertical slot cut in the soil and press soil firmly against the imbedded fabric or blanket.

Anchor mats in place with vertically driven staples, driven until their tops are flush with the soil. Space staples on 3-foot centers along mat edges and stagger space at 3-foot centers through the center. Place staples at 10-inch centers at end or junction slots.

Reseed areas damaged or destroyed during erosion mat placing operations as specified for original seeding.

Dispose of surplus excavated materials during erosion mat placing operation as specified for original seeding.

Following mat placement, uniformly apply water to the area to moisten seed bed to 2-inch depth and in a manner to avoid erosion.

Maintain erosion mat and make satisfactory repairs of damage from erosion, traffic, fires, or other causes until Work is accepted.

10.4.3 SILT FENCE

Silt fence shall be constructed in conformance with the criteria specified in Conservation Practice Standard 1056–Silt Fence.

10.4.4 SOIL STABILIZER

Soil Stabilizer Type A shall be applied with conventional hydraulic seeding equipment. CONTRACTOR shall take care to ensure that surrounding surfaces, structures, trees, and shrubs are not over-sprayed. Before Work is accepted any overspray must be satisfactorily cleaned from surfaces. The finished application shall be 3/16 inches to 1/4 inch thick. For permanent slope applications, CONTRACTOR shall sow seed separately before applying the soil stabilizer to ensure that the seed has direct contact with the soil.

Soil Stabilizer Type B shall be applied with conventional hydraulic seeding equipment or by dry spreading. CONTRACTOR shall apply material at the manufacturer's recommended rate. For permanent slope applications, CONTRACTOR shall apply an approved mulch when the soil stabilizer is applied or after it is applied to protect the seed.

10.4.5 INLET PROTECTION

All storm drains that are or will be functioning during construction shall be provided with inlet protection. Inlet protection shall be provided in conformance with the criteria specified in Conservation Practice Standard 1060–Storm Drain Inlet Protection for Construction Sites.

10.4.6 STONE TRACKING PADS AND TIRE WASHING

Tracking pads (tire washing stations as required) shall be installed in accordance with the criteria in Conservation Practice Standard 1057–Stone Tracking Pad and Tire Washing.

Surface water must be prevented from passing through tracking pads. Flows shall be diverted away from tracking pads and conveyed under and around them such as with culverts.

Any sediment tracked onto a road shall be removed before the end of each day. Flushing sediment shall not be allowed.

10.4.7 DITCH CHECKS

Ditch checks shall be provided in conformance with the criteria specified in Conservation Practice Standard 1062–Ditch Checks.

10.4.8 MULCHING

Mulching shall be provided in conformance with the criteria specified in Conservation Practice Standard 1058–Mulching for Construction Sites.

10.4.9 VEGETATIVE BUFFER

Vegetative buffer shall be provided in conformance with the criteria specified in Conservation Practice Standard 1054–Vegetative Buffer for Construction Sites.

10.4.10 SEEDING FOR EROSION CONTROL

Temporary seeding for erosion control shall be provided in conformance with the criteria specified in Conservation Practice Standard 1059–Seeding for Construction Site Erosion Control.

10.4.11 SEDIMENT TRAPS AND SEDIMENT BASINS

Sediment traps for erosion and sedimentation control during interim construction stages shall be installed in accordance with the criteria in Conservation Practice Standard 1063–Sediment Trap and sediment basins with the criteria in 1064–Sediment Basin. They shall be constructed prior to any disturbances and shall be placed so they function during all phases of the Work.

10.4.12 PERMIT REQUIREMENTS

Where land disturbance activities do not exceed 1 acre, CONTRACTOR shall maintain site conditions where erosion and pollution are controlled.

Unless otherwise specified in the **SPECIAL PROVISIONS**, OWNER has prepared a Storm Water Management and Erosion Control Plan in conjunction with the development of the Contract Documents and has submitted a “Notice of Intent” (NOI) for Storm Water Discharges Associated with Land Disturbing Activities. The NOI is included as an attachment to the Contract Documents. CONTRACTOR as designated operator of activities at the construction site shall be responsible for compliance with all permit conditions. This includes but is not limited to the following:

- a. Implement erosion and sediment control practices necessary to meet federal, state, and local performance standards.
- b. Receive required approvals from OWNER and regulatory agencies for any modifications to the erosion control plan necessitated by site conditions or CONTRACTOR’s operations.
- c. Provide a “qualified” inspector to inspect erosion control and sediment controls. Inspector shall have prior experience with and knowledge of installation and maintenance of erosion and sediment controls. Inspector shall be identified in writing to OWNER prior to any land disturbance.

- d. shall include inspecting erosion and sediment control facilities weekly and within 24 hours after a precipitation event of 0.5 inches or greater. CONTRACTOR shall maintain weekly written reports of all inspections.
- e. CONTRACTOR shall respond within 24 hours to all corrective measures noted on the inspection report to address pollution issues.
- f. CONTRACTOR shall submit to OWNER a written notice stating the times, dates, and actions taken to rectify the defective pollution and erosion controls.
- g. Pay any fines or other fees resulting from failure of CONTRACTOR to comply with the permit requirements.
- h. Submit a "Notice of Termination" (NOT) to DNR at end of the Project.

By execution of the Contract Documents, CONTRACTOR agrees to the following certification:

"I certify under penalty of law that I understand the terms and conditions of the Wisconsin Pollutant Discharge Elimination System General Permit that authorizes the storm water discharges associated with industrial activities from the construction site and as may be detailed in the Contract Documents. I agree to indemnify and hold OWNER and ENGINEER harmless from any claims, demands, suits, causes of action, settlements, fines, or judgments and the costs of litigation, including, but not limited to, reasonable attorney's fees and costs of investigation and arising from a condition, obligation or requirement assumed or to be performed by CONTRACTOR for storm water pollution and erosion control."

CONTRACTOR shall pay any fines or other fees resulting from failure of CONTRACTOR to comply with the permit requirements.

10.5 MISCELLANEOUS WORK

CONTRACTOR shall provide miscellaneous Work as specified in the **SPECIAL PROVISIONS**.

SECTION 11—MEASUREMENT AND PAYMENT

11.1 GENERAL

Payment for changes in quantities, as shown in the Bid and Contract, shall be made in accordance with the prices bid. No change of grade, alignment, or location shall annul or impair the Contract made and entered into relative to said Work. Payment shall be made for the quantities of each Bid item as actually installed. If a price is not provided in the Bid for an item of Work, the Work shall be considered incidental and included in adjacent items of Work.

11.2 UTILITY CONSTRUCTION

Payment for utility construction including storm sewer will be made as listed in the Bid for furnishing all materials, labor, and equipment for the complete installation of the sewers, mains, and appurtenances as shown and specified.

Where utility pipes are to be measured for payment by length and are connected by structures, the length of the utility pipe considered for payment will be measured from the inside wall to inside wall of connecting structures.

The prices bid shall include the pipe, excavation, dewatering, bedding, laying, jointing, backfilling, paving, restoration, testing, and maintenance of surface, and all other labor and material necessary for complete compliance with these Specifications. Wye and tee branches shall be included in the prices bid for sewer main unless otherwise listed in the Bid proposal form. The cost of all special connections to existing mains and appurtenances shall be included in the prices bid. Unless otherwise shown on the Drawings or specified in the **SPECIAL PROVISIONS**, the prices bid for utility construction shall include the cost of backfilling with existing materials.

11.4 INLET LEADS

The prices bid for inlet leads shall include the entire cost of all labor, excavations, backfilling, and material necessary for installation of the pipe from the center of the sewer main to the inlet box. The costs of special pipe fittings necessary to make the connections at the sewer main and at the inlet box shall be included in the prices bid.

The depth of service laterals and inlet leads will vary. The prices bid shall be for pipe installed at depths as shown on the Drawings or as requested by ENGINEER.

11.5 MANHOLES

Where manholes are not included in other Bid items, they will be paid for according to the prices bid. The prices bid for manholes shall include the cost of all material, Work, excavation, and backfilling necessary for construction of manholes as shown on the Drawings. Special bedding or pipe adjacent to manholes to standard trench width shall be included in the manhole price. The prices bid shall include the furnishing and installation of casting, steps, adjusting rings, and eccentric cone or flat slab as shown on the Drawings.

Special manholes will be paid for as shown on the Drawings and as listed in the Bid.

11.7 STORM SEWER INLETS

The prices bid for inlets shall include the entire cost of all materials, casting, adjusting rings, labor, excavation, and backfilling necessary for complete construction of the inlets as shown and as specified. The cost of inlet lead pipe will be paid for under a separate Bid item. The depth of inlet will vary from the minimum shown on Drawing 01-975-41A to the amount specified. The prices bid shall apply for all inlet depths as actually installed. The cost of concrete encasement at the sewer main, where necessary, shall be included in the prices bid for inlets.

11.8 ROCK EXCAVATION, UTILITIES

Rock excavation for utility trenches shall be paid at the price bid. Such price bid may either be per linear foot regardless of trench depth or on a cubic yard basis as measured in place.

Rock excavation shall include the cost of hauling and disposal of excavated rock and furnishing and placing backfill material and will be in addition to the prices bid for utility or street installations and appurtenances thereto.

11.9 SPECIAL BEDDING AND CONCRETE CRADLE

Where ENGINEER determines that unstable soils are present and are not CONTRACTOR's fault, payment for special bedding will be made. The price bid for special bedding shall include excavation for the bedding and furnishing and placing the bedding material.

The price bid for concrete cradle shall include forming, sheeting, excavation, and all materials for installation as shown on the Drawings. Measurement of concrete cradle will be made within the trench width for the depth as shown on the Drawings or requested by ENGINEER.

Special bedding and concrete cradle, where requested, will be paid for in addition to the prices bid for utility installations.

11.10 GRANULAR BACKFILL

The cost of granular backfill shall be included in the prices bid for utility installations and appurtenances where shown on the Drawings or specified. Where requested in the field by ENGINEER, payment will be made based on the prices bid measured in place following compaction. Costs shall include hauling away and disposing of material replaced by the granular backfill. Volume allowed for payment on a unit price basis shall not exceed an average trench width of 8 feet for the depth of fill placed.

Cover material and material placed within the zone of the trench where restoration materials are to be placed, such as topsoil and base course, shall not be included in the quantity measured for hauled-in granular backfill.

11.12 DEWATERING

The cost of removal of ground water and surface water shall be included in the prices bid for utility and street construction. No separate payment will be made for dewatering.

11.14 EROSION AND SEDIMENT CONTROL

Erosion and sediment control shall be paid at the various prices bid, if listed individually, or shall be included in the price bid for erosion and sediment control. If not included in the Bid, erosion and sediment control shall be considered incidental and included in the price bid for adjacent Work.

11.17 CLEARING AND GRUBBING

Cost for clearing and grubbing as described shall be paid for according to the Bid items included in the Bid. If individual Bid items are not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

11.18 COMMON EXCAVATION

Common excavation shall be included in the price bid for the Work, if listed separately. If individual Bid items are not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

The cost for utility installations within areas where common excavation is to be performed shall not include the cost for common excavation required in this Contract for street construction.

If listed separately, the price bid shall include excavation of materials and placement and compaction of excavated materials, except topsoil, to subgrade elevations. For lump sum bids, CONTRACTOR shall be responsible to make its own computations for common excavation in compiling the price bid. No changes in payment for common excavation will be allowed unless changes in the Work to be completed have been reviewed by ENGINEER. If not on a unit price basis, payment for any such changes shall be determined by calculating the common excavation quantity related to the change in Work and applying a unit price cost based on the lump sum bid and ENGINEER's original estimated common excavation quantity. For CONTRACTOR's information, ENGINEER's estimated quantity for common excavation will be noted in the Bid.

Saw cutting will be paid for according to the price bid, if listed separately. If individual Bid items are not provided, the cost of this Work shall be considered incidental.

11.19 ROCK EXCAVATION, STREETS

Rock excavation for grading of streets or for site work shall be paid at the price bid, and shall include the hauling and disposal of the excavated rock. Such price bid will be on a cubic yard basis as measured in place by cross sectioning the rock before and after its removal.

11.20 BORROW EXCAVATION

Cost for borrow excavation shall be paid for according to the items included in the Bid. If individual Bid items are not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

11.21 EXCAVATION BELOW SUBGRADE

Payment for excavation below subgrade will only be made if excavation below subgrade is reviewed by ENGINEER and only within the limits as requested. Excavation below subgrade shall be measured in place. The price bid for excavation below subgrade shall include all costs to excavate, remove, and dispose of undesirable material.

Cost for providing geotextile beneath excavation below subgrade shall be paid for in accordance with the price bid, if listed separately. If individual Bid items are not provided in the Bid, it shall be considered incidental and included in the price bid for adjacent Work.

11.22 GEOTEXTILES

Geotextile fabrics shall be paid at the prices bid, if listed separately. If individual Bid items are not provided in the Bid, they shall be considered incidental and included in the price bid for adjacent Work.

11.23 BASE COURSE

Payment for crushed aggregate base course shall be made at the price bid and shall include all labor, materials, and Work necessary for complete installation. Payment will be made based on weight tickets provided to ENGINEER within one week of delivery for each truckload of base course.

Fine grading shall be included in the price bid for fine grading, if listed separately. If a Bid price for fine grading is not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

Placement of base course for driveways, sidewalks, and outside the limits of a 1:1 slope from the bottom pavement or curb edge or top of shoulder edge shall not be eligible for payment unless the limits are extended on the typical section.

11.24 SALVAGED ASPHALT PAVEMENT

Cost for placement of salvaged asphalt pavement as base course shall be included in the price bid, if listed separately. This price shall include grading and compaction. Cost for salvaged asphalt milling shall include the cost of milling and transport. If a Bid price is not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

11.25 CONCRETE

The cost for removal of existing concrete pavement, curb and gutter, sidewalk, driveway, and pavement shall be paid for according to the price bid for these items. If a Bid price is not provided in the Bid, the cost for these removals shall be included in the price bid for adjacent utility and street construction Work.

The costs for meeting both cold and hot weather concrete requirements shall be included in the price bid for the Work, if listed separately. If a Bid price is not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

The cost for protecting newly placed concrete from damage will be considered incidental to the Work.

Concrete pavement shall be included in the price bid for the Work, if listed separately. If a Bid price is not provided in the Bid, the cost of this Work shall be considered incidental to adjacent utility and street construction Work.

11.26 CURB AND GUTTER

The prices bid for concrete curb and gutter, if listed separately, shall apply to both straight and curved curb and gutter (outside of median nose areas), to standard and reject curb and gutter, and to driveway sections at driveways and curb ramps (outside of median nose areas). Curb and gutter will be paid for through all inlets. The cost of base preparation, placing and finishing, jointing, tie bars, and utility markings, shall be included in the price bid for curb and gutter. The cost of curb and gutter placed in median nose areas shall be included in the price bid for median nose, if listed separately. If Bid prices are not provided in the Bid, the cost for these items shall be included in the cost for adjacent utility and street construction Work.

11.27 CONCRETE SIDEWALK AND DRIVEWAYS

Cost for new or replacement concrete sidewalk and driveway, if listed separately, shall be paid for according to the price bid. Price shall include grading, subgrade preparation, base material, placement, finish, and all other items necessary to complete the Work. If a Bid price is not provided in the Bid, the cost for these items shall be included in the price bid for adjacent utility and street construction Work.

11.28 ASPHALTIC CONCRETE PAVING

The cost for adjusting castings for new utility construction shall be considered incidental to the Work.

If existing castings are being replaced as part of the Work, the cost for adjusting the replacement castings shall be included in the price bid for the replacement castings.

Payment for adjusting new manhole castings from the finished lower course surface to finished grade and for adjusting existing castings to lower course and/or upper course grades shall be in accordance with the prices bid, if listed separately. If a Bid price is not provided in the Bid, the cost for these adjustments shall be included in the price bid for adjacent utility and street construction Work.

Providing and placing asphaltic tack coat material, if listed separately in the Bid, shall include all labor, materials, and equipment necessary to provide the tack coat as specified herein. If not included in the Bid, it shall be considered incidental to the Work.

The price bid for new asphaltic concrete lower and upper course pavement, if listed separately, will be based on the price bid for the Work. Payment will only be made for the quantities where weight tickets

for each truckload have been delivered to ENGINEER within 1 week of placement. Price bid shall include all materials, labor, and Work necessary for complete, in-place asphaltic concrete pavement, including fine grading and ramps. Asphaltic material will not be paid for as a separate item. The price bid for asphaltic pavement shall include CONTRACTOR's costs for labor, tools, and materials to cut, excavate, and match the new Work to the existing pavement. Where a unit price is not provided, the cost for paving shall be considered incidental to the Work.

11.29 PAVEMENT STRIPING

Pavement striping, if listed separately in the Bid, shall include all labor, materials, and equipment necessary to provide the markings as specified herein, including traffic control. If not included in the Bid, it shall be considered incidental and included in the price bid for adjacent Work.

11.30 SEEDING AND SODDING

Seeding and sodding (including topsoil), if listed separately, shall be paid for in accordance with the prices bid, which price shall be full compensation for preparing the earth bed including providing, grading, and rolling topsoil; furnishing and placing seed or sod, watering of sod; and for all labor, equipment, tools, and incidentals necessary to complete the Work. Where prices are not provided, the cost for this Work shall be considered incidental to the Work and included in the costs for adjacent utility and street construction Work.

11.31 MISCELLANEOUS RESTORATION

Cost for miscellaneous restoration items shall be paid for according to the prices bid, if listed separately. Where prices are not provided in the Bid, the costs shall be included in the price bid for adjacent utility and street construction Work.

11.32 BOULDER WALLS

Boulder wall will be paid for at the price bid, which price shall be full compensation for furnishing and installing the stone, for selecting the stone, preparation of the foundation, including excavation, backfilling, disposing excess materials, for all labor, tools, and equipment, and transportation necessary to complete the Work. Payment shall include the stone wall face that is buried 12 inches.

11.33 CUT BLOCK MODULAR RETAINING WALLS

Modular retaining wall will be paid for at the price bid, which price shall be full compensation for furnishing and installing the wall; preparation of the foundation, including excavation, backfilling, and disposing excess materials; and for all labor, tools, equipment, and transportation necessary to complete the Work.

11.34 PLANTINGS

Plantings, if listed separately, shall be paid for in accordance with the prices bid. The price bid for plantings shall include all items as specified herein and as shown on the Drawings. Where unit prices are not provided for, they shall be included in the cost for adjacent utility and street construction Work.

11.35 DUST CONTROL

Unless provided for in the Bid, dust control shall be considered incidental to the Work and included in adjacent or related items of Work.

11.36 SPECIAL ITEMS OF WORK, MATERIAL, AND EQUIPMENT

Payment for special items of Work, material, and equipment will be paid for as specified in the **SPECIAL PROVISIONS**.

11.37 MISCELLANEOUS WORK

Payment for miscellaneous Work will be paid for as specified in the **SPECIAL PROVISIONS**.

SECTION 12–SPECIAL PROVISIONS

The following modifies, expands, or clarifies the Standard Specifications for Utility and Street Construction. Reference is made in this Section 12 to the specific provision of the Standard Specifications being clarified, modified, or expanded. These **SPECIAL PROVISIONS** shall govern whenever there is conflict or discrepancy with the Standard Specifications and the WisDOT Specifications.

12.1 1.2 PIPE

The following pipe materials shall be used on the project:

Pipe application	Material
Storm Sewer	Reinforced Concrete
Storm Sewer Leads	Reinforced Concrete
Culvert Pipe	Reinforced Concrete

12.2 1.2.1 REINFORCED CONCRETE PIPE

For storm sewer applications, RCP shall be minimum class III

12.3 1.7 MANHOLE AND INLET CASTINGS

Inlet castings shall be Neenah R-3067 or equal with Type L vane grates where grades exceed 1% and Type R grates where grades are less than 1% or when a sump condition exists. Top of curb box portion of inlets shall be cast with the text "DUMP NO WASTE-DRAINS TO FRESH WATER".

Storm sewer manhole casting shall be Neenah R-1550 or equal as specified in Section 1.7 with Type C open grate lid. Catch basin castings shall be Neenah R-2561 inlet frame and grate or equal. Outlet Control Structure castings shall be Neenah 2561 grate only or equal.

12.4 4.3 BEDDING AND COVER

Bedding and cover for RCP storm sewer shall be Class B and shall conform to Gradation Size 57.

12.5 6.1 STREET CONSTRUCTION-GENERAL

There is no local water available. CONTRACTOR shall provide water needed via tanker trucks or other similar means.

12.6 6.9 CRUSHED AGGREGATE BASE COURSE

Dense graded base course shall be crushed stone. Base course thickness shall be 12 inches minimum under asphalt roadways unless otherwise requested by ENGINEER. On asphalt roadways, the top 6 inches of base course shall be 1 1/4-inch dense graded base course and the remaining base course shall be 3-inch dense graded base course. On asphalt path, base course shall be 6 inches of 1 1/4-inch dense graded base course.

5-foot Aggregate path shall be 3/4 inch dense graded base course.

Precast concrete panel stone base:

The 9-inch layer of crushed stone between the concrete panels shall be 3-inch crushed clear stone. The 6-inch lower layer of stone under the concrete panels shall be 3-inch crushed clear stone. The 6-inch upper layer of stone under the concrete panels shall be 3/4-inch crushed clear stone.

12.7 7.4 CONCRETE SIDEWALK AND DRIVEWAY APRONS

All new curb ramps shall include placement of detectable warning plates. Detectable warning plates shall be gray cast iron 2 feet by 4 feet with natural patina finish, Neenah R-4984, or equal. Payment for detectable warning plates will be made according to the unit prices bid.

12.8 8.3 ASPHALTIC CONCRETE PAVEMENT

Asphaltic concrete pavement shall be type 4 LT 58-28 S in the lower and upper layers for asphalt roadways and type 4 LT 58-28 S for asphalt paths. Asphalt thickness for roadways shall be 2 1/4 inches for the lower layer and 1 3/4 inches for the upper layer. Asphalt thickness for paths shall be 2 1/2 inches.

All existing pavement shall be cut on neat, straight lines and shall not be damaged beyond the limits of the excavation. should the cut edge be damaged, a new cut shall be made in neat, straight lines parallel to the original cut encompassing all damaged areas. Pavement removal shall be extended to a seam or joint if seam or joint is within 3 feet of damaged pavement. All sawcutting of asphalt pavements shall be considered incidental to adjacent work. Tack coats shall be considered incidental.

12.9 9.1 RESTORATION

Supplement to Section 9.2.1

See restoration plan for seeding locations; All disturbed areas shall be restored with topsoil, seed, and mulch. Topsoil shall be salvaged and reused onsite. A minimum of 6-inches of topsoil shall be graded and placed prior to seeding. If salvaged topsoil is deficient, contractor shall haul in topsoil at no additional cost to owner. Seed mix shall be Earth Carpet Madison Parks. Seed application rate shall be 4 to 5 lbs/1000 ft².

CONTRACTOR shall be responsible for watering of seed areas as necessary until growth is established.

12.10 10.3 TRAFFIC CONTROL

Contractor shall provide temporary traffic control as necessary to control access to the site in accordance with construction operations. Cost of temporary traffic control shall be considered incidental to adjacent work.

12.11 10.4.12 PERMIT REQUIREMENTS

Delete Section 10.4.12 of the Standard Specifications and insert the following in its place.

OWNER has prepared a Storm Water Management and Erosion Control Plan in conjunction with the development of the Contract Documents and has submitted a "Notice of Intent" (NOI) for Storm Water Discharges Associated with Land Disturbing Activities. The NOI is included as an attachment to the

Contract Documents. CONTRACTOR as designated operator of activities at the construction site shall be responsible for compliance with all permit conditions. This includes but is not limited to the following:

1. Implement erosion and sediment control practices necessary to meet federal, state, and local performance standards.
2. Receive required approvals from OWNER and regulatory agencies for any modifications to the erosion control plan necessitated by site conditions or CONTRACTOR's operations.
3. Provide a "qualified" inspector to inspect erosion control and sediment controls. Inspector shall have prior experience with and knowledge of installation and maintenance of erosion and sediment controls. Inspector shall be identified to OWNER.
4. Perform all inspection, maintenance, and record keeping activities required by the permit. This shall include inspecting erosion and sediment control facilities weekly and within 24 hours after a precipitation event of 0.5 inches or greater. CONTRACTOR shall maintain weekly written reports of all inspections.
5. CONTRACTOR shall respond within 24 hours to all corrective measures noted on the inspection report to address pollution issues.
6. CONTRACTOR shall submit to OWNER a written notice stating the times, dates and actions taken to rectify the defective pollution and erosion controls.
7. Pay any fines or other fees resulting from failure of CONTRACTOR to comply with the permit requirements.
8. Submit a "Notice of Termination" (NOT) to DNR at end of the Project.

CONTRACTOR and its subcontractors shall execute and sign the following certification:

"I certified under penalty of law that I understand the terms and conditions of the General Pollutant Discharge Elimination System Permit that authorizes the storm water discharges associated with industrial activities from the construction site and as may be detailed in the Contract Documents.

I agree to indemnify and hold OWNER harmless from any claims, demands, suits causes of action, settlements, fines, or judgments and the costs of litigation, including, but not limited to, reasonable attorney's fees and costs of investigation and arising from a condition, obligation or requirement assumed or to be performed by CONTRACTOR for storm water pollution and erosion control."

CONTRACTOR shall pay any fines or other fees resulting from failure of CONTRACTOR to comply with the permit requirements.

12.12 11.18 COMMON EXCAVATION

CONTRACTOR shall be responsible for making its own determination of the common excavation quantity in compiling the lump sum price bid.

12.13 EXISTING UTILITIES

It shall be CONTRACTOR's responsibility to verify the locations of all utilities prior to commencing with construction. It shall be CONTRACTOR's responsibility to protect all existing utilities from damage as a result of construction operations. All utilities damaged as a result of CONTRACTOR's equipment or methods shall be replaced at CONTRACTOR's expense.

12.14 CONCRETE TESTING-CURB AND GUTTER, SIDEWALK, AND DRIVEWAY APRONS

The following tests of fresh concrete shall be performed by CONTRACTOR. CONTRACTOR shall prepare, protect, transport, and have tested all cylinders at his expense.

a. Cylinders

Three test cylinders shall be made for each pour less than 100 cubic yards, and 6 test cylinders made for each pour in excess of 100 cubic yards. Each concrete mix shall be represented by at least 4 cylinders for the entire job. Concrete for cylinders shall be collected near the middle of the load and/or as requested by ENGINEER.

Cylinders shall be made and tested in accordance with ASTM C31 and ASTM C39, respectively. The cylinders must be kept moist and at temperatures between 60°F and 80°F and shall remain undisturbed and stored in a location free from vibration. In hot weather, the cylinders shall be covered with wet burlap and stored in a shaded area. It is CONTRACTOR's responsibility to provide a suitable protected location for storing cylinders on the job site.

After 24 hours, the cylinders shall be transferred to an independent testing laboratory acceptable to OWNER. The cylinders shall be packed in sawdust or other cushioning material for transit to avoid any bumping or jarring of the cylinders.

Cylinders shall be broken at 7 and 28 days or as requested by ENGINEER. Test result shall be mailed immediately and directly to ENGINEER. Test data shall include date and location of pour and concrete mix used.

b. Slump Test

CONTRACTOR shall make one slump test at the beginning of all pours with two tests being made for all pours in excess of 25 yards or as requested by ENGINEER. Slump tests shall conform to ASTM C143. CONTRACTOR shall furnish ENGINEER with a slump cone and rod to use in performing extra tests.

c. Air Test

When air-entrained concrete is used, the air content shall be checked by CONTRACTOR at the beginning of all pours with at least two checks being made for all pours in excess of 25 cubic yards.

The air contents shall be checked using the pressure method (ASTM C231). The pocket-sized alcohol air indicator shall not be used unless it is first used in conjunction with the pressure method test.

CONTRACTOR shall furnish and make available to ENGINEER all necessary equipment for making extra tests of the air content.

All costs of additional testing and sampling of fresh or hardened concrete needed because of suspected or actual violation of the specifications shall be borne by CONTRACTOR.

A record is to be kept of all concrete work. The record shall include the date, location of pour, concrete mix, slump, air content, test cylinder identification, concrete temperature, and ambient air temperature. In addition, for cold weather concreting, the record shall include the daily maximum-minimum thermometer readings of all thermometers during the entire curing period for all concrete pours. The project representative will keep this record, and CONTRACTOR shall assist in obtaining needed information.

12.15 EBS BACKFILL

Supplement to Section 6.6.

Undercut backfill material shall be 3-inch dense graded crushed stone base in accordance with Section 305 of the Standard Specifications. Payment for undercut excavation and backfill will be made according to the unit prices bid.

12.16 SILT LOG

Silt log shall conform to Conservation Practice Standard 1071-Interim Manufactured Perimeter Control and Slope Interruption Products, for Log-Type Products.

12.17 CONCRETE PAD AND ELECTRICAL PEDESTAL REMOVAL

The removal of Concrete Pads and Electrical Pedestals as detailed in the Drawings shall be included as part of Common Excavation.

Concrete Pads shall be removed to full depth, length, and width within the slope intercept.

Electrical Pedestals shall be removed completely to a depth of one foot below proposed grade.

12.18 FINAL RESTORATION

CONTRACTOR shall complete all restoration work before the surface layer of pavement is paved on project. Restoration work includes all topsoil placement, seeding, and any other work that requires the use of machinery being driven on the new pavement.

12.19 BIORETENTION BASIN

Where shown on the Drawings, CONTRACTOR shall construct bioretention basin per WDNR Technical Standard 1004-Bioretention for Infiltration. Bioretention basin shall meet the dimension requirements and material layers as shown in the Bioretention Basin layout and detail sheet in the Drawings. Bioretention basin shall be composed of engineered soil, pea gravel, and 3/4-inch clear stone.

Engineered Soil shall meet the following requirements:

Engineered Soil Mix: The engineered soil mix shall meet the following percentages. The engineered soil mix shall be free of rocks, stumps, roots, brush, or other material over 1-inch in diameter. No other material shall be mixed with the planting soil that may be harmful to plant growth or prove a hindrance to planting or maintenance. The engineered soil mix shall have a pH between 5.5 and 6.5.

Engineered Soil Component	Percentage Composition (By Volume)
Mineral (SiO ₂) Sand	70% to 85%
Compost	15% to 30%

Sand Specifications: The sand shall meet one of the following gradation requirements:

- USDA Coarse Sand (0.02 to 0.04 inches).
- ASTM C33 (Fine Aggregate Concrete Sand).
- Wisconsin Standards and Specifications for Highway and Structure Construction, Section 501.2.5.3.4. (Fine Aggregate Concrete Sand) 2005 Edition, or an equivalent as approved by the administering authority.

The sand component shall consist of mineral sand that is at least 97% SiO₂. Substitutions, such as calcium carbonated sand, dolomitic sand, manufactured sand, or stone dust are not allowed. The sand shall be washed to remove clay and silt particles and well-drained prior to mixing. Existing on-site sand may be used if meeting the above specification.

Compost Specifications: The compost shall meet the requirements of Wisconsin DNR Technical Standard (S100) as follows:

- Particle Size: 98% of the compost shall pass through a 0.75-inch screen.
- Physical Contaminants: Less than 1% combined glass, metal, and plastic.
- Organic Matter/Ash Content: At least 40% organic matter; less than 60% ash content.
- Carbon to Nitrogen Ratio: 10-20:1 C:N ratio.
- pH: Between 6 and 8.
- Soluble Salts: Electrical conductivity below 10 dS m⁻¹ (mmhos cm⁻¹).
- Moisture Content: Between 35% and 50% by weight.
- Maturity: The compost shall be resistant to further decomposition and free of compounds, such as ammonia and organic acids, in concentrations toxic to plant growth.
- Residual Seeds and Pathogens: Pathogens and noxious seeds shall be minimized.
- Pathogens: The compost shall meet the Class A requirements for pathogens as specified in NR 204.07(6)(a), Wis. Adm. Code.
- Other Chemical Contaminants: The compost shall meet the high quality pollutant concentrations as specified in NR 204.07(5)(c), Wis. Adm. Code.

CONTRACTOR shall also provide 6-inch-diameter perforated underdrain as shown in the Drawings. Underdrain shall be corrugated polyethylene drainage pipe conforming to AASHTO M 252, type CP and AASHTO M 294, type CP with class 2 perforations. The pipe shall be wrapping in a geotextile fabric sock of knitted, woven, or non-woven fibers of polyester, polypropylene, stabilized nylon, polyethylene or PVC. All drain tile shall meet the requirements of Section 612 Underdrains in WisDOT's Standard Specifications. All underdrain shall be connected to the proposed two-foot-diameter catch basin outlet control structure.

CONTRACTOR shall install a vertical, connecting standpipe to serve as a clean-out port for the underdrain pipe. The clean-out shall be rigid, non-perforated PVC pipe, a minimum of 6-inches in diameter and a screw cap that terminates at the flow line of the bioretention swale.

Compaction Avoidance: Compaction and smearing of the soils beneath the floor and side slopes of the bioretention area and compaction of the soils used for backfill in the soil planting bed shall be minimized. Acceptable equipment for constructing the project includes excavation hoes, light equipment with turf-type tires, marsh equipment, or wide track loaders.

Compaction Remediation: If compaction occurs at the bottom of the engineered soil, the soil shall be re-fractured to a depth of at least 12 inches. If smearing occurs, the smeared areas of the interface shall be corrected by raking or rototilling.

Suitable Weather: Construction shall be suspended during long periods of rainfall or snowmelt. Construction shall remain suspended if ponded water is present or if residual soil moisture contributes significantly to the potential for soil smearing, clumping, or other forms of compaction.

Placement of Engineered Soil:

Prior to placement, the engineered soil shall be premixed and the moisture content shall be low enough to prevent clumping and compaction during placement.

The engineered soil shall be placed in multiple lifts, each approximately 12 inches in depth.

Steps may be taken to induce mild settling of the engineered soil bed as needed to prepare a stable planting medium and to stabilize the ponding depth. Vibration plate-style compactors shall not be used to induce settling.

Engineered soil shall be placed in the final contour elevations shown on the Drawings. Three inches additional engineered soil shall be placed above final contours shown on the Drawings to account for potential settlement of the underlying engineered soil.

Bioretention basins (2) shall include any excavation required for the bioretention basin profile, engineered soil, pea gravel, clear stone, 5-inch underdrain tile, filter fabric, clean outs, 2-foot-diameter catch basin outlet structure, Neenah R-2561 casting, connections to proposed inlets and any other tools, materials or labor needed to construct the bioretention basins. Seed restoration, turf reinforcement mat, erosion mat, storm sewer, turf reinforcement mat, inlets, and apron endwalls, shall be paid for separately.

12.20 HERBACEOUS PLUGS

These specifications, along with contract drawings and lists of plant materials, apply to those items necessary for and incidental to the preparation, execution, completion, and maintenance of the landscape planting activities (excluding lawn areas) specified in the contract. The scope includes the planting of perennials and maintenance activities.

Quality Assurance

Qualifications:

- CONTRACTOR qualifications: A qualified landscape installer whose work has resulted in successful completion of a minimum of three projects similar in size and scope to this project.
- CONTRACTOR's field supervision: CONTRACTOR shall maintain an experienced full-time supervisor on project site when planting is in progress.
- CONTRACTOR's meeting attendance: CONTRACTOR and landscaping subcontractor, where applicable, shall attend construction meetings at the request of ENGINEER. CONTRACTOR and landscaping subcontractor, where applicable, shall attend a pre-construction meeting.

Delivery, Storage, and Handling:

- CONTRACTOR shall deliver, store, protect, and handle products using good horticultural practices.
- CONTRACTOR shall deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- CONTRACTOR shall protect plants until planted.
- CONTRACTOR shall deliver plant materials immediately prior to placement. Plants shall be kept moist.

Coordination: Coordinate work and access to the site with the work and access requirements of all other Contractors prior to the start of work, especially when such work will connect to or be connected to other work.

Measurement

Plants shall conform to the measurements specified within the contract documents. No plant shall be less than the minimum size specified.

Herbaceous perennials shall be measured by pot size, not by top growth.

Inspections

CONTRACTOR shall be responsible for all certificates of inspection of plant materials that may be required by federal, state, or other authorities to accompany shipment of plants.

ENGINEER reserves the right to accept or reject all plants CONTRACTOR intends to use. Any plant delivered to the site that is damaged or desiccated, possesses a dried root system, or does not meet the material specifications shall not be accepted. No payment shall be made for any unsatisfactory materials. All rejected plant material shall be removed from the project site by the close of the working day.

Notice shall be given to ENGINEER not less than 72 hours before the plant material is to be on the project site. Observations of the plant materials, including root systems, may be made by ENGINEER.

Substitutions

The substitutions of plant materials is not permitted unless authorized in writing by ENGINEER. If written proof is submitted by CONTRACTOR that a plant of specified species, variety, or size is unavailable, consideration will be given towards the nearest available size or variety, or towards an alternate species selection, with a corresponding adjustment of the contract price.

Larger plants than those specified can be used if acceptable to ENGINEER. The use of larger plants shall not increase the contract price. The container size of the larger specimen shall be proportionally increased, relative to the specified size.

Delivery, Storage, and Handling

Plant Transport:

- All transport/shipping/handling methods and materials shall be performed according to best nursery and horticultural practices. Each shipping container shall be clearly labeled as to species, quantity, lift date, and packing date. For non-local sources, transit time from the plant source/nursery to the construction site shall be direct and shall not exceed 24 hours.
- Non-local plants shall be scheduled for shipping so the plants arrive at the construction site no earlier than 24 hours prior to the anticipated planting date for those specified plants. If acceptable to ENGINEER, the period of on-site storage may be extended if CONTRACTOR can demonstrate to ENGINEER the ability to store the materials on-site without damaging the viability of the plant materials. However, it is the sole responsibility of CONTRACTOR to ensure the plants are properly stored.
- CONTRACTOR shall arrange for the acceptance and unloading of plants at the project site.
- All plant materials, shipments, and deliveries shall comply with current state and federal laws and regulations governing the inspection, shipping, selling, and handling of plant stock. If required by law or regulation, a certificate of inspection, or a copy thereof, for injurious insects, plant diseases, and other plant pests shall accompany each shipment or delivery of plant material. The certificate shall bear the name and address of the source of the plant stock.

Plant Handling: If the plants are not planted on the day of delivery, the plants shall be stored on-site in a shaded location or in a well-ventilated vehicle during which time the material shall be kept from freezing and kept covered, moist, cool, and out of the wind and sun.

Planting Schedule

Planting Schedule: No later than 45 days prior to the estimated planting date, CONTRACTOR shall submit to ENGINEER an estimated planting schedule. This estimated schedule shall include the plant shipping dates from the suppliers, plant delivery dates at the construction site, planting dates for each shipment, plant quantities, and an estimate of the planting crew size. The use of multiple plant shipping dates shall be acceptable. This schedule shall be subject to review of ENGINEER. CONTRACTOR shall adhere to this schedule unless there are factors beyond CONTRACTOR's control such as inclement weather.

Planting Season (Window): The planting window for non-dormant plants shall be from August 15 to September 15 provided the ground is not frozen. Alterations to the planting window may be made, so long as it is agreeable to ENGINEER and CONTRACTOR. There shall be no planting outside the specified windows except as accepted in writing by ENGINEER.

Plant Installation Period: After plant delivery to the construction site, plant material shall be installed within 34 hours. Shipments of plant materials may be staggered over several days.

Job Conditions

CONTRACTOR shall protect all plants, lawns, and grass areas from damage at all times. Damaged plants, lawns, or grass areas shall be replaced or treated as required to conform to specifications herein for fresh stock.

Work areas shall be kept clean and orderly during the installation period. Under no condition shall debris from planting activities result in a safety hazard on-site or to adjacent off-site property.

Damage to lawns or grass areas incurred as a result of replacement operations shall be repaired by CONTRACTOR at no cost to OWNER.

Herbaceous Plant Plugs

CONTRACTOR shall provide non-dormant live plant container stock ("plugs") of the species and quantities indicated on the planting schedule. The plugs shall have been grown in 1.25-inch-square, 2.25-inch-deep container (or larger size when appropriate for the species or where indicated) long enough and under the proper conditions for new roots to have developed so the full volume of the soil mass shall retain its shape and hold together when removed from the container and lightly shaken. Plants that can be removed from the pots by holding the stem growth and gently pulling on the pot or plants whose root system does not occupy the full volume of the pot may be rejected without compensation. All non-dormant plants shall be healthy and vigorous with well-developed leaf, stem, and root systems. The minimum stem height of the plant stock shall be 10 centimeters. Roots shall be fresh, turgid, and not brittle.

Herbaceous plant plug source: Plant materials shall be from Wisconsin or Minnesota nurseries specializing in growing native species from Wisconsin genotypes or similar nurseries in Iowa or parts of Illinois, Zones 4 or 5a of the USDA Plant Hardiness Zone Map, miscellaneous publication 1475, revised 1990. The Wisconsin Department of Natural Resources maintains a list of native plant nurseries and suppliers on-line at www.dnr.state.wi.us.

Substitutions of ecologically equivalent native species will be allowed only upon approval by the project engineer. Information documenting the above mentioned specifications and any to follow must be presented to ENGINEER five days prior to any seeding or planting activities.

The seed mixes or seed materials and planting recommendations are available from individual vendors. Partial list of suppliers or restoration seed mix vendors is shown below:

Applied Ecological Services, Inc.
17921 Smith Road
P.O. Box 256 Brodhead, WI 53520
(608) 897-8641

Prairie Ridge Nursery RR 2,
9738 Overland Road
Mr. Horeb, WI 53572
(608) 437-5245

La Crosse Seed
2901 Packers Avenue
Madison, WI 53707
(608) 249-9291
Country Wetlands Nursery
Box 126 Muskego, WI 53150
(414) 679-1268

Cardno, J.F. New
708 Roosevelt Road
Walkerton, IN 46574
(574) 586-3400

Prairie Moon Nursery
32115 Prairie Lane
Winona, MN 55987
(507) 452-1362

Prairie Seed Source
P.O. Box 83
North Lakes, WI 53064
(414) 674-7166

Wildlife Nurseries
P.O. Box 2724 Oshkosh, WI 54903
(414) 231-3780

Prairie Nursery
P.O. Box 306 Westfield, WI 53964
(800) 476-9453

Prairie Restorations, Inc.
P.O. Box 327 Princeton, MN 55371
763-389-4342

Genesis Nursery
23200 Hurd Road
Tampico, IL 61283
(815) 438-2220

Marshland Transplant Aquatic Nursery
P.O. Box 1 Berlin, WI 54923
(920) 361-4200

Ion Exchange
1878 Old Mission Drive
Harpers Ferry, IA 52146-7533
(800) 291-2143

Kester's Wild Game Food Nurseries, Inc.
P.O. Box 516 Omro, WI 54963
(414) 675-2929

To increase genetic diversity and improve success rates of revegetation efforts, all stock used for revegetation shall be certified prior to installation as having a genetic point of origin within 200 linear statute miles of the site. Materials should be procured from sources as near to the site as possible.

All plugs shall be free of seed and vegetative propagules of any weeds. The species, planting density, and spacing of plugs are specified.

Wetland Type Plants: Install the following species of plants/plugs over the entire basin or the compensatory storage areas at 24-inch centers and/or patches. An equal number of each of the following species shall be planted based on site-specific conditions.

Wet-mesic slopes above ordinary water:

1. Aster novae-angelica—NE Aster.
2. Carex typhina—Common Cattail/Sedge.
3. Carex frankii—Franks Sedge).
4. Heliopsis helianthoides—Early Ox-Eye Sunflower.
5. Liatris spicata—Marsh Blazing Star.
6. Solidago riddellii—Riddell's Goldenrod.

When possible, prepare the planting areas by flooding the planting site making sure the soils is saturated. To plant, push the plugs or plants into planting holes and pack around it by hand. Make sure all roots are covered with soil, without void spaces, and firmly in contact with the soil.

Wetland plants will typically spread about 9 to 12 inches in a full growing season. Plant wetland species on 18-inch to 24-inch centers unless otherwise noted. If planting areas are restricted based on site-climatic conditions, plant plugs on 18-inch centers in patches. Plant patches that are about 10 feet square or in diameter. Space the patches about 10 feet apart. The patches can be planted to different species according to the hydrology. Unless approved, no plants shall be planted in standing water. The species selection and arrangement should mimic natural conditions and enhance water quality, wildlife value, or aesthetics.

Herbicides/Pesticides

Nonselective Herbicides: EPA registered and approved, glyphosate herbicide intended for vegetation removal while preparing planting beds (Round-Up, Rodeo, Ranger, or Kleen-Up) and recommended surfactants and adjuvants.

Selective Herbicides: EPA registered and approved specified herbicide such as sethoxydim intended for grass removal, and clopyralid ("Stinger") intended for robust broadleaf plants like Canada thistle, and recommended surfactants and adjuvants.

Water

Water shall be fresh water that is free from toxic substances and chemicals that may be injurious to plant growth. Trucks, hoses, and other watering equipment required to transport water from a source to the planting area shall be included as part of the work in this section, and payment shall be incidental to this item.

General

During all phases of this work, including transport and on-site handling, all plant materials shall be carefully handled and packed to prevent injuries and desiccation. During transit and on-site handling, the plant materials shall be kept from freezing and kept covered, moist, cool, out of the weather, and out of the wind and sun. Plants not properly transported, packed, or handled as solely determined by ENGINEER may be rejected by ENGINEER without compensation and shall be removed from the site by the end of each workday. Plants shall be watered to maintain moist soil and/or plant conditions until accepted.

No planting shall occur until the topsoil and finish grading meet the specifications as outlined in Division 20 and all the soil testing results have been reviewed by CONTRACTOR, the landscaping subcontractor (if applicable), and ENGINEER and soil amendment actions have been taken.

Pre-Planting Weed Control

If the vegetative cover consists of more than 25 percent weeds at any point prior to planting the specified stock, CONTRACTOR shall treat the vegetation with a glyphosate-based herbicide at the rate recommended on the label at two-week intervals until the weed cover, including weed seed sprouts, is reduced to less than 5% of the total vegetative cover, dead or alive.

Herbicide

Herbicides shall be applied per the product manufacturer's label. Seeding or planting following herbicide application shall occur after the time period specified by the product manufacturer.

Preparation

CONTRACTOR shall protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

CONTRACTOR shall provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

CONTRACTOR shall notify ENGINEER in writing of any soil conditions, obstructions, or concerns about water drainage deemed detrimental to healthy plant growth. These conditions or obstructions shall be detailed, along with any suggestions for correction, removal, or relocation. When soil conditions, poor drainage, or other obstructions are encountered that cannot easily be remedied, ENGINEER shall designate alternate locations, and shall bear the additional costs of such relocation.

Layout

Prior to planting, CONTRACTOR shall stake out all the planting zones as specified and shown on the drawings. A layout stake shall be placed at each corner of each planting zone. The stakes shall be

numbered or coded indicating the appropriate zones and species to be planted. Plants shall be arranged in staggered rows with plants spaced at 12 inches on center. Refer to the typical herbaceous plug planting detail in the project drawings.

CONTRACTOR shall notify ENGINEER so he may review staking layout prior to planting.

CONTRACTOR shall notify Digger's Hotline (1-800-242-8511 statewide) after staking to verify location of all underground utilities prior to planting.

Setting Plants

All stock shall be planted upright. Adequate care shall be taken to avoid bending and/or breaking plant stems and leaves of non-dormant bareroot stock and plugs.

Plants may be set by hand or using a mechanical or Ellis transplanter.

Planting Depth for Plugs: The individual plugs shall be planted in the soil at least 1 inch deeper than grown in the nursery or source location or to a depth that will ensure the top of the bulb, corm, tuber, rhizome, and the attached rootmass lies at least 1 inch below the soil surface. The maximum planting depth shall be 2 inches deeper than grown in the nursery.

In order to place the plants at the appropriate depth in the soil, the soil surface shall be opened with a tile spade or other appropriate hand or power tool.

All plants planted in nonsaturated soil conditions shall be watered during or immediately after planting in order to create moist soil within the rooting zone of the plants.

Clean-Up and Protection

CONTRACTOR shall promptly remove soil, rejected plants, and debris created by planting activities from the site.

CONTRACTOR shall clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

Initial Acceptance

All plant material shall be evaluated for Initial Acceptance 60 days after all the plant materials have been satisfactorily installed.

Plant materials determined to be dead or seriously weakened shall not be accepted with the exceptions noted herein.

Plant materials found dead, absent, seriously damaged, weakened or desiccated, floating on the water surface, deposited along the edge of the swale, exposed on soil, or within the water column shall be replanted or replaced with new materials prior to Initial Acceptance at no additional cost to OWNER. If new materials are required in order to achieve Initial Acceptance, such materials shall be acquired and installed by CONTRACTOR within 14 calendar days at no additional cost to OWNER. Replacement plant material shall be installed prior to Initial Acceptance of the entire planting.

No compensation shall be made for the installation or the cost of the material for plants not properly planted, including those plants whose roots are exposed at the time of acceptance or those plants subjected to desiccation.

Maintenance

During the 60-day Initial Acceptance period, CONTRACTOR shall be responsible for ensuring that the planting areas are kept moist as appropriate. The application of water shall not cause soil erosion or plant displacement. Any displaced plants or eroded soil shall be placed or repaired by CONTRACTOR immediately at CONTRACTOR's expense.

During the Warranty period beginning with Initial Acceptance, CONTRACTOR shall provide weed inspections and control as follows:

- Inspect the seeded areas at a sufficient frequency to ensure that weeds do not re-seed themselves. Minimum inspection frequency shall include a spring, summer, and fall inspection. CONTRACTOR shall notify ENGINEER of the inspection no less than 48 hours prior to an inspection.
- Implement the appropriate weed control approaches within 7 calendar days of the inspection, as conditions allow. If weather and/or site conditions are such that performing the maintenance within the 7 calendar days of inspection would cause unnecessary damage to the site, CONTRACTOR shall notify ENGINEER and provide a schedule for implementing the maintenance protocols.
- Maintain the weed coverage at less than 5% of the planted area.

Warranty

CONTRACTOR shall warranty for the period of one growing season, beginning with the Initial Acceptance.

- In all other planting areas, installed plant coverage or survival shall be as follows: At least 75% at the end of the Warranty Period. If coverage is less than the specified coverage, live plants shall be planted to achieve the specified coverage unless ENGINEER deems that the seeded species will provide sufficient additional coverage. Species and mix of the replacement plants shall be as determined by ENGINEER in consultation with CONTRACTOR at no additional cost to OWNER.
- At the end of the Warranty Period, the weed coverage in the planted areas shall be less than 10%. If weed coverage is greater than coverage specified, CONTRACTOR shall hand weed or herbicide to provide a weed coverage meeting the Warranty performance criteria.
- Replacement with live plants of weeded/herbicide areas shall be completed. Species and mix of the replacement plants shall be as determined by ENGINEER in consultation with CONTRACTOR at no additional cost to OWNER. Replacement plants shall be subject to the Initial Acceptance period.

12.21 PAVEMENT MARKINGS AND SIGNAGE

All new pavement markings and signage will be completed and installed by OWNER.

12.22 TREE AND BRUSH REMOVAL

All trees and brush within the slope intercepts shown on the Drawings, except those called out to be protected, shall be completely removed from the site and disposed of (including stumps). Cutting and grinding of tree stumps will not be treated as tree removal.

END DIVISION 20

Specifications for Vault Toilet Building

PART 1 – GENERAL

1. SCOPE
 - 1.1. Construction and onsite placement of a prefabricated precast concrete vault toilet building.
2. MANUFACTURER
 - 2.1. Manufacturer shall be Huffcutt Concrete or a pre-approved equal.
 - 2.2. Manufacturer shall be an NPCA Certified Plant or equal with verifiable references demonstrating quality, design and service upon request.
 - 2.3. Manufacturer will provide a written warranty providing 20 years structural, manufacturer's warranty on all hardware and components not produced at precast concrete manufacturer's plant, and 3 years against defects in paint, caulk, and grout.
3. DESIGN
 - 3.1. Building will be manufactured using precast concrete including the roof. Building's structural design will be relevant to the region and properties associated with its final placement. Design will also meet ADA and building code requirements.
4. SUBMITTALS
 - 4.1. Manufacturer shall provide submittals and engineering if requested.

PART 2 – PRODUCTS

1. MATERIALS
 - 1.1. Doors and Frames
 - 1.1.1. Doors shall be 18ga galvanized metal, louvered with 16ga frames. Doors and frames shall include one coat of rust inhibitive primer and two finish coats of enamel paint.
 - 1.2. Door Hardware
 - 1.2.1. Aluminum drip cap. Reese or equal.
 - 1.2.2. Door closure with hold open. Cal-Royal or equal.
 - 1.2.3. Stainless hinges with non-removable pin. Cal-Royal or equal.
 - 1.2.4. Grade 1 lockset. Function and keying to be verified with owner.
 - 1.2.5. Brush style sweep. Reese or equal.
 - 1.2.6. ADA compliant threshold. Reese or equal.
 - 1.3. Windows
 - 1.3.1. Vinyl frame, bug screen and security mesh. Parco or equal.
 - 1.3.1.1.
 - 1.4. Interior Hardware
 - 1.4.1. Stainless 3 roll toilet paper dispensers.

- 1.4.2. ADA toilet stalls shall have (1) 18" stainless vertical grab bar, (1) 36" stainless horizontal grab bar, (1) 42" stainless horizontal grab bar.
- 1.4.3. Stainless floor mounted urinal.
- 1.4.4. Plastic handicap toilet riser. Romtec or equal.
- 1.5. Vent Pipes
 - 1.5.1. Vent pipes shall be 12" and made of HDPE. Vent pipe shall extend approximately 36" above the roof line.
- 1.6. Access/Clean Out Hatch
 - 1.6.1. Access/clean out hatch shall have a 24" x 24" clear opening, made from aluminum and be rated for a 300 psf pedestrian load. Cover shall be hinged with a kickstand to prevent accidental closing. Cover shall include a slam lock with T handle for locking.
- 1.7. Sealers
 - 1.7.1. Floor shall be sealed using a deep penetrating, high alkali resistant, low volatility product. TK-290 or equal.
- 1.8. Caulks and Grout
 - 1.8.1. All joints between precast panels shall be caulked using a durable, flexible polyurethane sealant. BASF Sonolastic NP-1 or equal.
 - 1.8.2. Weld plate panel connections shall be grouted flush with interior wall surface. Speed Crete Red Line or equal.
- 1.9. Vault
 - 1.9.1. Vault shall be lined with a factory installed membrane. Marflex 5000 or equal.
- 2. FINISHES
 - 2.1. Interior
 - 2.1.1. Smooth trowel finish.
 - 2.2. Exterior
 - 2.2.1. Exterior wall appearance to be approved by owner using an architectural form liner.
 - 2.2.2. Roof shall be cedar shake architectural form liner.
 - 2.3. Paint
 - 2.3.1. Interior
 - 2.3.1.1. Wall panels shall be primed with a premium quality water based acrylic bonding primer moisture and alkali resistant. Finish coat shall be a high performance acrylic enamel.
 - 2.3.2. Exterior
 - 2.3.2.1. Roof shall be covered with a quality 100% acrylic satin paint. Owner to determine color.
 - 2.3.2.2. Walls shall be covered with a quality concrete stain. Owner to determine color.
 - 2.3.2.3. Doors shall be covered using 2 coats of a high performance 100% acrylic satin enamel. Owner to determine color.

Part 3 – Execution

1. PRECAST CONCRETE VAULT TOILET BUILDING

1.1. Building manufacturer shall construct, assemble, and paint at their plant so that it may be transported to the jobsite as a finished module and placed using a crane.

2. ONSITE

2.1. Contractor shall provide adequate access and a level pad for the crane and semis to sit side by side under their own power. Working radius shall be 35' from center pin on crane.

2.2. Contractor shall provide all excavation, backfilling, and finish grading for vault toilet building. In addition contractor shall provide suitable bedding of sand or granular material for the vault.

2.3. Manufacturer will install HDPE vent pipes and perform any shipping and handling adjustments and repairs.

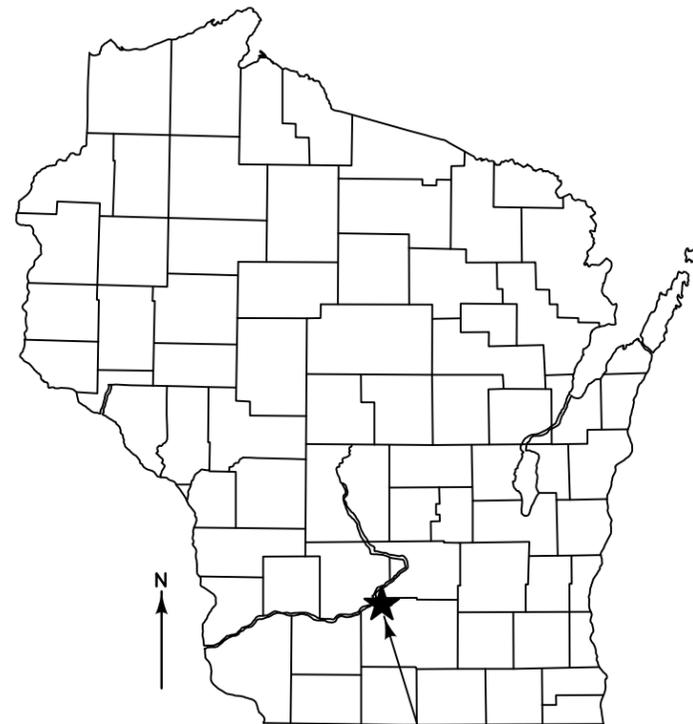
LUSSIER COUNTY PARK BOAT LAUNCH

FOR THE

DANE COUNTY PARKS DIVISION

DANE COUNTY, WISCONSIN

MAY, 2017

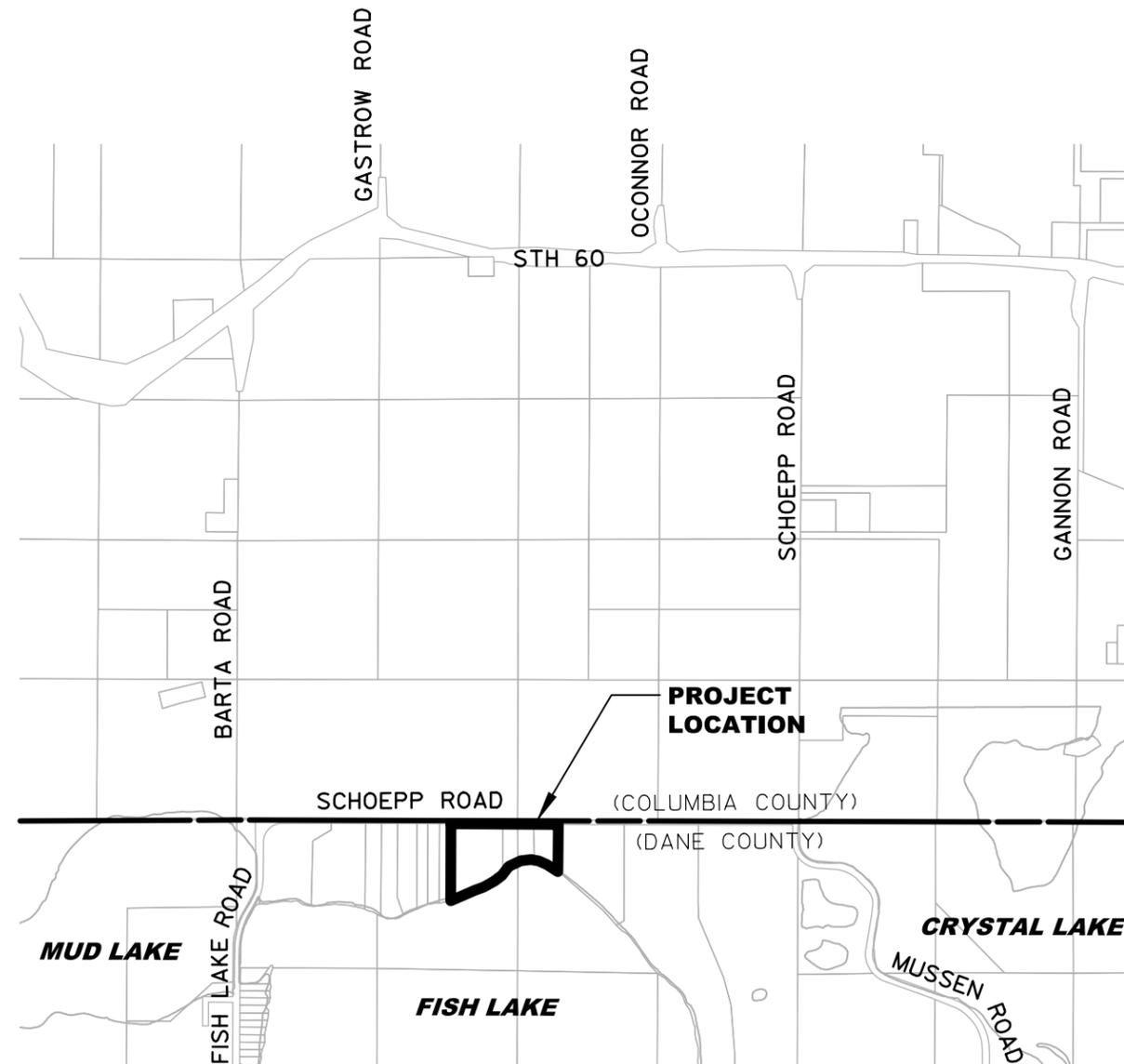


FISH LAKE

PROJECT LOCATION
NO SCALE

910 West Wingra Drive
Madison, WI 53715
608-251-4843
608-251-8655 fax
www.strand.com

CONTRACT NO. 1-2017



AREA MAP
NO SCALE

LIST OF DRAWINGS

SHEET NO.	DRAWING TITLE
1	TITLE
2	STANDARD NOTES, SYMBOLS, AND TYPICAL SECTIONS
3	PROJECT OVERVIEW AND DEMOLITION PLAN
4-5	BOAT LAUNCH DETAILS
6	BOARDING DOCK DETAILS
7	EROSION CONTROL DETAILS
8-9	TEMPORARY EROSION CONTROL PLAN
10-11	SITE GRADING PLAN
12-13	PERMANENT EROSION CONTROL AND RESTORATION PLAN
14-15	BIORETENTION BASIN LAYOUT AND DETAILS
16-21	PLAN AND PROFILE
22-23	PAVEMENT MARKING AND SIGNAGE PLAN
24-38	ACCESS ROAD - CROSS SECTIONS
39-40	LAUNCH RAMP - CROSS SECTIONS
41-43	PARKING LOT - CROSS SECTIONS
44-52	PATH - CROSS SECTIONS



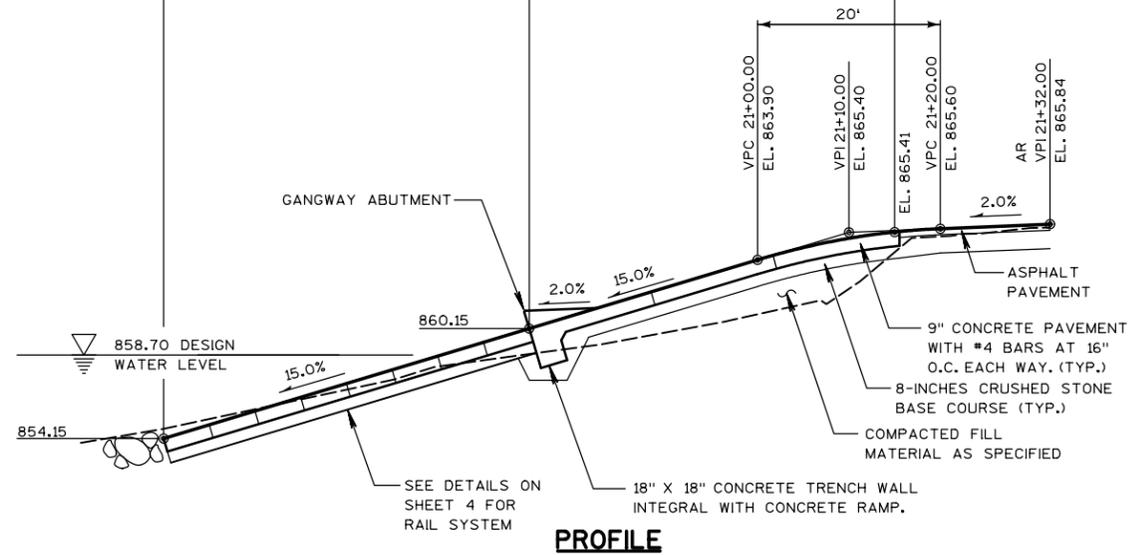
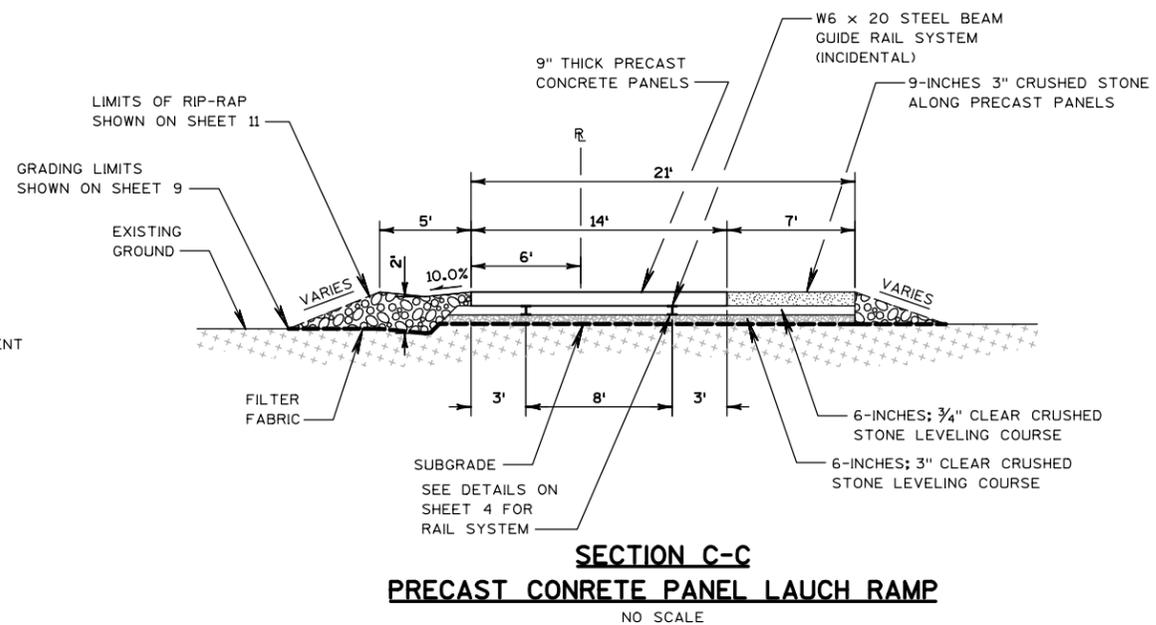
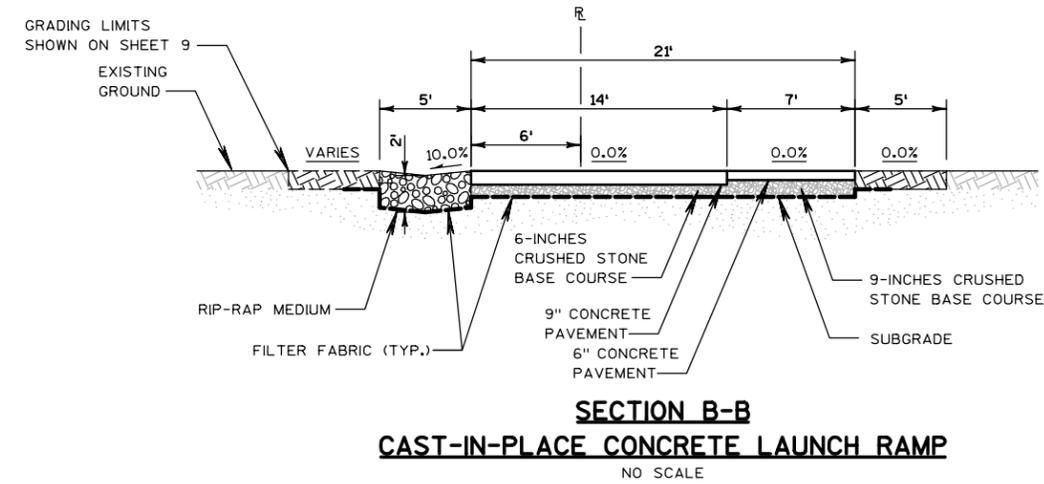
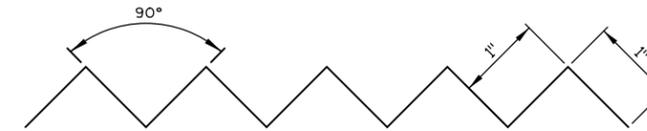
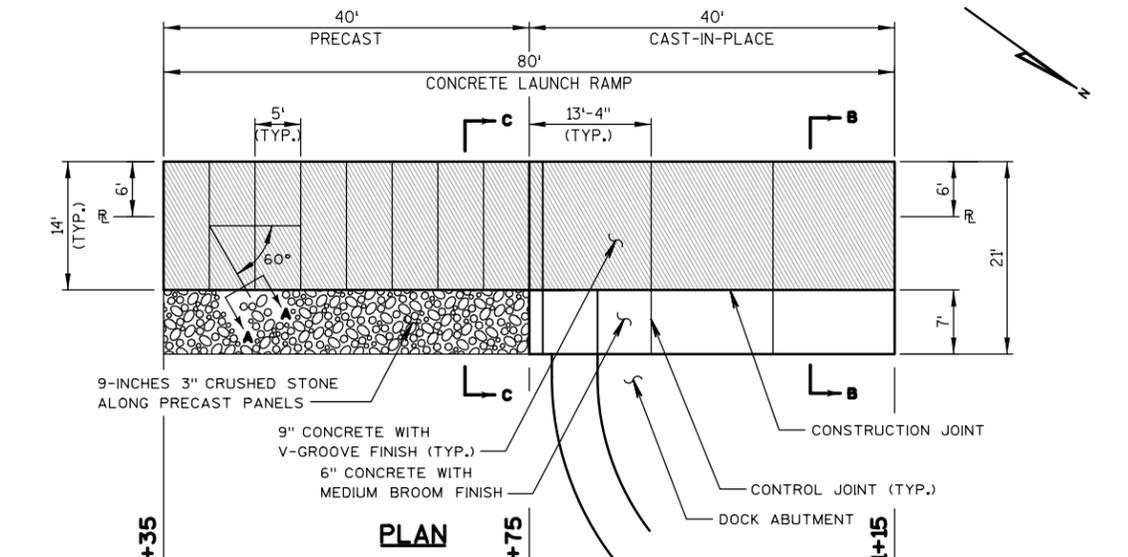
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JOB NO. 4311.001

GENERAL NOTES:

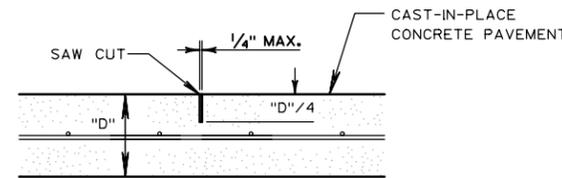
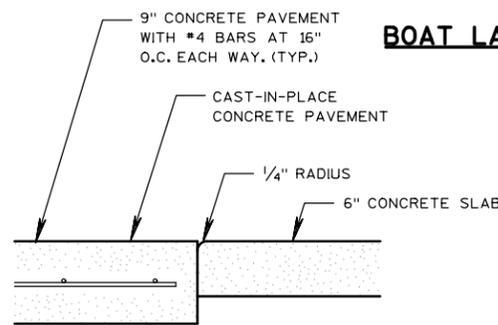
1. PRIOR TO CONCRETE AND REINFORCING PLACEMENT, CONTRACTOR SHALL PROOF ROLL BASE COURSE IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR SHALL REMOVE BASE AND EXCAVATE UNSUITABLE SUBGRADE AS REQUESTED BY THE OWNER AND ENGINEER. EBS, BACKFILL SHALL BE PAID AT UNIT PRICE BID. EXCAVATION AND REPLACEMENT OF BASE COURSE SHALL BE INCIDENTAL TO THE WORK.

2. THE PRECAST PANELS ON GUIDE RAIL SYSTEM IS DESIGNED TO ALLOW FOR RMAP CONSTRUCTION UNDER WATER. CONTRACTOR MAY ELECT TO CONSTRUCT COFFERDAM AND CONSTRUCT A FULL LENGTH CAST-IN-PLACE RAMP.

* LOCATION OF TRANSITION FROM PRECAST TO CAST-IN-PLACE RAMP MAY BE ADJUSTED AS REQUIRED DUE TO WATER LEVEL AT TIME OF CONSTRUCTION.



BOAT LAUNCH PLAN AND PROFILE
NO SCALE

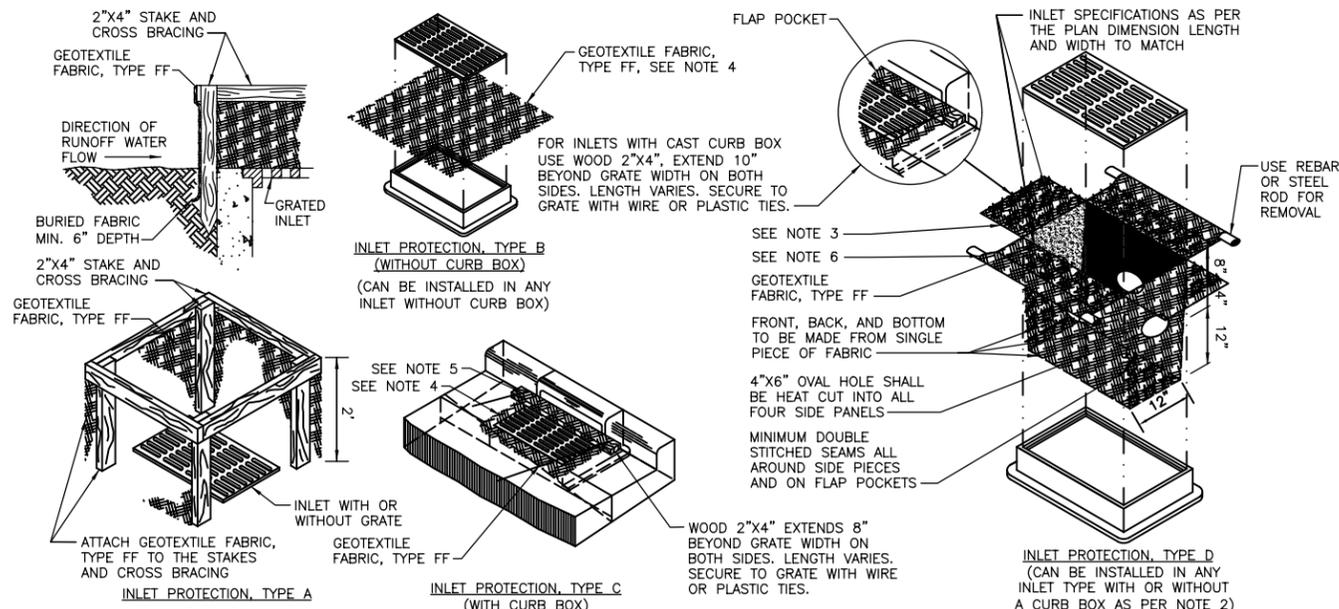


BOAT LAUNCH DETAILS
LUSSIER COUNTY PARK BOAT LAUNCH
DANE COUNTY PARKS DIVISION
DANE COUNTY, WISCONSIN

JOB NO. 4311.001
PROJECT MGR. ZRS

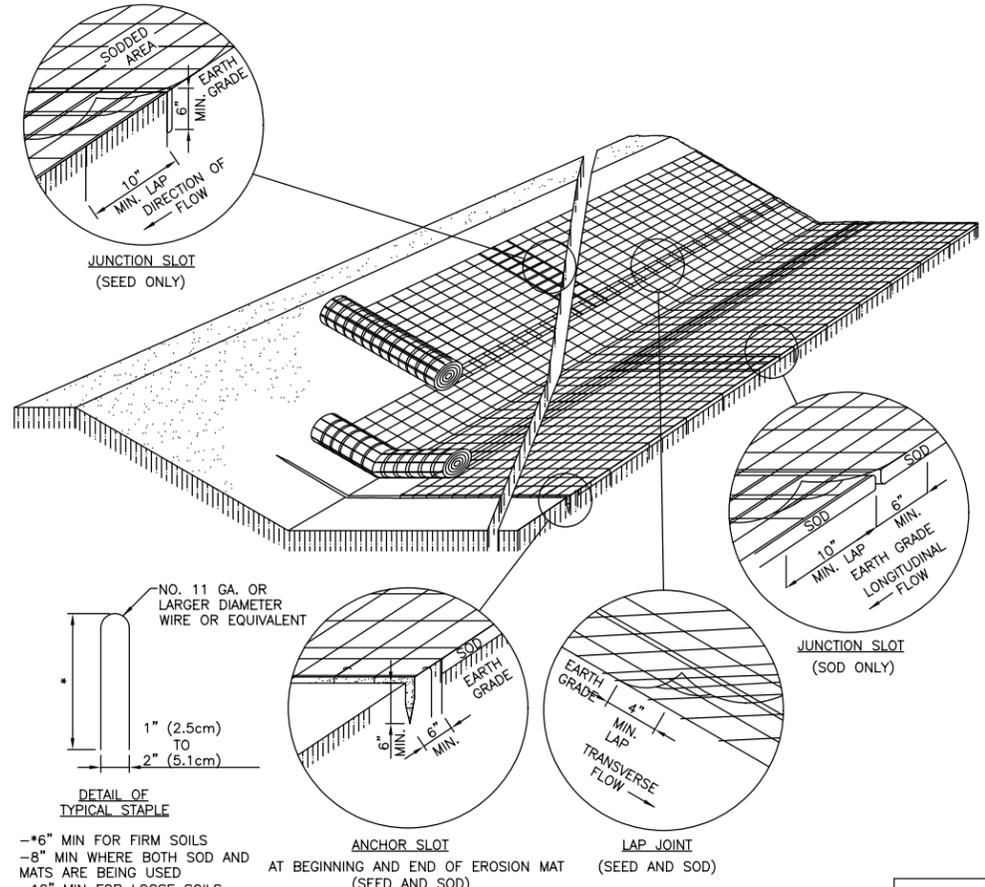


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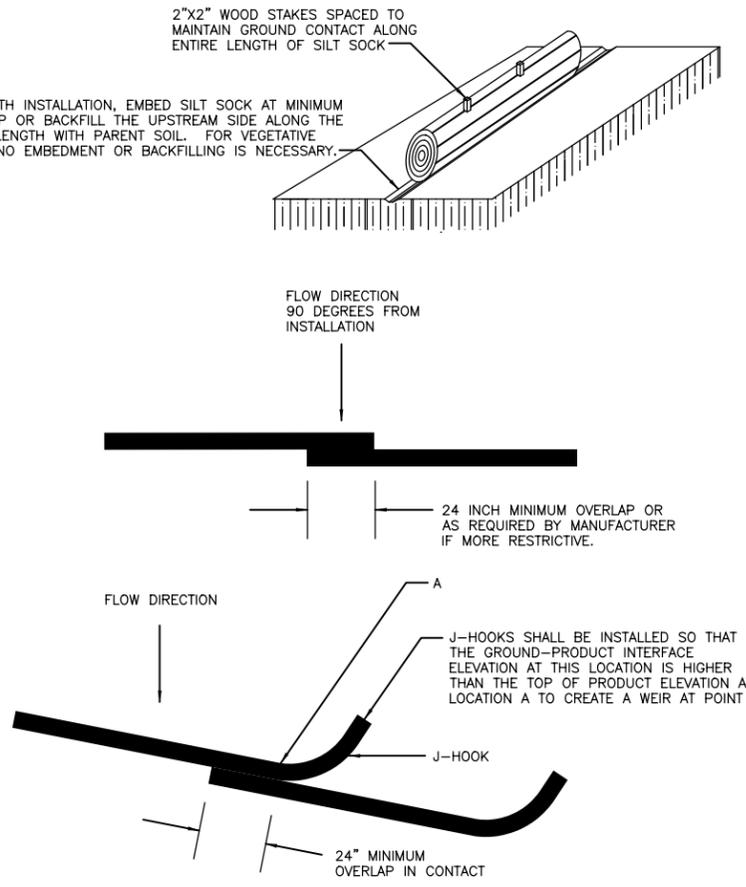
- NOTES:**
- INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.
 - MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENTS EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
 - WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET, ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
 - FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
 - FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
 - FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.
 - FOR TYPES B AND C, TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.
 - FOR TYPE D, DO NOT INSTALL INLET PROTECTION TYPE D INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY, THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION TYPE A, B, C, AND D (WDNR TECHNICAL STANDARD 1060)



- NOTES:**
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
 - VARIATIONS IN THE DIMENSIONS OR MATERIALS SHOWN HEREON SHALL BE PERMITTED IF THEY PROVIDE EQUIVALENT PROTECTION AND MATERIAL STRENGTH.
 - LAP JOINTS SHALL NOT BE PLACED IN THE BOTTOM OF V-SHAPED DITCHES.
 - JUNCTION SLOTS ON ADJACENT STRIPS OF MATTING SHALL BE STAGGERED A MINIMUM OF 4 FEET APART.
 - EDGES OF THE EROSION MAT SHALL BE IMPRESSED IN THE SOIL.
 - EROSION MAT SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- EROSION MAT OVER SOD**
- ONLY JUTE FABRIC WILL BE PERMITTED OVER SOD.
 - FLOOD STAKES FOR SOD MAY BE OMITTED IF THE EXISTING SLOPE AND SOIL CONDITIONS SO PERMIT.
 - THE WIDTH OF EROSION MAT SHALL ALWAYS EQUAL THE SOD WIDTH.
 - SOD STRIPS MAY BE PLACED EITHER LONGITUDINALLY OR TRANSVERSELY TO THE FLOW LINE OF THE DITCH.
- EROSION MAT OVER SEEDING**
- JUNCTION OR ANCHOR SLOTS SHALL BE AT MINIMUM INTERVALS OF 100 FEET ON GRADES UP TO AND INCLUDING 3 PERCENT, AND 50 FEET ON GRADES EXCEEDING 3 PERCENT.

EROSION CONTROL MAT INSTALLATION (WDNR TECHNICAL STANDARD 1052)

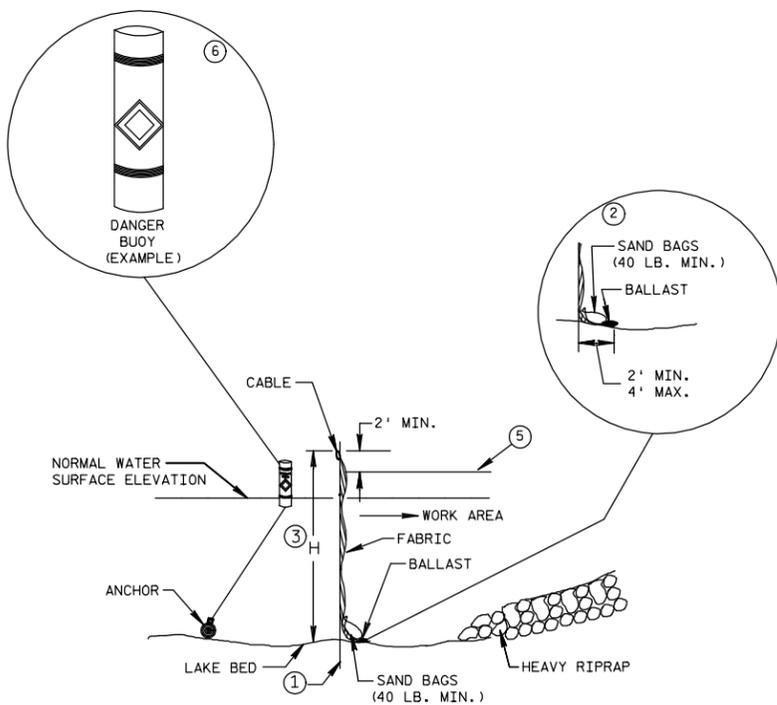


- NOTES:**
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
 - PRODUCTS SHOULD BE PLACED ON THE CONTOUR WHENEVER POSSIBLE. J-HOOKS MAY BE USED FOR SLOPING INSTALLATIONS. PRODUCTS SHOULD NOT BE PLACED PERPENDICULAR TO THE CONTOUR.
 - THE ENDS OF PRODUCT INSTALLATIONS SHOULD BE EXTENDED UPSLOPE TO PREVENT WATER FROM FLOWING AROUND THE ENDS OF THE PRODUCT.
 - PRODUCTS THAT ARE PLACED ON A CURVED ALIGNMENT SHALL BE INSTALLED AT A LARGE ENOUGH RADIUS OF CURVATURE TO PREVENT KINKING.
 - PRODUCTS INSTALLED ON DISTURBED GROUND SHALL BE ENTRENCHED A MINIMUM OF 2 INCHES TO ENSURE CONTINUOUS GROUND CONTACT. PRODUCTS INSTALLED ON VEGETATED GROUND MAY BE INSTALLED WITHOUT ENTRENCHMENT. ALL GAPS AND RUTS CREATING AN UNDERCUTTING SITUATION SHALL BE FILLED WITH SOIL.
 - MINIMUM 24 INCHES OF OVERLAP IS REQUIRED OR AS REQUIRED BY THE MANUFACTURER IF MORE RESTRICTIVE. OVERLAP SHOULD BE SHINGLED IN THE DIRECTION OF FLOW.
 - STAKE OR ANCHOR AS NEEDED TO MAINTAIN CONSTANT GROUND CONTACT ALONG THE ENTIRE LENGTH OF THE PRODUCT AT ALL TIMES AND TO PREVENT LATERAL MOVEMENT AND/OR FLOATATION.
 - THE SPACING IN THE DIRECTION OF THE SLOPE SHALL NOT EXCEED THE MAXIMUM SLOPE LENGTHS FOR THE APPROPRIATE SLOPE IN THE TABLE BELOW. THE LOG DIAMETER SHALL FOLLOW THE SIZE GIVEN IN THE TABLE BELOW.
 - PRODUCTS SHOULD BE INSTALLED PRIOR TO DISTURBING THE UPSLOPE AREA.

LOG-TYPE PRODUCT INSTALLATION (WDNR TECHNICAL STANDARD 1071)

MAX. SPACING AND LOG DIAMETER		
SLOPE	SPACING (FT)	LOG DIAMETER
0-2%	30	6-INCH
2.1-5%	25	6-INCH
5.1-10%	15	6-INCH
10.1-33%	10	8-INCH
>33%	5	8-INCH

- NOTES:**
- TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATION.
 - SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
 - WHEN BARRIER HEIGHT, H, EXCEEDS 8FT., POSTS SPACING MAY NEED TO BE DECREASED.
 - IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
 - ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY TO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
 - USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL (WDNR TECHNICAL STANDARD 1069)

DATE:	REVISIONS	NO.

EROSION CONTROL DETAILS

LUSSIER COUNTY PARK BOAT LAUNCH

DANE COUNTY PARKS DIVISION

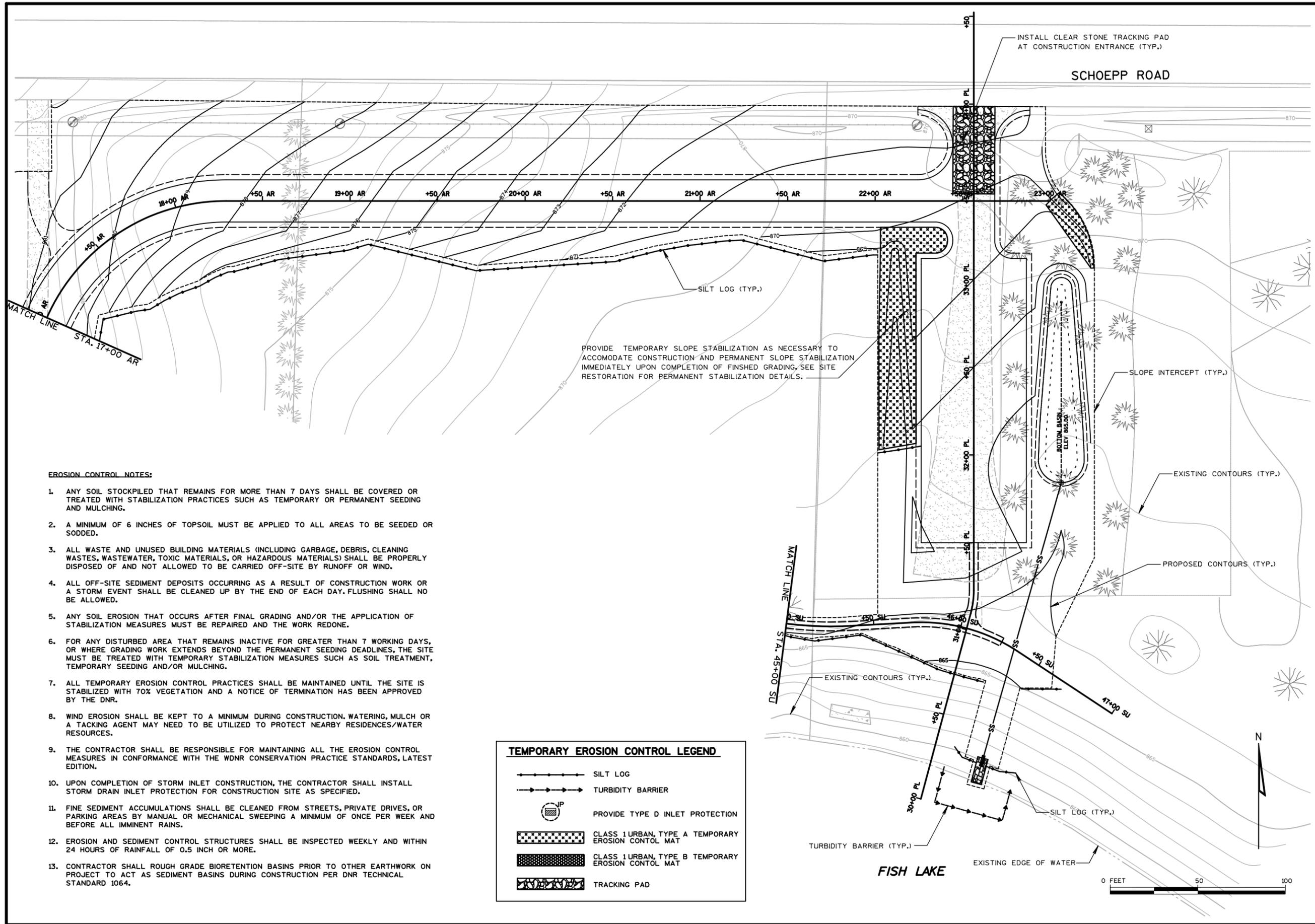
DANE COUNTY, WISCONSIN

JOB NO. 4311.001

PROJECT MGR. ZRS



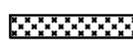
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EROSION CONTROL NOTES:

1. ANY SOIL STOCKPILED THAT REMAINS FOR MORE THAN 7 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
2. A MINIMUM OF 6 INCHES OF TOPSOIL MUST BE APPLIED TO ALL AREAS TO BE SEEDED OR SODDED.
3. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
4. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH DAY. FLUSHING SHALL NOT BE ALLOWED.
5. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR THE APPLICATION OF STABILIZATION MEASURES MUST BE REPAIRED AND THE WORK REDONE.
6. FOR ANY DISTURBED AREA THAT REMAINS INACTIVE FOR GREATER THAN 7 WORKING DAYS, OR WHERE GRADING WORK EXTENDS BEYOND THE PERMANENT SEEDING DEADLINES, THE SITE MUST BE TREATED WITH TEMPORARY STABILIZATION MEASURES SUCH AS SOIL TREATMENT, TEMPORARY SEEDING AND/OR MULCHING.
7. ALL TEMPORARY EROSION CONTROL PRACTICES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED WITH 70% VEGETATION AND A NOTICE OF TERMINATION HAS BEEN APPROVED BY THE DNR.
8. WIND EROSION SHALL BE KEPT TO A MINIMUM DURING CONSTRUCTION. WATERING, MULCH OR A TACKING AGENT MAY NEED TO BE UTILIZED TO PROTECT NEARBY RESIDENCES/WATER RESOURCES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL THE EROSION CONTROL MEASURES IN CONFORMANCE WITH THE WDNR CONSERVATION PRACTICE STANDARDS, LATEST EDITION.
10. UPON COMPLETION OF STORM INLET CONSTRUCTION, THE CONTRACTOR SHALL INSTALL STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITE AS SPECIFIED.
11. FINE SEDIMENT ACCUMULATIONS SHALL BE CLEANED FROM STREETS, PRIVATE DRIVES, OR PARKING AREAS BY MANUAL OR MECHANICAL SWEEPING A MINIMUM OF ONCE PER WEEK AND BEFORE ALL IMMINENT RAINS.
12. EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF RAINFALL OF 0.5 INCH OR MORE.
13. CONTRACTOR SHALL ROUGH GRADE BIOTENTION BASINS PRIOR TO OTHER EARTHWORK ON PROJECT TO ACT AS SEDIMENT BASINS DURING CONSTRUCTION PER DNR TECHNICAL STANDARD 1064.

TEMPORARY EROSION CONTROL LEGEND

-  SILT LOG
-  TURBIDITY BARRIER
-  PROVIDE TYPE D INLET PROTECTION
-  CLASS 1 URBAN, TYPE A TEMPORARY EROSION CONTROL MAT
-  CLASS 1 URBAN, TYPE B TEMPORARY EROSION CONTROL MAT
-  TRACKING PAD

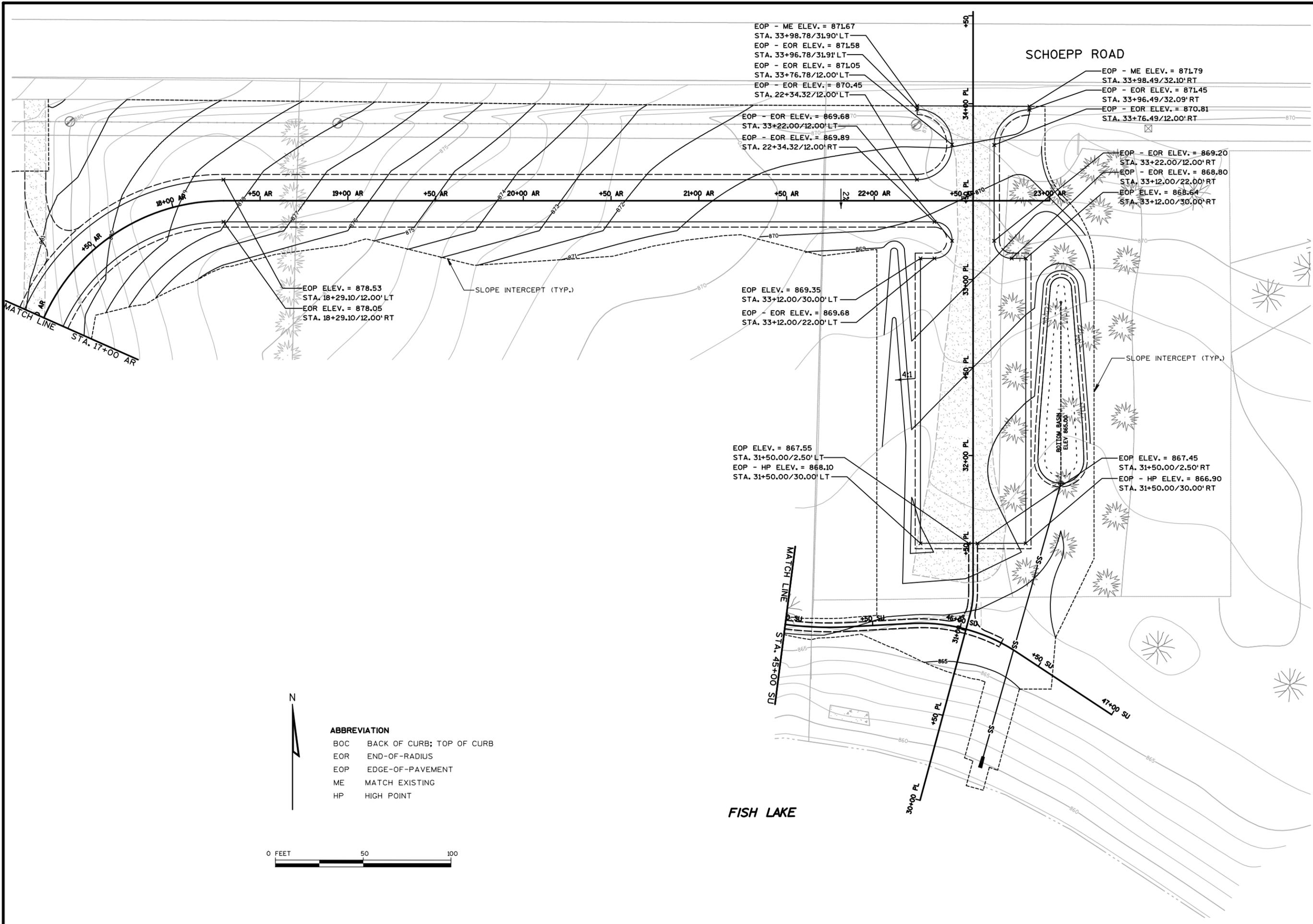
NO.	REVISIONS	DATE:

TEMPORARY EROSION CONTROL PLAN
 LUSSIER COUNTY PARK BOAT LAUNCH
 DANE COUNTY PARKS DIVISION
 DANE COUNTY, WISCONSIN

JOB NO.
4311.001
 PROJECT MGR.
ZRS



SHEET
9



EOP - ME ELEV. = 871.67
 STA. 33+98.78/31.90' LT
 EOP - EOR ELEV. = 871.58
 STA. 33+96.78/31.91' LT
 EOP - EOR ELEV. = 871.05
 STA. 33+76.78/12.00' LT
 EOP - EOR ELEV. = 870.45
 STA. 22+34.32/12.00' LT

EOP - ME ELEV. = 871.79
 STA. 33+98.49/32.10' RT
 EOP - EOR ELEV. = 871.45
 STA. 33+96.49/32.09' RT
 EOP - EOR ELEV. = 870.81
 STA. 33+76.49/12.00' RT

EOP - EOR ELEV. = 869.68
 STA. 33+22.00/12.00' LT
 EOP - EOR ELEV. = 869.89
 STA. 22+34.32/12.00' RT

EOP - EOR ELEV. = 869.20
 STA. 33+22.00/12.00' RT
 EOP - EOR ELEV. = 868.80
 STA. 33+12.00/22.00' RT
 EOP ELEV. = 868.64
 STA. 33+12.00/30.00' RT

EOP ELEV. = 878.53
 STA. 18+29.10/12.00' LT
 EOR ELEV. = 878.05
 STA. 18+29.10/12.00' RT

EOP ELEV. = 869.35
 STA. 33+12.00/30.00' LT
 EOP - EOR ELEV. = 869.68
 STA. 33+12.00/22.00' LT

EOP ELEV. = 867.55
 STA. 31+50.00/2.50' LT
 EOP - HP ELEV. = 868.10
 STA. 31+50.00/30.00' LT

EOP ELEV. = 867.45
 STA. 31+50.00/2.50' RT
 EOP - HP ELEV. = 866.90
 STA. 31+50.00/30.00' RT



ABBREVIATION

BOC	BACK OF CURB; TOP OF CURB
EOR	END-OF-RADIUS
EOP	EDGE-OF-PAVEMENT
ME	MATCH EXISTING
HP	HIGH POINT



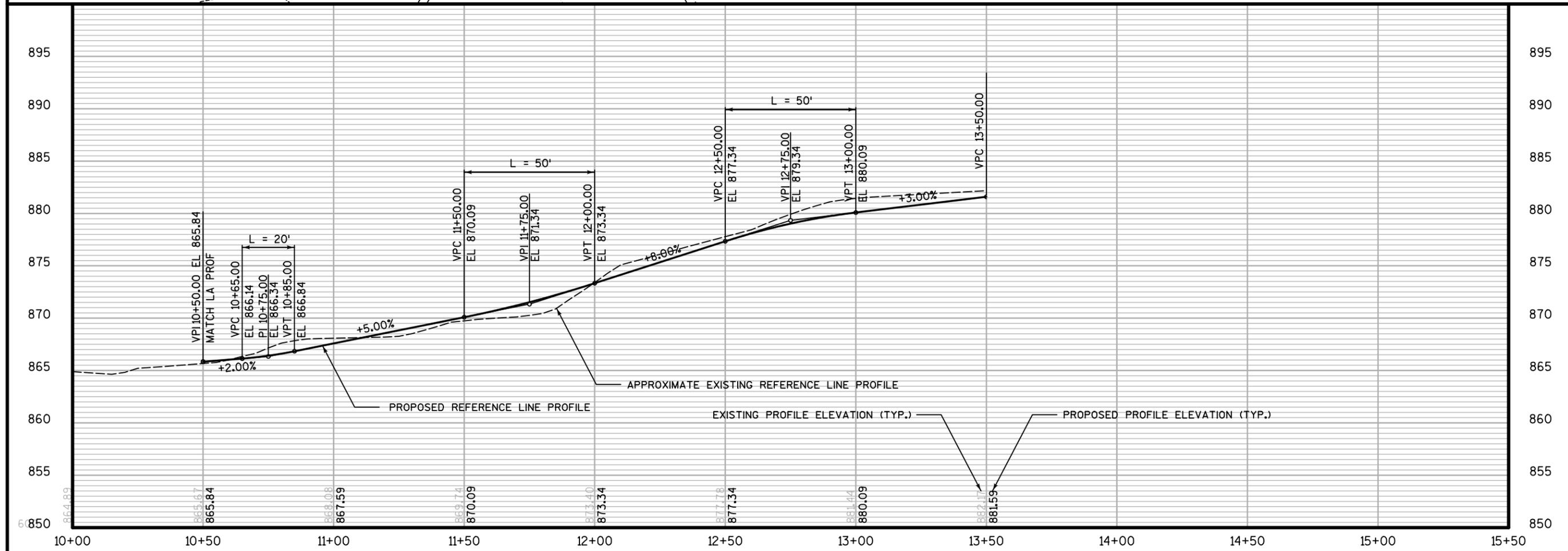
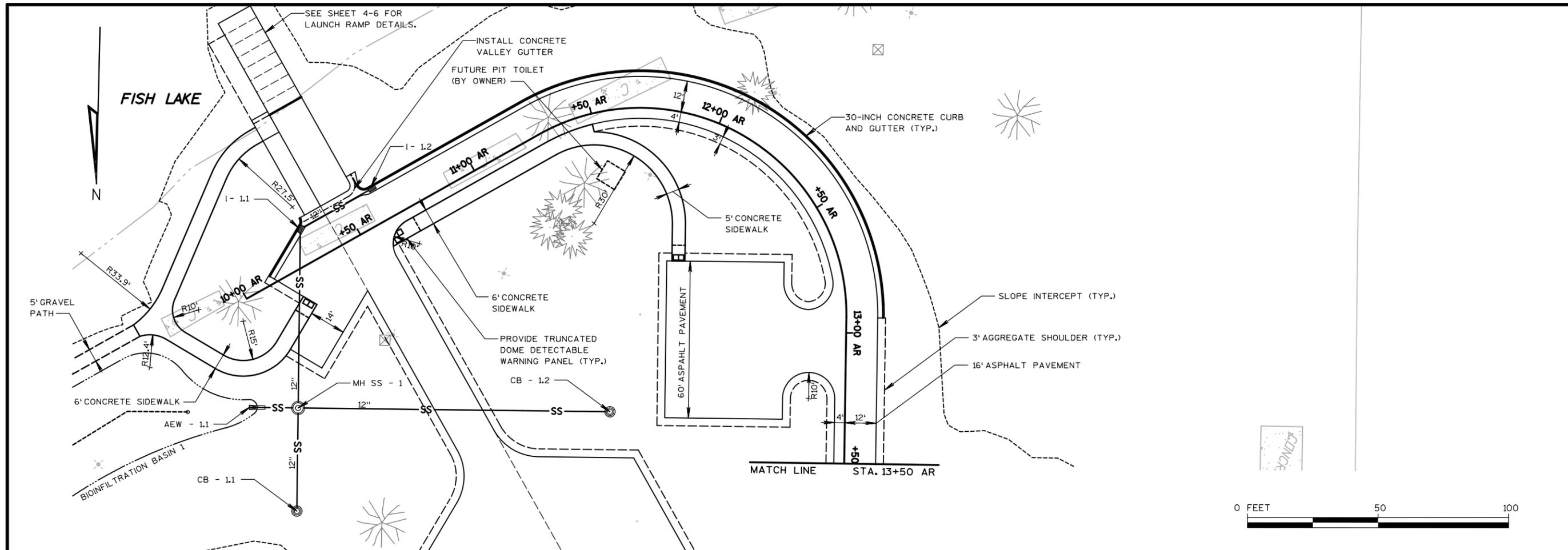
NO.	REVISIONS	DATE

SITE GRADING PLAN
 LUSSIER COUNTY PARK BOAT LAUNCH
 DANE COUNTY PARKS DIVISION
 DANE COUNTY, WISCONSIN

JOB NO.
4311.001
 PROJECT MGR.
ZRS



SHEET
11



NO.	REVISIONS	DATE

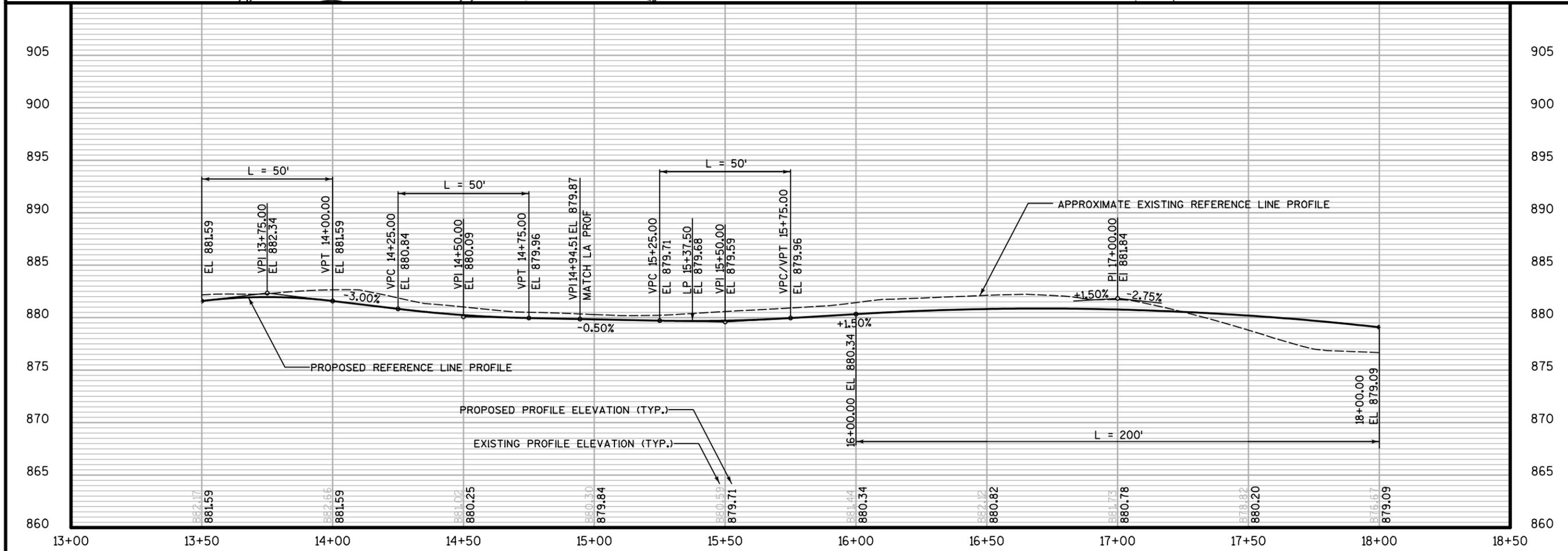
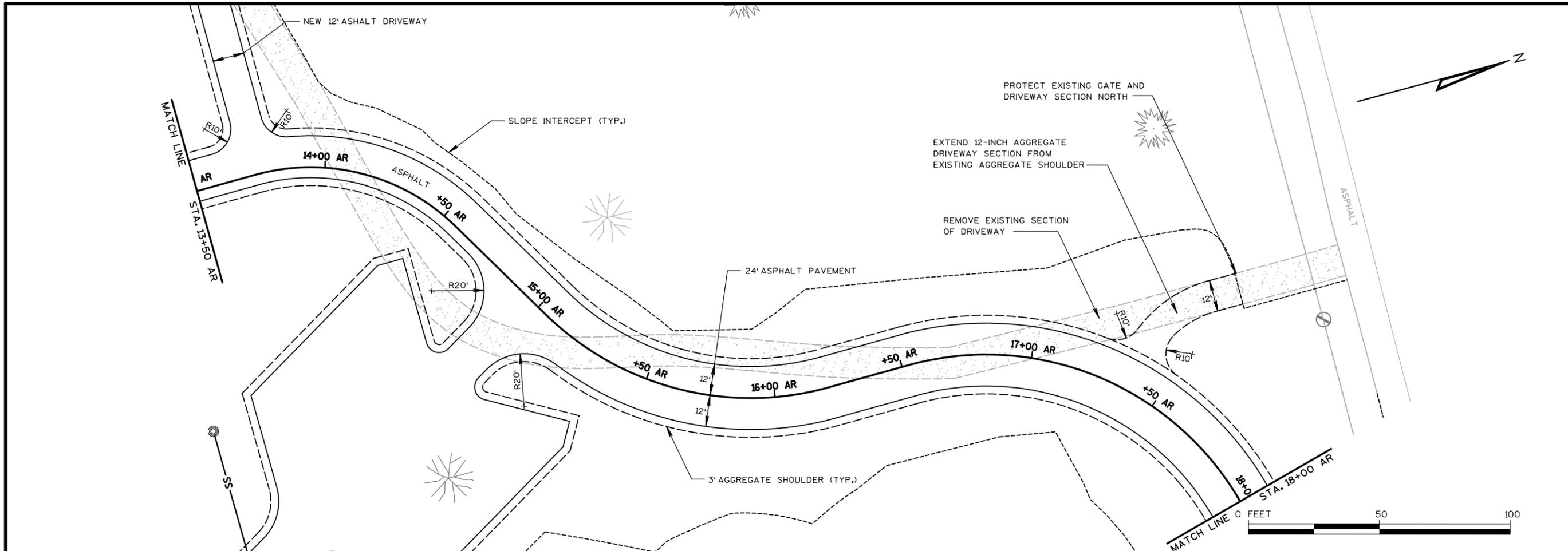
**ACCESS ROAD
PLAN AND PROFILE**

LUSSIER COUNTY PARK BOAT LAUNCH
DANE COUNTY PARKS DIVISION
DANE COUNTY, WISCONSIN

JOB NO.
4311.001
PROJECT MGR.
ZRS



SHEET
16



NO.	REVISIONS	DATE

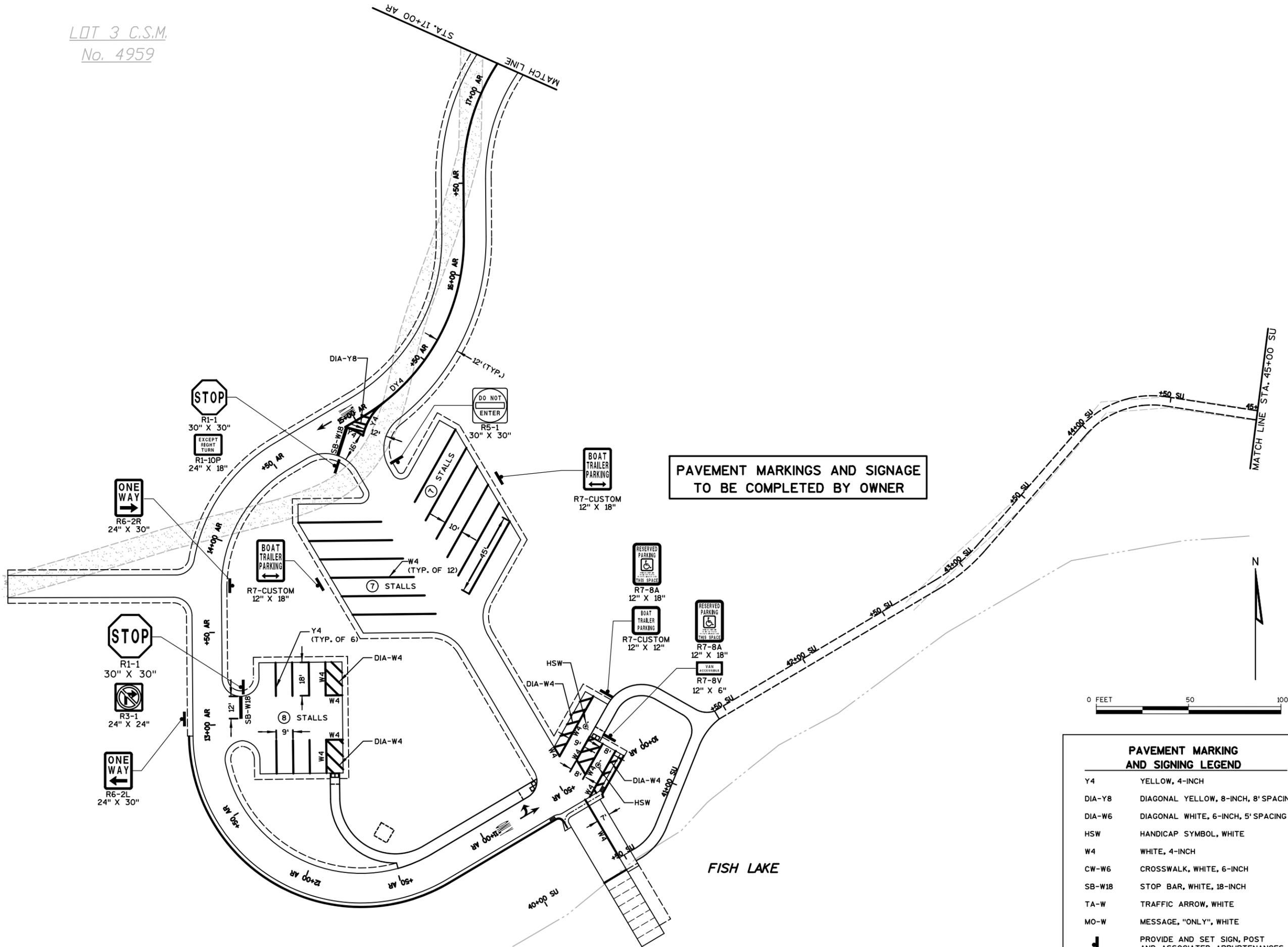
**ACCESS ROAD
PLAN AND PROFILE**
LUSSIER COUNTY PARK BOAT LAUNCH
DANE COUNTY PARKS DIVISION
DANE COUNTY, WISCONSIN

JOB NO.
4311.001
PROJECT MGR.
ZRS



SHEET
17

LOT 3 C.S.M.
No. 4959



PAVEMENT MARKINGS AND SIGNAGE
TO BE COMPLETED BY OWNER



**PAVEMENT MARKING
AND SIGNING LEGEND**

Y4	YELLOW, 4-INCH
DIA-Y8	DIAGONAL YELLOW, 8-INCH, 8' SPACING
DIA-W6	DIAGONAL WHITE, 6-INCH, 5' SPACING
HSW	HANDICAP SYMBOL, WHITE
W4	WHITE, 4-INCH
CW-W6	CROSSWALK, WHITE, 6-INCH
SB-W18	STOP BAR, WHITE, 18-INCH
TA-W	TRAFFIC ARROW, WHITE
MO-W	MESSAGE, "ONLY", WHITE
	PROVIDE AND SET SIGN, POST AND ASSOCIATED APPURTENANCES

PAVEMENT MARKING AND SIGNAGE PLAN

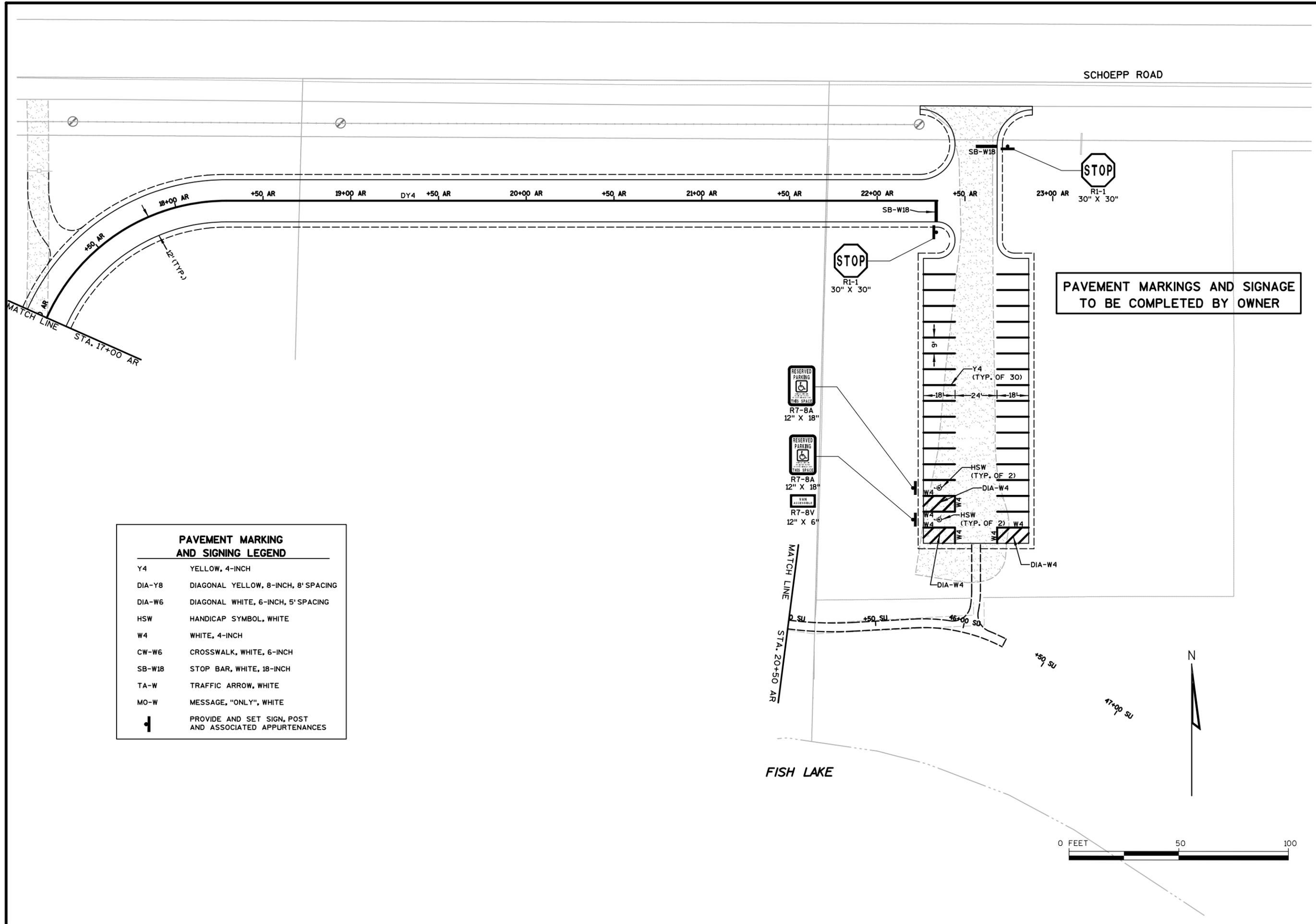
LUSSIER COUNTY PARK BOAT LAUNCH
DANE COUNTY PARKS DIVISION
DANE COUNTY, WISCONSIN

NO.	REVISIONS	DATE

JOB NO.
4311.001
PROJECT MGR.
ZRS



SHEET
22



PAVEMENT MARKINGS AND SIGNAGE
TO BE COMPLETED BY OWNER

PAVEMENT MARKING AND SIGNING LEGEND	
Y4	YELLOW, 4-INCH
DIA-Y8	DIAGONAL YELLOW, 8-INCH, 8' SPACING
DIA-W6	DIAGONAL WHITE, 6-INCH, 5' SPACING
HSW	HANDICAP SYMBOL, WHITE
W4	WHITE, 4-INCH
CW-W6	CROSSWALK, WHITE, 6-INCH
SB-W18	STOP BAR, WHITE, 18-INCH
TA-W	TRAFFIC ARROW, WHITE
MO-W	MESSAGE, "ONLY", WHITE
	PROVIDE AND SET SIGN, POST AND ASSOCIATED APPURTENANCES

NO.	REVISIONS	DATE:

PAVEMENT MARKING AND SIGNAGE PLAN
 LUSSIER COUNTY PARK BOAT LAUNCH
 DANE COUNTY PARKS DIVISION
 DANE COUNTY, WISCONSIN

JOB NO.
4311.001
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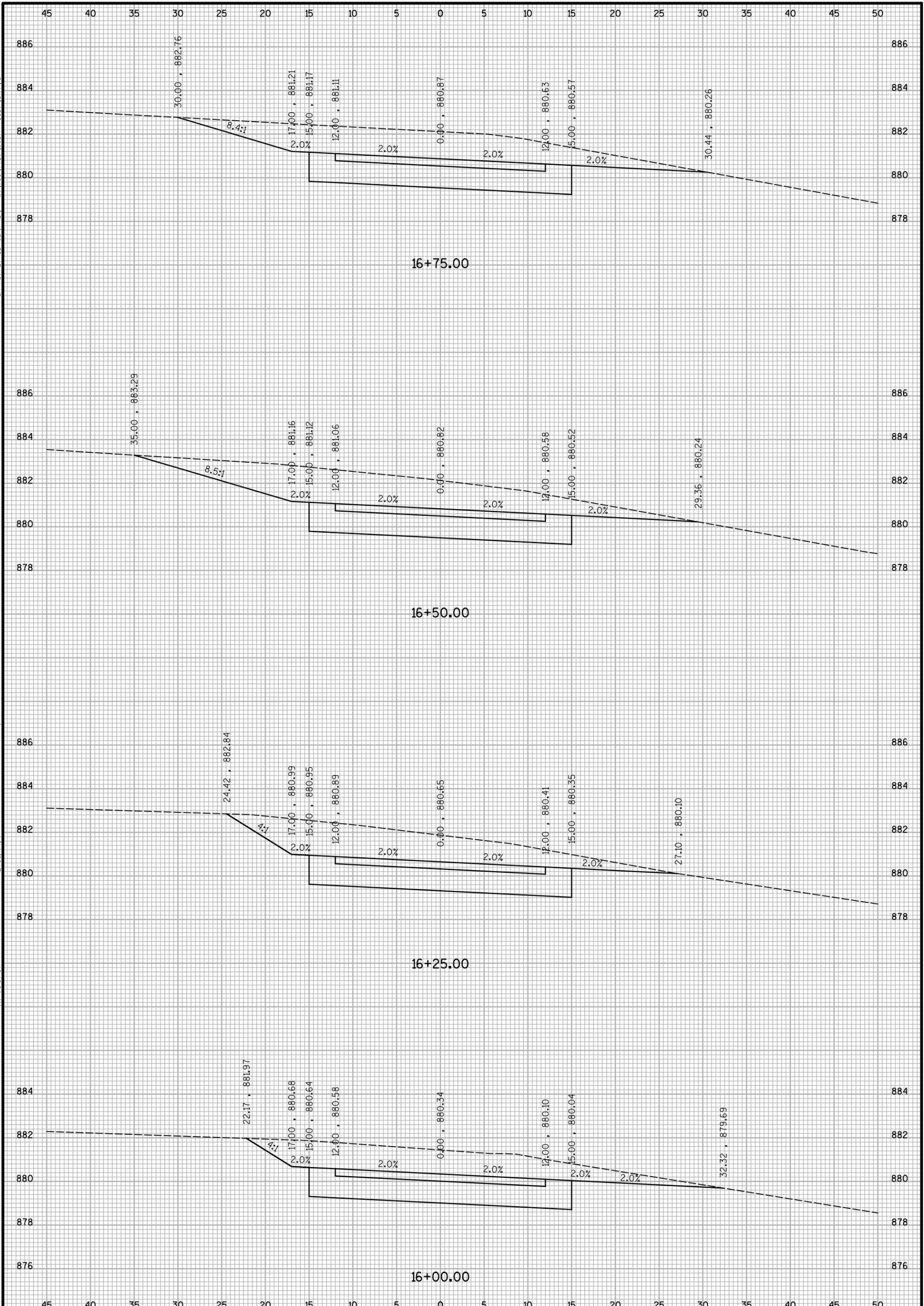
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23

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user: joms

4/14/2017

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STRAND ASSOCIATES
SHEET 32

JOB NO.
4311.001
PROJECT MGR.
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**ACCESS ROAD (AR)
CROSS SECTIONS**
LUSSIER COUNTY PARK BOAT LAUNCH
DANE COUNTY PARKS DIVISION
DANE COUNTY, WISCONSIN

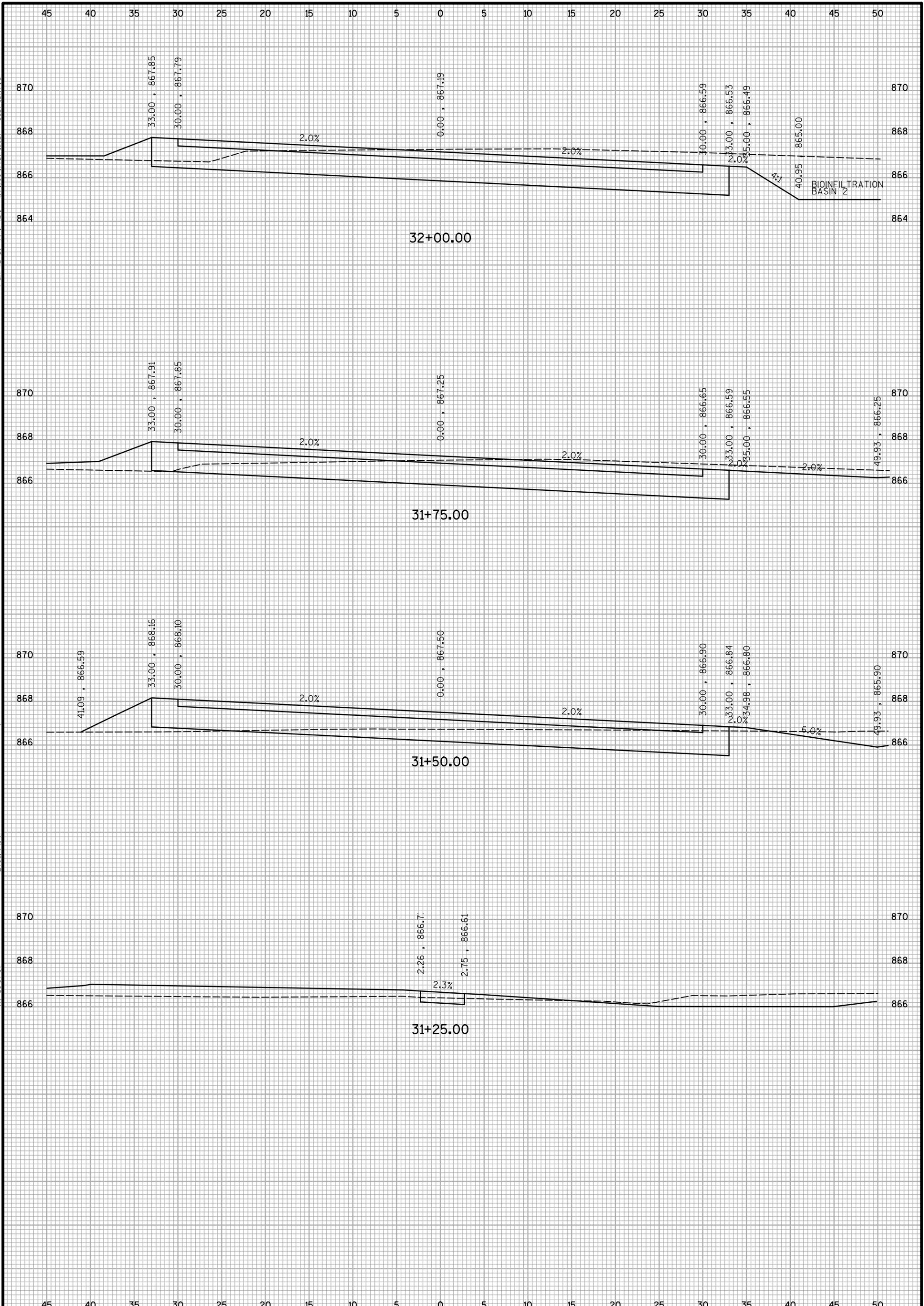
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STRAND ASSOCIATES
SHEET 41

JOB NO.
4311.001
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**PARKING LOT (PL)
CROSS SECTIONS**
LUSSIER COUNTY PARK BOAT LAUNCH
DANE COUNTY PARKS DIVISION
DANE COUNTY, WISCONSIN

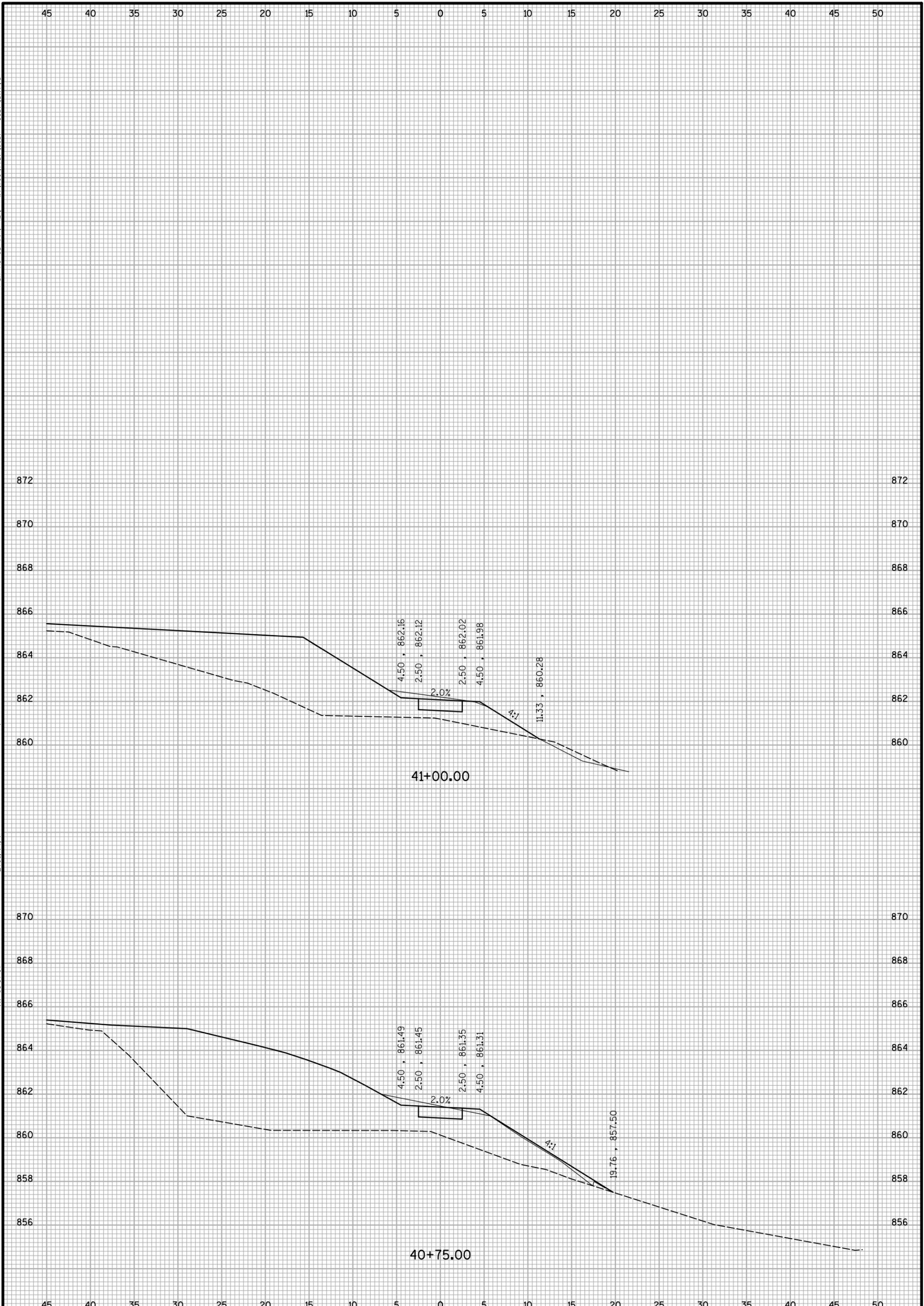
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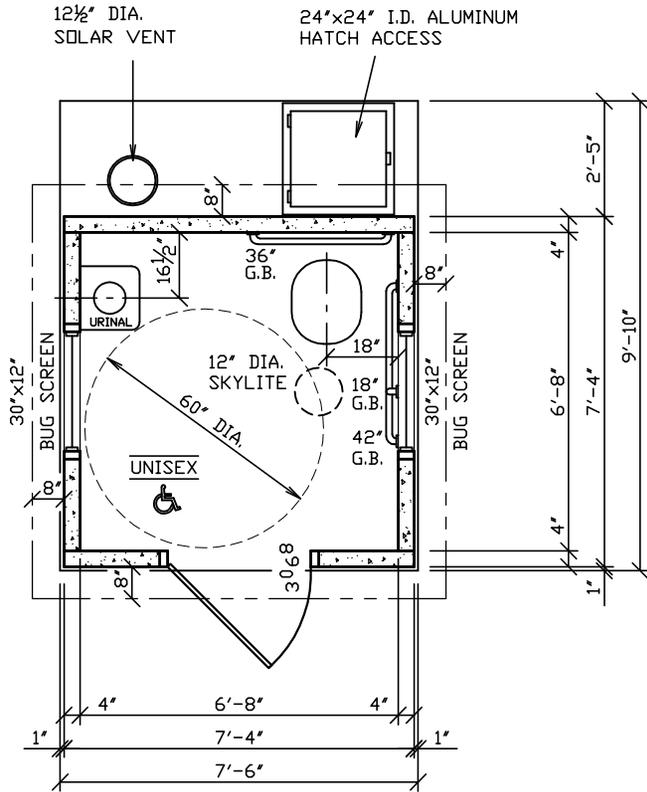
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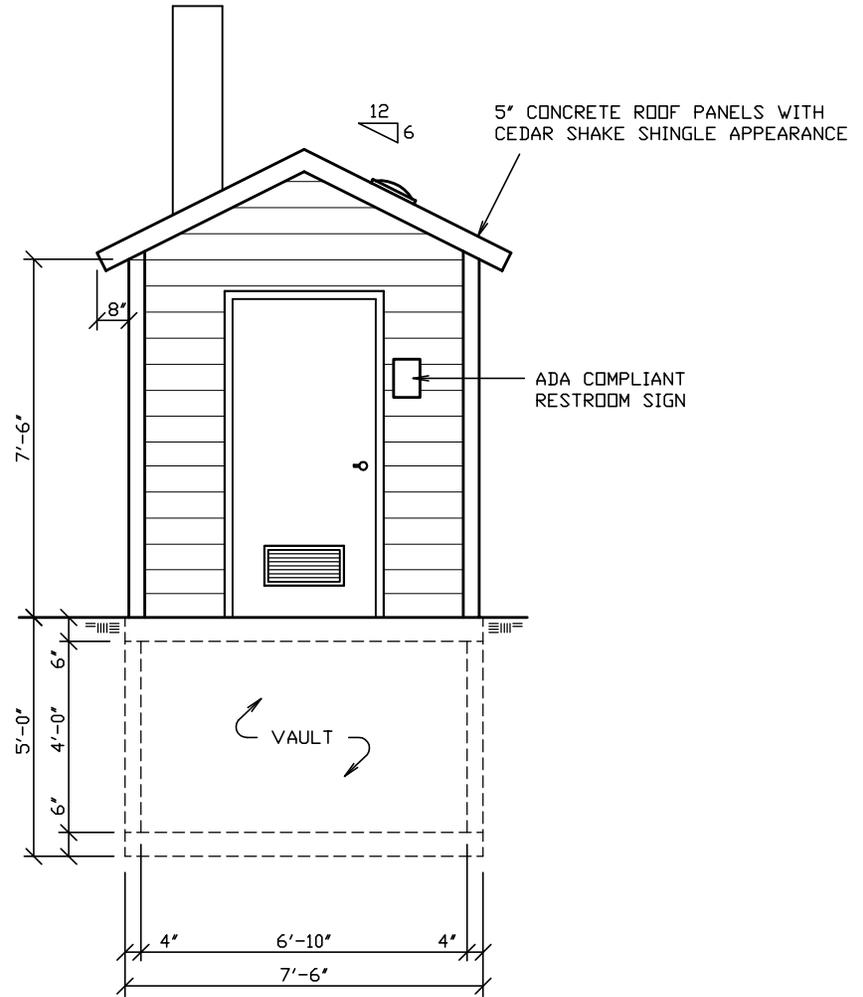
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 STRAND ASSOCIATES SHEET 44	JOB NO. 4311.001	SHARED-USE PATH (SU) CROSS SECTIONS LUSSIER COUNTY PARK BOAT LAUNCH DANE COUNTY PARKS DIVISION DANE COUNTY, WISCONSIN	NO.	REVISIONS	DATE:



FLOOR PLAN
SCALE: 1/4" = 1'-0"



FRONT ELEVATION
SCALE: 1/4" = 1'-0"

N.P.C.A. CERTIFIED PLANT
&
MEMBER OF:
NATIONAL & WISCONSIN PRECAST CONCRETE ASSOCIATIONS

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4154 123rd STREET
CHIPPEWA FALLS, WI 54729
(715) 723-7446 * (800) 924-1516
FAX (715) 723-7111 * www.huffcutt.com

HUFFCUTT
CONCRETE, INC



PROJECT:
TEAL