

AGENDA
BOARD OF PUBLIC WORKS MEETING
Tuesday, May 31, 2022 at 6:00 p.m.
Jackson Municipal Complex
Village Board Room
N168W19851 Main Street
Jackson, WI 53037

1. Call to Order and Roll Call
2. Approval of the Board of Public Works Minutes of April 26, 2022
3. Review of Bids for Jackson Park – Tennis Courts to Pickle Ball Project
4. Fiber to the Home Project Presentation by Mid-West Fiber
5. Resolution 22-09 Adopting 2021 CMAR for Jackson Sewer Utility
6. Verizon – Land Lease Agreement for Fiber to White Water Tower Site
7. Update on STH 60 (Main St) 2022 2023 Utility Replacement Project
8. Update on Eagle Dr and STH 60 Intersection Improvement Project
9. Director of Public Works Report
10. Citizens/Village Staff to address the Board
11. Adjourn

Persons with disabilities requiring special accommodations for attendance at the meeting should contact the Village Hall at least one (1) business day prior to the meeting.

It is possible that members of the Village Board may attend the above meeting. No action will be taken by any governmental body at this meeting other than the governmental body specifically referred to in this meeting notice. This notice is given so that members of the Village Board may attend the meeting without violating the open meeting law.

DRAFT Minutes
Board of Public Works Meeting
Tuesday, April 26, 2022 at 6:00 p.m.
Jackson Municipal Complex
Village Board Room
N168W19851 Main Street
Jackson, WI 53037

1. Call to Order and Roll Call

Chair Heckendorf called the meeting to order at 6:00 p.m.

Members Present: Tr. Engelhardt, Sarah Malchow, Tr. Matter, Tim Meffert, Steve Schoen, and Gloria Teifke

Staff Present: Administrator Jen Keller, Director of Public Works Brian Kober and Clerk Jilline Dobratz

Also Present: Stan Lukasz of DAAR Engineering, Inc.

2. Approval of the Board of Public Works Minutes of March 29, 2022

Motion by Gloria Teifke, second by Sarah Malchow to approve the Board of Public Works minutes of March 29, 2022.

Vote: 7 ayes, 0 nays. Motion carried.

3. Review of Engineering Service – Eagle Dr & STH 60 Intersection Design

Director Kober gave background information. Stan Lukasz of DAAR Engineering, Inc. was present and gave information on the engineering services. Discussion ensued on traffic, safety issues, signals versus a roundabout and pedestrian crossing. TID #7 could fund a portion of the project.

Motion by Gloria Teifke, second by Sarah Malchow to recommend Budget & Finance and Village Board enter into a two party agreement with the DAAR Engineering for – Eagle Dr & STH 60 Intersection Design.

Vote: 6 ayes, 1 nay (Tr. Matter). Motion carried.

All Board of Public Works Committee members stated a roundabout is preferred at the Eagle Drive and STH 60 Intersection.

4. Review of Sewer and Water Accounts with Uncollectible Balances

Director Kober provided information on six accounts with uncollectible balances.

Motion by Chair Heckendorf, second by Tr. Matter to recommend Budget & Finance and Village Board write off the Sewer and Water Accounts with Uncollectible Balances in the amount of \$4,027.50.

Vote: 7 ayes, 0 nays. Motion carried.

5. Review of Quotes for Televising Interceptor Sanitary Sewer

Director Kober stated three quotes were received for televising the two interceptor sewers.

Motion by Tr. Engelhardt, second by Tim Meffert to recommend Budget & Finance and Village Board accept the quote from Great Lakes TV Seal Inc. for Televising Interceptor Sanitary Sewer in an amount not to exceed \$26,183.30.

Vote: 7 ayes, 0 nays. Motion carried.

6. Review of Jackson Water Utility 2021 Consumer Confidence Report

Motion by Chair Heckendorf, second by Tr. Engelhardt to recommend Village Board accept the Jackson Water Utility 2021 Consumer Confidence Report and publish it in the official Village newspaper.

Vote: 7 ayes, 0 nays. Motion carried.

7. Sanitary Sewer & Water Extension to serve Maple Fields Development

Director Kober commented on the extension to serve the development.

Motion by Chair Heckendorf, second by Tr. Engelhardt to recommend Village Board approve Sanitary Sewer & Water Extension to serve Maple Fields Development.

Vote: 7 ayes, 0 nays. Motion carried.

8. Director of Public Works Report

Director Kober gave the report.

Motion by Tr. Matter, second by Steve Schoen to place the Director of Public Works Report on file.

Vote: 7 ayes, 0 nays. Motion carried.

9. Citizens/Village Staff to Address the Board

Gloria Teifke inquired on the status of the storm water ponds. Saturday's Spring Clean-up information was given.

10. Adjourn

Motion by Chair Heckendorf, second by Tr. Engelhardt to adjourn.

Vote: 7 ayes, 0 nays. Meeting was adjourned at 7:05 p.m.

Respectfully submitted,

Jilline Dobratz, *CMC/WCPC*
Village Clerk

STANDARD FORM OF
BID ANALYSIS

WHEREAS the Village of Jackson (hereinafter referred to as the OWNER) has received bids on the 26 day of May 2022 for the Jackson Park Tennis-Pickleball Courts, Contract A-22, (hereinafter referred to as the Project); and

WHEREAS Cedar Corporation (hereinafter referred to as ENGINEER) has been retained by the OWNER to prepare bid tabulations, analyze bid results and consult with the OWNER on the award of contracts.

The ENGINEER hereby consults as follows:

1. One (1) bid was received for the project. The base bid amount is \$543,720.50. A summary of the bid tabulation is attached.
2. Based upon ENGINEER's analysis of the bids received on the above PROJECT the responsive low bidder is:

Payne & Dolan, Inc.
N3 W23650 Badinger Road
Waukesha, WI 53186

Bid Amount: \$543,720.50

3. It is understood that by this analysis, that the ENGINEER does not guarantee the Contractor's performance which is covered by the Contractor's bond, but it is a statement by the ENGINEER that the ENGINEER has no information which would lead the ENGINEER to believe that the Contractor does not have the necessary equipment and personnel to complete the PROJECT in compliance with the drawings and specifications within reasonable tolerances generally accepted in the trade.
4. It is further understood that this analysis is not a representation that the ENGINEER has reviewed the proposal for possible legal irregularities which should be a function of the OWNER'S legal counsel, and at the option of the OWNER.
5. It is further understood that in the event that OWNER feels that the Contract should be awarded on some basis other than price, the OWNER should defer further action on this PROJECT until a thorough legal review can be made by OWNER'S legal counsel.

Cedar Corporation

Submitted by: Ron D. Dalton, P.E.

Date: May 27, 2022



BID TABULATION
JACKSON PARK TENNIS-PICKLEBALL COURT
CONTRACT A-22
VILLAGE OF JACKSON
WASHINGTON COUNTY, WI

BID DATE - May 26, 2022

PROJECT NAME: Jackson Park Tennis – Pickleball Courts				Payne & Dolan, Inc. N3 W23650 Badinger Road Waukesha, WI 53186							
PROJECT NO: Contract A-22											
ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
BASE BID -											
1	Common Excavation, with Asphalt and Concrete Pavement Removal, with Subgrade Preparation	CY	1,100	\$33.00	\$36,300.00						
2	Remove & Salvage Existing Fence	LF	675	\$15.00	\$10,125.00						
3	Remove & Salvage Existing Benches	Each	4	\$100.00	\$400.00						
4	Remove & Salvage Existing Basketball Hoop Assembly	Each	2	\$200.00	\$400.00						
5	8-inch Base Aggregate - at Sidewalks and Courts	Tons	1,600	\$25.00	\$40,000.00						
6	3-inch HMA Pavement, 5 LT 58-28 S	Tons	642	\$285.00	\$182,970.00						
7	6-inch Concrete Bike Rack Pad	SF	96	\$48.00	\$4,608.00						
8	10-ft. Vinyl Coated Fence	LF	767	\$120.00	\$92,040.00						
9	4-ft. Vinyl Coated Fence	LF	79	\$90.00	\$7,110.00						
10	3-ft. Vinyl Coated Gate	Each	2	\$4,000.00	\$8,000.00						
11	Pickleball Net Posts/Ground Sleeves	Each	8	\$750.00	\$6,000.00						
12	Pickleball Nets/Center Strap & Anchors	Each	4	\$750.00	\$3,000.00						
13	Tennis Net Posts/Ground Sleeves	Each	4	\$800.00	\$3,200.00						
14	Tennis Net/Center Strap & Anchors	Each	2	\$750.00	\$1,500.00						
15	All Court and Asphalt Coatings with Linework, and Painting	LS	1	\$90,000.00	\$90,000.00						
16	Concrete Net Footings	Each	12	\$1,500.00	\$18,000.00						
17	Silt Fence	LF	730	\$2.00	\$1,460.00						
18	Lawn Restoration	SY	325	\$9.50	\$3,087.50						
19	Bike Rack	Each	2	\$2,000.00	\$4,000.00						
20	Basketball Goal Assembly	Each	3	\$10,000.00	\$30,000.00						
21	Saw Cut Curb Head	LF	6	\$170.00	\$1,020.00						
22	Saw Cut Asphalt Pavement	LF	10	\$50.00	\$500.00						
Base Bid Total:					\$543,720.50						
Alternate Bid Items:											
ALT 1	Additive Alternate Bid Item 1: 6-ft. Vinyl Coated Fence, (ADD)	LF	291	\$70.00	\$20,370.00						
ALT 2	Deductive Alternate Bid Item 2: 10-ft. Vinyl Coated Fence, (DEDUCT)	LF	291	(\$90.00)	(\$26,190.00)						
ALT 3	Additive Alternate Bid Item 3: Benches, (ADD)	Each	8	\$3,750.00	\$30,000.00						
PROJECT TOTAL - CONTRACT A-22:					\$567,900.50						



PROJECT MANUAL

**JACKSON PARK TENNIS – PICKLEBALL COURTS,
CONTRACT A-22
VILLAGE OF JACKSON
WASHINGTON COUNTY, WI**

Quest eBidDoc #8202416

May 2022

CEDAR CORPORATION
W61 N497 WASHINGTON AVENUE
CEDARBURG, WI 53012
262-204-2360
262-375-2688 (Fax)
www.cedarcorp.com

Engineer's Project Number: 05789-0015

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Jackson Park Tennis – Pickleball Courts, Contract A-22

Engineer's Project Number: 05789-0015

May 2022

Prepared for:

Village of Jackson
Washington County, WI

Prepared by:



REUSE OF DOCUMENTS

This document has been developed for a specific application and not for general use; therefore, it may not be used without the written approval of Cedar Corporation. Unapproved use is at the sole responsibility of the unauthorized user.

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SECTION 00 01 07
SEALS AND SIGNATURES



I hereby certify that the portion of this submission described below was prepared by me, or under my direct supervision and responsible charge. I am a duly Licensed Professional Engineer under the laws of the State of Wisconsin.

Ronald D. Dalton, P.E.

Ronald D. Dalton

5-11-2022

Signature

Date

Discipline: Project Manager

WI License No. E-28440

License expires: July 31, 2022

Division(s) covered by this seal: All

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END OF SECTION

SECTION 00 11 13
ADVERTISEMENT FOR BIDS

Sealed bids for **Jackson Park Tennis – Pickleball Courts, Contract A-22**, will be received by the Village of Jackson, Attention: Director of Public Works & Village Engineer at the Public Works Building, W194 N16660 Eagle Drive (PO Box 637), Jackson, Wisconsin 53037, by 2:00 PM (local time), on Thursday, May 26, 2022; and then at said office publicly opened and read aloud.

The work, in general, will include the approximate quantities and items listed below:

BASE BID SECTIONS:

1,100	C.Y.	Common Excavation
1,600	Tons	8-inch Base Aggregate
640	Tons	3-inch Asphalt
96	S.F.	6-inch Concrete
767	L.F.	10-ft. Fence
79	L.F.	4-ft. Fence
4	EA.	Pickleball Nets
2	EA.	Tennis Nets
31,390	S.F.	Asphalt Paint
2	EA.	Bike Rack
3	EA.	Basketball Hoop
325	S.Y.	Lawn Restoration

The proposals shall be submitted on the forms furnished with the specifications. Each proposal shall be accompanied by a bid bond of a bonding company duly authorized to do business in the State of Wisconsin in an amount equal to five percent (5%) of the proposal. This proposal guarantee shall be subject to forfeiture as provided by law.

Complete digital project bidding documents can be downloaded at www.cedarcorp.com or www.questcdn.com. Reference **QuestCDN project number 8202416** for a nonrefundable charge of \$30. Contact QuestCDN Customer Support at 952-233-1632 or info@questcdn.com for assistance in membership registration downloading digital project information.

The QuestCDN website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

Proposals shall not be withdrawn for a period of 45 days after the date of opening. The Village of Jackson reserves the right to reject any or all of the proposals and to waive any informalities therein.

Dates of Publication: May 12 and May 19, 2022

By Authority of: Village of Jackson
Brian Kober, P.E., Director of Public Works/Village Engineer

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 2.04 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version 7.x or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of

Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within three days of Owner's request, Bidder must submit the following information:
 - A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A pre-bid conference will not be conducted for this Project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

- 5.01 *Site and Other Areas*
 - A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities,

construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:

Not Applicable.

Owner will make copies of these other Site-related documents available to any Bidder on request.

- B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
- C. The other Site-related documents are not part of the Contract Documents.
- D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.
- E. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. Bidders visiting the Site are required to arrange their own transportation to the Site.
- C. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

5.05 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and

certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. **Ron Dalton, P.E., Project Manager, at the office of the Engineer: Cedar Corporation, telephone: 262-204-2341**
email: ron.dalton@cedarcorp.com
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than five days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 All Bidders shall submit to Owner a list of proposed subcontractors. Utilize form provided in bid proposal documents.
- 11.02 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 11.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
 - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder’s name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.02 *Allowances*

- A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and

submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.

- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

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

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. Owner shall have the right to accept alternatives in any order or combination or to not accept any for which Owner determines funds will be available at the time of award, unless specifically otherwise provided.
 - C. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—WAGE RATE REQUIREMENTS

21.01 The contractor shall comply with all applicable federal, state, and local rules and regulations regarding the posting, certification, and filing of wage rates paid to employees.

END OF SECTION

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**SECTION 00 23 00
ALTERNATES**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Administrative and procedural requirements for alternates.
 - 2. Description of alternates.

1.02 REFERENCES

- A. Definitions
 - 1. Alternate: An amount proposed by bidders and stated on Bid Form for certain work defined in Bidding Requirements that may be added to or deducted from Base Bid amount if Owner decides to accept a corresponding change either in quantity of construction to be completed or in products, materials, equipment, systems, or installation methods described in Contract Documents.
 - a. The cost or credit for each alternate is net addition to or deduction from Contract Sum to incorporate alternate into Work. No other adjustments are made to Contract Sum.
 - b. Alternates described in this Section are part of Work only if enumerated in Agreement.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination
 - 1. Modify or adjust affected adjacent work as necessary to completely integrate work of alternate into Project.
 - a. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
 - b. Coordinate related work and modify surrounding work to integrate the Work of each alternate.

2. Alternates shall conform to the requirements of each Section of the Specifications which pertain to the scope of the work contained within the Alternate.
 3. Refer to Drawings for details and other information related to the construction of Alternates where such construction is required by scope.
- B. Acceptance of Alternates
1. Alternates quoted on the Bid Form will be reviewed and accepted or rejected at Owner's option. Accepted alternates will be represented in the Agreement.
 2. If Owner selects any of the alternates, the time for Substantial Completion will be correspondingly adjusted for the selected items only.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 ADDITIVE ALTERNATES

- A. 6-ft. Vinyl Coated Fence
- B. Benches

3.02 DEDUCTIVE ALTERNATES

- A. 10-ft. Vinyl Coated Fence

END OF SECTION

SECTION 00 41 00
BID FORM

Bidder's Name: _____

Project Title: Jackson Park Tennis – Pickleball Courts, Contract A-22

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

A. *Physical address:* Village of Jackson
Attention: Director of Public Works/Village Engineer
W194 N16660 Eagle Drive (Public Works Building)
Jackson, WI 53037

B. *Mailing address:* Village of Jackson
Attention: Director of Public Works/Village Engineer
PO Box 637
Jackson, WI 53037

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

ARTICLE 2—ATTACHMENTS TO THIS BID

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

- A. Section 00 43 13 - Required Bid security.
- B. Section 00 43 36 - List of Proposed Subcontractors.
- C. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids.
- D. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids.

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Unit Price Bids*

- A. Bidder will perform the following Work at the indicated unit prices:

Unit Price Bid Schedule

Jackson Park Tennis – Pickleball Courts, Contract A-22

Item No.	Description	Quantity	Unit	Bid Unit Price	Bid Price
Base Bid:					
1	Common Excavation, with Asphalt and Concrete Pavement Removal, with Subgrade Preparation	1,100	CY	\$	\$
2	Remove & Salvage Existing Fence	675	LF	\$	\$
3	Remove & Salvage Existing Benches	4	Each	\$	\$
4	Remove & Salvage Existing Basketball Hoop Assembly	2	Each	\$	\$
5	8-inch Base Aggregate - at Sidewalks and Courts	1,600	Tons	\$	\$
6	3-inch HMA Pavement, 5 LT 58-28 S	642	Tons	\$	\$
7	6-inch Concrete Bike Rack Pad	96	SF	\$	\$
8	10-ft. Vinyl Coated Fence	767	LF	\$	\$
9	4-ft. Vinyl Coated Fence	79	LF	\$	\$
10	3-ft. Vinyl Coated Gate	2	Each	\$	\$
11	Pickleball Net Posts/Ground Sleeves	8	Each	\$	\$
12	Pickleball Nets/Center Strap & Anchors	4	Each	\$	\$
13	Tennis Net Posts/Ground Sleeves	4	Each	\$	\$
14	Tennis Net/Center Strap & Anchors	2	Each	\$	\$
15	All Court and Asphalt Coatings with Linework, and Painting	1	LS	\$	\$
16	Concrete Net Footings	12	Each	\$	\$
17	Silt Fence	730	LF	\$	\$
18	Lawn Restoration	325	SY	\$	\$
19	Bike Rack	2	Each	\$	\$
20	Basketball Goal Assembly	3	Each	\$	\$
21	Saw Cut Curb Head	6	LF	\$	\$
22	Saw Cut Asphalt Pavement	10	LF	\$	\$
Total Base Bid Price:					\$

(On line above, write out Total Base Bid Price, including any allowances.)

Alternate Bid Items:

Additive and/or Deductive Alternate Bid Items. The additive and/or deductive alternate bid items listed below are bid items that the Owner may select based on the cost-effective analysis after the bid opening and before the contract is awarded. The Contractor is required to complete this bid schedule and include it with the bid. The additive and/or deductive alternate bid items listed below will be used for determining the low bidder.

ALT 1	Additive Alternate Bid Item 1: 6-ft. Vinyl Coated Fence, (ADD)	291	LF	\$	\$
ALT 2	Deductive Alternate Bid Item 2: 10-ft. Vinyl Coated Fence, (DEDUCT)	291	LF	(\$)	(\$)
ALT 3	Additive Alternate Bid Item 3: Benches, (ADD)	8	Each	\$	\$

The Owner reserves the right to select and add any of the Schedule(s) or Alternate(s) listed above. If the Owner selects one or more of the Schedule(s) or Alternate(s), the award of the contract shall be based upon the total sum of the Schedule(s) and Alternate(s) selected.

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

C. The Owner reserves the right to select and add any of the Schedule(s) or Alternate(s) listed above. If the Owner selects one or more of the Schedule(s) or Alternate(s), the award of the contract shall be based upon the total sum of the Schedule(s) and Alternate(s) selected.

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

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

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
 7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable)

SECTION 00 43 13
BID BOND (PENAL SUM FORM)

Bidder Name: _____ Address <i>(principal place of business)</i> : _____ 	Surety Name: _____ Address <i>(principal place of business)</i> : _____
Owner Name: _____ Address <i>(principal place of business)</i> : _____ 	Bid Project <i>(name and location)</i> : _____ Bid Due Date: _____
Bond Penal Sum: _____ Date of Bond: _____	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 00 43 33
EQUIPMENT AND SERVICES PRICE SCHEDULE

Bidder shall list the price for equipment and services in the table below. Upon request of the Owner or Engineer, Bidder shall provide a price quotation for any additional equipment or service included in the bid.

Specification Section	Supplier	Price

END OF SECTION

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SECTION 00 43 36
PROPOSED SUBCONTRACTORS FORM

The following subcontractors will be utilized for portions of the project work. Changes shall not be made subsequent to the bid unless the change(s) is approved by the Owner.

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**SECTION 00 51 00
NOTICE OF AWARD**

Date of Issuance:

Owner:

Owner's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[Describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is \$**[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[Number of copies sent] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **[number of copies sent]** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): None.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

By (*signature*): _____

Name (*printed*): _____

Title: _____

Copy: Engineer

SECTION 00 52 13
AGREEMENT BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between Village of Jackson (“Owner”) and [name of contracting entity] (“Contractor”).

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Reconstruction of Tennis – Pickleball Courts at Jackson Park in the Village of Jackson, Wisconsin.

ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: JACKSON PARK TENNIS – PICKLEBALL COURTS, CONTRACT A-22, VILLAGE OF JACKSON, WASHINGTON COUNTY, WI.

ARTICLE 3—ENGINEER

- 3.01 The Owner has retained Cedar Corporation (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by Cedar Corporation.

ARTICLE 4—CONTRACT TIMES

- 4.01 *Time is of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Dates*
- A. The Work will be substantially complete on or before August 26, 2022; and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before September 9, 2022.

4.05 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. *Substantial Completion*: Contractor shall pay Owner \$750 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500 for each day that expires after such time until the Work is completed and ready for final payment.
 3. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities) _____ (\$_____).

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment as recommended by the Engineer each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
 - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. 95 percent of the value of the Work completed (with the balance being retainage).
 - 1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
 - b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 97.5 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the maximum rate allowed by law at the place of the project.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 - 1. This Agreement (pages ____ to ____, inclusive).
 - 2. Bonds:
 - a. Performance bond, together with power of attorney (pages ____ to ____, inclusive).
 - b. Payment bond, together with power of attorney (pages ____ to ____, inclusive).
 - 3. General Conditions (pages ____ to ____, inclusive).
 - 4. Supplementary Conditions (pages ____ to ____, inclusive).
 - 5. Specifications as listed in the table of contents of the project manual.
 - 6. Drawings (not attached but incorporated by reference) consisting of **[number]** sheets with each sheet bearing the following general title: *Construction Drawings for Jackson Park Tennis-Pickleball Courts, Village of Jackson, Washington County, WI. May 12, 2022.*
 - 8. Addenda (numbers **[number]** to **[number]**, inclusive).
 - 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages ____ to ____, inclusive).
 - b. Wage Rates (if applicable).
 - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.

- e. Contractor Payment Request.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
 - 1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 - 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site, if any, and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 - 5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 - 6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 - 7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the

Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the

standard wording of such published document to the Contractor in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

Owner:

Village of Jackson

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Attention: **[Village Clerk or Engineer]**

[Village Clerk or Engineer street address]

(PO Box 637)

Jackson, Wisconsin 53037

Phone:

Email:

(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

Contractor:

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Attention:

Phone:

Email:

License No.:

(where applicable)

State:

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**SECTION 00 55 00
NOTICE TO PROCEED**

Owner: _____ Owner's Project No.: _____
Engineer: _____ Engineer's Project No.: _____
Contractor: _____ Contractor's Project No.: _____
Project: _____
Contract Name: _____
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **[date for Substantial Completion, from Agreement]**, and the date by which readiness for final payment must be achieved is **[date for readiness, from Agreement]**.

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner: _____
By (*signature*): _____
Name (*printed*): _____
Title: _____
Date Issued: _____
Copy: Engineer

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**SECTION 00 61 13.13
PERFORMANCE BOND**

Contractor Name: _____ Address (<i>principal place of business</i>): _____	Surety Name: _____ Address (<i>principal place of business</i>): _____
Owner Name: _____ Mailing address (<i>principal place of business</i>): _____	Contract Description (<i>name and location</i>): _____ Contract Price: _____ Effective Date of Contract: _____
Bond Bond Amount: _____ Date of Bond: _____ <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☐ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i> _____	<i>(Full formal name of Surety) (corporate seal)</i> _____
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

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 Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may 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 Paragraph 3.1 will 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 does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. 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 Paragraph 3.1 does 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 Paragraph 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 Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in

Paragraph 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:
 - 5.4.1 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
 - 5.4.2 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 Paragraph 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 Paragraph 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 Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will 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:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. 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 Paragraph 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 will not be reduced or set off on account of any such unrelated obligations. No right of action will 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 must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must 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 periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
12. Notice to the Surety, the Owner, or the Contractor must 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 will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will 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 for the Contractor for 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 will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: None.

SECTION 00 61 13.16
PAYMENT BOND

Contractor Name: _____ Address <i>(principal place of business)</i> : _____	Surety Name: _____ Address <i>(principal place of business)</i> : _____
Owner Name: _____ Mailing address <i>(principal place of business)</i> : _____	Contract Description <i>(name and location)</i> : _____ Contract Price: _____ Effective Date of Contract: _____
Bond Bond Amount: _____ Date of Bond: _____ <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: ☐ None ☐ See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i> _____	<i>(Full formal name of Surety) (corporate seal)</i> _____
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

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 will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 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 Paragraph 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 will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. 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
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 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 Paragraph 13).
6. If a notice of non-payment required by Paragraph 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 Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 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 Paragraph 7.1 or 7.2 will 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 Paragraph 7.1 or 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 will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will 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 will 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 satisfying 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 will 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 Paragraph 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 will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will 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 will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests 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:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. 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;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. 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 is to include without limitation in the terms of "labor, materials, or equipment" that part of the 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 will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: None.

Contractor's Application for Payment No.

	Application Period:	Application Date:
To (Owner):	From (Contractor):	Via (Engineer): Cedar Corporation
Project:	Contract:	
Owner's Contract No:	Contractor's Project No:	Engineer's Project No:

Application For Payment Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE.....	\$ _____
2. Net change by Change Orders.....	\$ _____
3. Current Contract Price (Line 1 ± 2).....	\$ _____
4. TOTAL COMPLETED AND STORED TO DATE (Column I total on Progress Estimates).....	\$ _____
5. RETAINAGE:	
a. 5% X _____ Work Completed.....	\$ _____
b. 5% X _____ Stored Material.....	\$ _____
c. Total Retainage (Line 5.a + Line 5.b).....	\$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....	\$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
8. AMOUNT DUE THIS APPLICATION.....	\$ _____

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature

By:	Date:
-----	-------

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____ (Engineer) _____ (Date)

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is approved by: _____ (Owner) _____ (Date)

Approved by: _____
Funding or Financing Entity (if applicable) (Date)

Unit Price Progress Estimate

Contractor's Application

[illegible]

SECTION 00 63 36
FIELD ORDER NO.: [Number of Field Order]

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	Effective Date
Date Issued:	of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

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SECTION 00 63 49
WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	Effective Date of Work
Date Issued:	Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$ _____ **[increase] [decrease] [not yet estimated].**

Contract Time: _____ days **[increase] [decrease] [not yet estimated].**

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer	Authorized by Owner
By: _____	_____
Title: _____	_____
Date: _____	_____

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SECTION 00 63 63
CHANGE ORDER NO.: [Number of Change Order]

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	Effective Date of
Date Issued:	Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	Change in Contract Times [State Contract Times as either a specific date or a number of days]
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] : \$ _____	[Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] : Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: \$ _____	[Increase] [Decrease] this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required) By: _____ Title: _____ Date: _____ Authorized by Owner By: _____ Title: _____ Date: _____	Accepted by Contractor _____ _____ _____ Approved by Funding Agency (if applicable) _____ _____ _____
---	---

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SECTION 00 65 16
CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: _____ Owner's Project No.: _____
Engineer: _____ Engineer's Project No.: _____
Contractor: _____ Contractor's Project No.: _____
Project: _____
Contract Name: _____

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

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

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the

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

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

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

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available

to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

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

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
 3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

- c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
 - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or
 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate

with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price

will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

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

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

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

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

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

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*
- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
 - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

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

18.09 *Successors and Assigns*

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

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SECTION 00 73 00
SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

SC-1.01.A.50 Add the following at the end of the Paragraph:

A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.

SC-1.01A.51 Add the following new paragraph after Paragraph 1.01.A.50:

Abnormal Weather Conditions - Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

ARTICLE 2 - PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

- A. Owner shall furnish to Contractor three (3) printed copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

2.05 *Acceptance of Schedules*

SC-2.05.A.3 Add the following sentence to the end of Paragraph 2.05.A.3.: “Unit quantities and unit prices will be utilized for unit price work.”

2.06 *Electronic Transmittals*

SC-2.06 Delete Paragraph 2.06.B in its entirety and insert the following in its place:

B. *Electronic Documents Protocol*: The parties shall conform to the following provisions in Paragraph 2.06.B.

1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.
- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

- f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. *System Infrastructure for Electronic Document Exchange*

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is 20 MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
 - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media

such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

SC-2.06.C. Delete Paragraph 2.06.C. and insert the following in its place:

- C. When Contractor transmits items in electronic media or digital format, the items shall be compatible with Engineer's software application packages, operating systems, and computer hardware.

ARTICLE 4 - COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A Amend the last sentence of Paragraph 4.01.A. to read as follows:

In no event will the Contract Times commence to run later than the thirtieth day after the Effective Date of the Contract.

4.05 *Delays in Contractor's Progress*

SC-4.05 Amend Paragraph 4.05.C. by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled, and 4) normal bad weather days in any given timeframe will not be considered "abnormal" for weather related delays.

ARTICLE 5 - SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Prepared By	Date of Report	Technical Data
No reports.			

- F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground

Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Prepared By	Date of Drawings	Technical Data
No Drawings.			

5.06 Hazardous Environmental Conditions

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Prepared By	Date of Report	Technical Data
No Reports			

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Prepared By	Date of Drawings	Technical Data
No Drawings			

ARTICLE 6 - BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

6.03 Contractor's Insurance

SC-6.03 Add the following paragraphs immediately after Paragraph 6.03.C:

- D. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation and Related Coverages:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>

Employer's Liability:

Bodily injury, each accident	\$ <u>1,000,000</u>
Bodily injury by disease, each employee	\$ <u>1,000,000</u>
Bodily injury/disease aggregate	\$ <u>1,000,000</u>

For work performed in monopolistic states,
stop-gap liability coverage shall be endorsed to
either the worker's compensation or
commercial general liability policy with a
minimum limit of:

\$ 500,000

2. Contractor's Commercial General Liability Coverages:

General Aggregate	\$ <u>1,000,000</u>
Products – Completed Operations Aggregate	\$ <u>1,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000</u>

3. Automobile Liability Coverages:

Bodily Injury:

Each person	\$ <u>1,000,000</u>
Each accident	\$ <u>1,000,000</u>

Property Damage:

Each accident	\$ <u>500,000</u>
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[or]

Combined Single Limit of	\$ <u>1,000,000</u>
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4. Excess or Umbrella Liability:

Per Occurrence	\$ 5,000,000
General Aggregate	\$ 5,000,000

5. Contractor's Pollution Liability:

Each Occurrence	\$ N/A
General Aggregate	\$ N/A



If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds:

In addition to Owner (Village of Jackson) and Engineer (Cedar Corporation), include as additional insureds the following: None, by endorsement as additional insureds.

7. The Owner will consider a policy with lower employer liability limits and a larger umbrella liability policy provided the Contractor can demonstrate that the umbrella policy provides equal or greater coverage than the basic requirement.

E. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

F. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- G. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.

6.04 Builder's Risk and Other Property Insurance

SC-6.04 Add the following paragraphs immediately after Paragraph 6.04.E:

F. *Builder's Risk Requirements:* The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).
 - a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
 - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
 4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 5. extend to cover damage or loss to insured property while in transit.
 6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
 7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
 8. include performance/hot testing and start-up, if applicable.
 9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
 - 10 include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
 - a. Engineer: Cedar Corporation.
- G. *Builder's Risk and Other Property Insurance Deductibles:* The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.
1. The builder's risk policy (or if applicable the installation floater) will be subject to a deductible amount of no more than \$1,000 for direct physical loss in any one occurrence.

ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

7.02 *Supervision and Superintendence*

SC-7.02 Add after last sentence in Paragraph 7.02 B.:

The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

2. Regular working hours will be 7:00 a.m. to 6:00 p.m.

7.07 *Concerning Subcontractors, Suppliers, and Others*

SC-7.07.A Amend Paragraph 7.07.A by adding the following text to the end of the Paragraph:

The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

7.09 *Permits*

SC-7.09.A Add a new paragraph immediately after Paragraph GC-7.09 A:

- A. The Owner shall be responsible for obtaining the following permit(s):

None.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- B. Contractor shall become aware of and comply with Sec. 77.54 (9m) Wis. Stats, which is effective as of January 1, 2016. The sale of and the storage, use, or other consumption of tangible personal property, or items or property sold to a construction contractor who, in fulfillment of a real property activity, transfers the tangible personal property, or items or property to local units of government such as a county, city, village, town, or school district, or to a nonprofit organization as part of constructing the "facility", is EXEMPT from the sales tax and the use tax. The "facility" means any building, shelter, parking lot, parking garage, athletic field, athletic park, storm sewer, water supply system or sewerage and waste water treatment facility, but does not include a highway, street, or road.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

7.12 Record Documents

SC-7.12.A Add a new paragraph immediately after Paragraph 7.12.A:

- B. The Contractor shall excavate all points which are not adequately referenced on the Contractor's copy of the annotated record documents at his own expense so necessary measurements can be made.

7.15 Emergencies

SC-7.15 Add a new paragraph immediately after Paragraph 7.15 A:

- B. In emergencies affecting the safety or protection of persons or property or maintenance of temporary construction at the site or adjacent thereto, and Contractor cannot be reached, Owner may act to attempt to prevent threatened damage, injury, or loss. Owner will give Contractor and Engineer prompt written notice of such action and the cost of the correction or remedy shall be charged against Contractor. A Change Order will be issued to document the change in Contract Price.

ARTICLE 9 - OWNER'S RESPONSIBILITIES

9.11 Evidence of Financial Arrangements

Delete Paragraph 9.11 in its entirety.

ARTICLE 10 - ENGINEER'S STATUS DURING CONSTRUCTION

10.03 Resident Project Representative

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
3. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
4. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
5. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
 - d. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made;

and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

6. *Inspections and Tests*

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work, and report details to Engineer.
- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- c. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

7. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

8. *Shop Drawings and Samples:*

- a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
- b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
- c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

9. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

10. *Records:*

- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders,

Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.

- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. *Completion*

- a. Participate in Engineer's visits regarding Substantial Completion.
- b. Assist in the preparation of a punch list of items to be completed or corrected.
- c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 13 - COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.02 *Allowances*

SC-13.02.C. Delete Paragraph 13.02.C. in its entirety and insert the following in its place:

Deleted.

13.03 Unit Price Work

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 15 - PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 Progress Payments

SC-15.01.B.1 Amend the first sentence changing 20 days to 10 days.

SC-15.01.D.1 Amend the first sentence changing "Ten days" to "Twenty days".

15.02 Contractor's Warranty of Title

SC-15.02.A Amend paragraph by striking out the following text: "7 days after".

15.03 Substantial Completion

SC-15.03.B Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of

time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.08 *Correction Period*

SC-15.08 Add the following new Paragraph 15.08.G:

- G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1; or if no such revision has been made in SC-6.01.B, then the correction period is hereby specified to be “two years”, *except* Landscape Restoration warranty shall be “one year” after Substantial Completion.

END OF SECTION

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**SECTION 01 10 00
SUMMARY**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Summary of Work
 - a. Work Covered by Contract Documents
 - 2. Work Restrictions
 - a. Access to Site
 - b. Use of Site
 - c. Work in Rights-of-Way
 - d. Work Sequence
 - 3. Project Utility Sources

1.02 SUMMARY OF WORK

- A. Work Covered by Contract Documents
 - 1. Location: Jackson Park located at W204 N16901 Jackson Drive in the Village of Jackson, Wisconsin.
 - 2. The Work includes:
 - a. Removal and salvage materials
 - b. Excavation and grading
 - c. Crushed aggregate base course
 - d. Concrete work
 - e. HMA Pavement
 - f. Specialty Equipment
 - g. Asphalt coatings and linework

- h. Fencing
- i. Lawn restoration

1.03 WORK RESTRICTIONS

A. Access to Site

- 1. Access to the Site is limited to Jackson Drive.

B. Use of Site

1. General

- a. Contractor shall have full use of the Site for construction operations as allowed by law, ordinances, permits, easement agreements and the Contract Documents.
- b. Limit Use of the Site by Owner's right to perform work or to retain other contractors on portions of the Project.
- c. The Project Site is limited to property boundaries, rights-of-way, easements and other areas designated in the Contract Documents.
- d. Provide protection and safekeeping of material and products stored on or off the Site.
- e. Move any stored material or products that interfere with operations of Owner or other Contractors.

2. Use of the Site

- a. Limit use of premises to areas within the Contract limits.
- b. Do not disturb portions of Project Site beyond areas in the indicated Work.
- c. Confine construction operations to limits shown on the Drawings.
- d. Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
- e. Coordinate and obtain concurrence for any utility service disruptions with affected property owners.

- f. Coordinate and obtain concurrence for any access disruptions and access changes with affected property owners.
- g. Coordinate and obtain concurrence for any disruption or relocation for mail service, garbage pick-up service, school bus service and any other normal occupant service with affected property owners.

C. Work in Rights-of-Way

- 1. Keep driveways, loading areas, and entrances serving premises clear and available to residents and emergency vehicles at all time. Do not use these areas for parking or storage of materials.
- 2. Continuously keep rights- of- way, storage areas, streets, roads, highways and adjacent properties free from accumulations of waste materials, excess excavation, rubbish and windblown debris resulting from construction operations.
- 3. Broom or water clean paved surfaces and remove surplus materials, tools, construction equipment and machinery as each work area is completed.
- 4. Protect and avoid damage within the work area.
 - a. Protect and avoid damage to trees or shrubbery within the work area not designated for removal.
 - b. Adequately close and protect all excavations, equipment, and materials stored within the Site of the Project.
 - c. Do not interfere with or create any hazards to traffic.
 - d. Control dust on all roads, drives, walkways, and parking areas.
 - e. Provide protection of all existing equipment located throughout the Project area.
- 5. Public Relations
 - a. Where operations of the Contractor require personal contact with the public, the Contractor and all his employees shall act in a courteous and respectful manner when in contact with the public.

- b. Provide all means necessary to control dust on and near the work, including off-site borrow and stockpile areas as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of other work on the Site.
- c. Minimize interference with traffic.
- d. Provide and maintain ingress and egress for all residents along the construction route.
- e. Notify all local emergency services, school districts, and other public agencies with regard to access, control and maintenance of traffic in the work area.
- f. Obey and follow all posted speed limits.

D. Work Sequence

- 1. Perform Construction Work sequencing as required to meet the Contract Times and Milestones stated in the Agreement.
- 2. Provide access to properties affected by the construction activities.
- 3. Protect road surfaces from damage and debris outside the construction Site and the areas not scheduled for replacement.
- 4. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- 5. Do not interrupt delivery of mail service, garbage pickup, school buses, emergency vehicles and other normal municipal operations.

1.04 PROJECT UTILITY SOURCES

A. Water and Sewer

- 1. Village of Jackson
Attn: Brian Kober, PE, DPW Phone: 262-677-9001, Ext. 14

B. Gas and Electric

- 1. WE Energies – Gas Division
Attn: Art Cove Phone: 414-944-5755
- 2. WE Energies – Electric Division
Attn: Jeff Rondeau Phone: 262-268-3407

C. Cable

- | | | |
|----|---|---------------------|
| 1. | Charter Communications
Attn: Steve Storm | Phone: 414-908-4769 |
| 2. | Spectrum
Attn: Steve Cramer | Phone: 414-277-4045 |

D. Telephone

- | | | |
|----|---------------------------|---------------------|
| 1. | AT&T
Attn: Joan Weaver | Phone: 414-535-7416 |
|----|---------------------------|---------------------|

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 22 01
UNIT PRICES – TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Temporary Controls
 - a. Temporary Erosion and Sediment Control
 - (1) Temporary Silt Fence
- B. Unit Prices include:
 - 1. Defined work for each Unit Price Item that will provide a functionally complete Project when combined with all Unit Price Items. If there are specific work items that the Contractor believes not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 - 2. The method of measurement for payment.
 - 3. The price per unit for payment.

1.02 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item of the following work items common to the Unit Price Items unless there is a specific Unit Price Item for the Work, then include with that specific Unit Price Item.
 - 1. Mobilization of personnel, equipment, supplies, and incidentals required to complete the Work.
 - 2. Project Management and Coordination
 - 3. Photographic Documentation
 - 4. Submittal Procedures
 - 5. Quality Requirements
 - 6. Temporary Facilities and Controls

7. Erosion and Sedimentation Controls
8. Subsurface exploration for locating existing utilities
9. Landscaping - turf establishment surface restoration and trees and bushes damaged during construction
10. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.

1.03 TEMPORARY CONTROLS

A. Temporary Erosion and Sediment Control

1. Temporary Silt Fence

- a. The unit price for Silt Fence Erosion Control work includes:
 - (1) General Work Items of Article 1.02.
 - (2) Fabric and posts.
 - (3) Excavation to anchor fabric and compact soil or provide soil to anchor the fabric.
 - (4) Inspection and maintenance of the installed silt fence.
 - (5) Removal of the silt fence.
 - (6) Removal and disposal of trapped sediment.
 - (7) Finish grading.
 - (8) Seeding, fertilizing, mulching area around the removed silt fence that does not have established turf.
- b. Measurement for payment will be the actual horizontal length installed.
- c. The unit of measurement for payment is linear feet.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 22 02
UNIT PRICES - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Examination and Preparation
 - a. Mobilization
- B. Unit Prices include:
 - 1. Defined work for each Unit Price Item that will provide a functionally complete Project when combined with all Unit Price Items. If there are specific work items that the Contractor believes not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 - 2. The method of measurement for payment.
 - 3. The price per unit for payment.

1.02 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items common to the Unit Price Items unless there is a specific Unit Price Item for the Work, then include with that specific Unit Price Item.
 - 1. Project Management and Coordination
 - 2. Quality Requirements

1.03 EXAMINATION AND PREPARATION

- A. Mobilization
 - 1. Mobilization work includes:
 - a. Determine appropriate personnel, tools, equipment, materials, supplies, and incidentals required to properly perform the Work.

- b. Move appropriate personnel, tools, equipment, materials, supplies, and incidentals to the Project Site as required to perform the Work.
 - c. Upon completion of the Work, remove personnel, tools, equipment, materials, supplies, and incidentals from the Project Site.
 - d. Restore disturbed areas outside the Project Site to a preconstruction condition.
- 2. Measurement for payment will not be made.
 - 3. Incidental to other items of work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 22 03
UNIT PRICES - DEMOLITION AND STRUCTURE MOVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Demolition
 - a. Selective Site Demolition
 - (1) Remove and Salvage Existing Fence
 - (2) Remove and Salvage Existing Benches
 - (3) Remove and Salvage Basketball Hoop Assembly
 - b. Pavement Removal
 - (1) Saw Cutting Asphalt Pavement
 - (2) Asphalt and Concrete Pavement Removal
 - (3) Saw Cut Curb Head
- B. Unit Prices include:
 - 1. Defined work for each Unit Price Item that will provide a functionally complete Project when combined with all Unit Price Items. If there are specific work items that the Contractor believes not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 - 2. The method of measurement for payment.
 - 3. The price per unit for payment.

1.02 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items common to the Unit Price Items unless there is a specific Unit Price Item for the Work, then include with that specific Unit Price Item.

1. Mobilization of personnel, equipment, supplies, and incidentals required to complete the Work.
2. Project Management and Coordination
3. Photographic Documentation
4. Cutting and Patching
5. Trenching and Backfill
6. Erosion and Sedimentation Controls
7. Subsurface exploration for locating existing utilities
8. Landscaping - turf establishment surface restoration and trees and bushes damaged during construction
9. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.

1.03 DEMOLITION

A. Selective Site Demolition

1. Remove and Salvage Existing Fence
 - a. The unit price for Remove and Salvage Existing Fence work includes:
 - (1) General Work Items of Article 1.02.
 - (2) Excavation and full removal of posts and bases.
 - (3) Removing and salvaging Existing Fence, and transporting.
 - (4) Backfilling and compacting.
 - (5) Preparing salvaged components for transport by stacking, rolling, etc.; and secure in bundles of manageable size.
 - b. Measurement for payment will be the actual amount of Existing Fence removed and salvaged.
 - c. The unit of measurement for payment is lineal feet.

2. Remove and Salvage Existing Benches

- a. The unit price for Remove and Salvage Existing Benches work includes:
 - (1) General Work Items of Article 1.02.
 - (2) Removing and salvaging Existing Benches, and transporting.
- b. Measurement for payment will be the actual number of Existing Benches removed and salvaged.
- c. The unit of measurement for payment is each.

3. Remove and Salvage Existing Basketball Hoop Assembly

- a. The unit price for Remove and Salvage Existing Basketball Hoop Assembly work includes:
 - (1) General Work Items of Article 1.02.
 - (2) Excavation and full removal of posts and bases.
 - (3) Removing and salvaging Basketball Hoop Assemblies, and transporting.
 - (4) Backfilling and compacting.
- b. Measurement for payment will be the actual number of Basketball Hoop Assemblies removed and salvaged.
- c. The unit of measurement for payment is each

B. Pavement Removal

1. Saw Cutting Asphalt Pavement

- a. The unit price for Saw Cutting Asphalt Pavement work includes:
 - (1) General Work Items of Article 1.02
 - (2) Saw cutting concrete and asphalt pavement to specified depth.

- b. Measurement for payment will be the actual length of saw cut.
 - c. The unit of measurement for payment is linear feet.
- 2. Asphalt and Concrete Pavement Removal
 - a. Asphalt and Concrete Pavement Removal work includes:
 - (1) General Work Items of Article 1.02
 - (2) Breaking up and removal of asphalt and concrete materials.
 - (3) Hauling and disposal of asphalt and concrete materials.
 - b. Measurement for payment will not be made.
 - c. Considered incidental to Common Excavation work items.
- 3. Saw Cut Curb Head
 - a. The unit price for Saw Cut Curb Head work includes:
 - (1) General Work Items of Article 1.02.
 - (2) Saw cutting concrete Curb Head to provide for desired path access.
 - (3) Off site disposal of removed concrete material.
 - b. Measurement for payment will be the actual length of saw cut.
 - c. The unit of measurement for payment is linear feet.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 22 04
UNIT PRICES - EARTHWORK

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Common Excavation
 - a. Common Excavation
 - b. Subgrade Preparation
- B. Unit Prices include:
 - 1. Defined work for each Unit Price Item that will provide a functionally complete Project when combined with all Unit Price Items. If there are specific work items that the Contractor believes not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 - 2. The method of measurement for payment.
 - 3. The price per unit for payment.

1.02 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items common to the Unit Price Items unless there is a specific Unit Price Item for the Work, then include with that specific Unit Price Item.
 - 1. Mobilization of personnel, equipment, supplies, and incidentals required to complete the Work.
 - 2. Project Management and Coordination
 - 3. Photographic Documentation
 - 4. Submittal Procedures
 - 5. Quality Requirements
 - 6. Temporary Facilities and Controls

7. Field Engineering
8. Erosion and Sedimentation Controls
9. Subsurface Exploration for Locating Existing Utilities
10. Pipe Bedding
11. Landscaping - turf establishment surface restoration and trees and bushes damaged during construction.
12. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.

1.03 COMMON EXCAVATION

A. Common Excavation

1. The unit price for Common Excavation work includes:
 - a. Removal of unsuitable materials.
 - b. Improvement of moisture content by compaction, disking, drying and recompaction.
 - c. Excavation to finish subgrade.
 - d. Subgrade preparation.
 - e. Grading.
 - f. Compaction.
 - g. Top soil placement/respreads.
 - h. Pavement removal and disposal.
 - i. Tennis Net posts and base removals, and disposal.
 - j. Disposal of excavated material.
2. Measurement for payment will not be made. The estimated quantity represents the computed volume by average end area from cross sections shown on the Drawings and will be the basis for payment.
3. The unit of measurement for payment is cubic yards.

B. Subgrade Preparation

1. Subgrade Preparation work includes:
 - a. General Work Items of Article 1.02.
 - b. Excavation and grading.
 - c. Shaping and compacting.
 - d. Finish grading.
 - e. Testing.
 - f. Proof rolling.
 - g. Providing drainage during construction.
2. Measurement for payment will not be made.
3. Considered incidental to Common Excavation work items.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 22 05
UNIT PRICES – EXTERIOR IMPROVEMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Aggregate Base Courses
 - a. Crushed Aggregate Base and Surface Course
 - 2. Flexible Paving
 - a. Hot Mix Asphalt Pavement
 - 3. Curb, Gutters, Sidewalks, and Driveways
 - a. Concrete Bike Rack Pad
 - 4. Paving Specialties
 - a. Asphalt Court Color Finish System and Painting
 - (1) Court and Asphalt Coatings with Linework
 - 5. Fences and Gates
 - a. Chainlink Fences
 - b. Chainlink Fence Gates
 - 6. Site Furnishings
 - a. Site Bicycle Racks
 - b. Net Posts/Ground Sleeves
 - c. Nets/Center Straps
 - d. Concrete Net Footings
 - e. Basketball Goal Assemblies
 - f. Benches

7. Turf and Grasses

a. Topsoil, Turf and Grasses (Lawn Restoration)

B. Unit Prices include:

1. Defined work for each Unit Price Item that will provide a functionally complete Project when combined with all Unit Price Items. If there are specific work items that the Contractor believes not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
2. The method of measurement for payment.
3. The price per unit for payment.

1.02 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items common to the Unit Price Items unless there is a specific Unit Price Item for the Work, then include with that specific Unit Price Item.
1. Mobilization of personnel, equipment, supplies, and incidentals required to complete the Work.
 2. Project Management and Coordination
 3. Photographic Documentation
 4. Submittal Procedures
 5. Quality Requirements
 6. Temporary Facilities and Controls
 7. Field Engineering
 8. Equipment Assembly and Installation
 9. Closeout Procedures
 10. Erosion and Sedimentation Controls
 11. Landscaping - turf establishment surface restoration and trees and bushes damaged during construction

12. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.

1.03 BASE COURSES

- A. Crushed Aggregate Base and Surface Course
 1. The unit price for Crushed Aggregate Base and Surface Course work includes:
 - a. General Work Items of Article 1.02.
 - b. Aggregate material.
 - c. Preparation of foundation.
 - d. Placing and compacting to thickness and width shown on the Drawings, or specified elsewhere.
 - e. Maintenance until surface pavement is constructed.
 - f. Preparation of the crushed aggregate base for paving.
 - g. Proof (test) rolling.
 2. Measurement for payment will be the actual amount of material required and incorporated in the work verified by submitting to the Engineer delivery tickets provided with each load showing the weight measured on a certified scale, type of material, the date delivered and the project name. Aggregates in excess of seven (7) percent total moisture determined based on the dry mass of the aggregates will have moisture content in excess of seven (7) percent deducted from the measured weight.
 3. The unit of measurement for payment is Tons.

1.04 FLEXIBLE PAVING

- A. Hot Mix Asphalt Pavement
 1. The unit price for Hot Mix Asphalt Pavement work includes:
 - a. General Work Items of Article 1.02.
 - b. Hot Mix Asphalt mixture, tack coat and other required materials.
 - c. Surface preparation.

- d. Provide tack coat on base material.
 - e. Saw cutting adjacent and abutting pavement surfaces.
 - f. Hot Mix Asphalt placement and compaction to thickness and width shown on the Drawings or specified elsewhere.
 - g. Tack coat between asphaltic concrete courses and abutting pavements.
- 2. Measurement for payment will be the actual amount of material required and incorporated in the work verified by submitting to the Engineer delivery tickets provided with each load showing the weight measured on a certified scale, type of material, the date delivered and the project name.
 - 3. The unit of measurement for payment is Tons.

1.05 CURBS, GUTTERS, SIDEWALKS, AND DRIVEWAYS

A. Concrete Bike Rack Pad

- 1. The unit price for Concrete Bike Rack Pad work includes:
 - a. General Work Items of Article 1.02.
 - b. Providing Portland cement concrete mixture of thickness shown in the Drawings, or specified elsewhere.
 - c. Providing curing.
 - d. Subgrade preparation.
 - e. Provide crushed aggregate base.
 - f. Providing contraction joints.
 - g. Finishing.
 - h. Protection.
 - i. Restoration.
- 2. Measurement for payment will be the average horizontal length and width of the concrete placed.
- 3. The unit of measurement for payment is square feet.

1.06 PAVEMENT SPECIALTIES

A. Asphalt Court Color Finish System and Painting

1. Court and Asphalt Coatings with Linework

- a. The unit price for Court and Asphalt Coatings with Linework includes:

- (1) General Work Items of Article 1.02.
- (2) Prepare asphalt surface for coating application.
- (3) Provide materials and installation per manufacturers' guidelines.
- (4) Protection of coatings/paint until dry.

- b. Measurement for payment will not be made.

- c. The unit of measurement for payment is lump sum.

1.07 FENCES AND GATES

A. Chainlink Fences

1. The unit price for Chain Link Fences work includes:

- a. General Work Items of Article 1.02.
- b. Provide corner, pull, end, line and gate posts.
- c. Provide framing.
- d. Provide fabric and tension wire.
- e. Provide adjusting and finishing.

2. Measurement for payment will be the actual length measured in the field.

3. The unit of measurement for payment is linear feet.

B. Chainlink Fence Gates

1. The unit price for Chainlink Fence Gates work includes:

- a. General Work Items of Article 1.02.

- b. Provide hinging.
 - c. Provide gates.
- 2. Measurement for payment will not be made.
- 3. The unit of measurement for payment is each.

1.08 SITE FURNISHINGS

- A. Site Bicycle Racks, Net Posts/Ground Sleeves, Nets/Center Straps and Anchors, Concrete Net Footings, Basketball Goal Assemblies, and Benches
 - 1. The bid items/unit prices for: Site Bicycle Racks, Net Posts/Ground Sleeves, Nets/Center Straps and Anchors, Concrete Net Footings, Basketball Goal Assemblies, and Benches work includes:
 - a. General work items of Article 1.02.
 - b. Excavations.
 - c. Materials.
 - d. Assembly (Assemblies).
 - e. Forming.
 - f. Installation and anchoring.
 - g. Restoration of disturbed areas.
 - 2. Measurement for payment will be the actual number provided.
 - 3. The unit of measurement for payment is each.

1.09 TURF AND GRASSES

- A. Topsoil, Turf and Grasses (Lawn Restoration)
 - 1. The unit price for Topsoil, Turf and Grasses (Lawn Restoration) work includes:
 - a. General Work Items of Article 1.02.
 - b. Site preparation.
 - c. Topsoiling

- d. Seeding.
 - e. Fertilizing.
 - f. Mulching
 - g. Maintenance and monitoring.
- 2. Measurement for payment will be the actual length and width, not to exceed width shown on Drawings, measured in the field.
 - 3. The unit of measurement for payment is square yards.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 29 00
PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Administrative and procedural requirements to prepare and process Applications for Payment.

1.02 SCHEDULE OF VALUES

- A. Unit Price Bid Schedule shall be the Schedule of Values used as the basis for reviewing Applications for Payment.
- B. Submit preliminary Schedule of Values within 10 days after the effective date of the Agreement and before the Preconstruction Conference.
- C. At the Preconstruction Conference, review the preliminary Schedule of Values for acceptability by the Engineer.
- D. Within 10 days after the Preconstruction Conference, and before submittal of progress payments, make corrections and adjustments, as necessary, to obtain an acceptable Schedule of Values and resubmit to the Engineer.
- E. Format and Content
 - 1. Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each specification section.
 - 2. Include the following project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Engineer.
 - c. Engineer's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 3. Arrange the Schedule of Values per specification section providing the following subdivisions, description of work and dollar values for each:

- a. Subcontractor work.
 - b. Manufacturer or fabricator.
 - c. Supplier.
 - d. Contractor work.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not installed.
7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Provide a separate line item in the Schedule of Values for each allowance. Show line item value of unit cost allowances as a product of the unit cost multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

1.03 APPLICATIONS FOR PAYMENT

- A. Provide each Application for Payment consistent with previous applications and payments as recommended by the Engineer and approved by Owner.
- B. Submittal times for progress payments shall be as determined at the Preconstruction Conference. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 10 days before the date for each progress payment.
- C. Requests for progress payments shall be at least 10 days before the date established for each progress payment, but not more often than once a month.

- D. Use forms provided by Engineer for applications for payment. Sample copy of the Application for Payment and Continuation Sheet is included in Section 00 62 76 Application for Payment Form.
- E. Application Preparation Procedures
 - 1. Unit Price Contract Work
 - a. When requested by the Contractor, the Engineer will determine the actual quantities and classifications of Unit Price Work performed.
 - b. Engineer will review preliminary determinations with the Contractor before completing Application for Payment.
 - c. Engineer will review the Application for Payment based on Engineer's decision on actual quantities and classifications.
 - d. Contractor shall submit signed Application for payment to Owner, through Engineer, for approval within time frame agreed to at the Preconstruction Conference.
 - 2. If payment is requested for allowances, then submit with the Application for Payment copies of a bill of sale, invoice, or other documentation stating the actual cost of the material in the allowance.
 - 3. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- F. With each Application for Payment, submit waivers of liens from subcontractors and suppliers for the construction period covered by the previous application.
 - 1. Submit partial waivers on each item for amount requested before deduction for retainage on each item.
 - 2. When an application shows completion for an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work shall submit waivers.
 - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application.

5. Submit waivers of lien on forms executed in a manner acceptable to Owner.
- G. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's construction schedule.
 4. Copies of building and other permits.
 5. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- H. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Consent of Surety to Final Payment.
 5. Final lien waivers as evidence of settled claims.
 6. Final liquidated damages settlement statement.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Project Coordination
 - 2. Preconstruction Meetings
 - 3. Progress Meetings
 - 4. Electronic Communication Protocols

1.02 PROJECT COORDINATION

- A. Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.
- B. Coordinate construction operations that depend on each other for proper installation, connection, and operation.
- C. Coordinate scheduling and timing of required administrative procedures with construction activities and activities of other contractors (where applicable) to avoid conflicts and to ensure orderly progress of the Work.
- D. Coordinate the Work according to the requirements of the General Conditions. Do not delegate responsibility for coordination to any subcontractor.
 - 1. Anticipate the interrelationship of all subcontractors and their relationship with the total Work.
 - 2. Resolve differences or disputes between subcontractors and material suppliers concerning coordination, interference, or extent of work between Specification Sections.
 - a. The Contractor's decisions, if consistent with the Contract Documents, shall be final.
 - b. Engineer will not coordinate work between Specification Sections.

3. Coordinate the work of subcontractors and material suppliers, so that their work is performed in a manner to minimize interference with, and to facilitate the progress of the work.
- E. Coordinate utility and building services shutdowns, interruptions and closures of vehicular and pedestrian thoroughfares, including access to buildings and parking areas, to minimize disruption of private and site activities.
- F. Provide layout, scheduling and sequencing of the Work.
 1. Verify, confirm and coordinate field measurements so that new construction correctly and accurately interfaces with conditions existing prior to construction.
 2. Bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of the Work.
 3. Coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including work under separate contracts.

1.03 PRECONSTRUCTION MEETINGS

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

4. Maintaining required records.
5. Other Project requirements.

1.04 PROGRESS MEETINGS

- A. The Engineer will schedule and facilitate progress meetings at the Project site at regular intervals.
- B. In addition to representatives of the Owner, the Engineer and the Contractor, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to make binding decisions on matters relating to the Work.
- C. Items of significance will be reviewed that could affect progress.
 1. Review progress since the last meeting.
 - a. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule.
 - b. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so.
 - c. Discuss whether scheduled revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
 2. Review the present and future needs of each entity present, including the following:
 - a. Interface requirements.
 - b. Time.
 - c. Sequences.
 - d. Status of submittals.
 - e. Deliveries.
 - f. Off-site fabrication problems.
 - g. Access.

- h. Site utilization.
 - i. Temporary facilities and services.
 - j. Hours of work.
 - k. Hazards and risks.
 - l. Housekeeping.
 - m. Quality and work standards.
 - n. Change orders.
 - o. Documentation of information for payment requests.
- D. Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule within 5 days after each meeting.

1.05 ELECTRONIC COMMUNICATION PROTOCOLS

- A. The Engineer will use electronic means of communication related to the Contractor's correspondence, Submittals, Requests for Information (RFI), Progress Payment Requests, and Non-Compliance Issues via Internet-based software.
- B. The Contractor shall use this electronic communication for administrative communications with the Engineer.
- C. The Contractor shall be responsible for frequent monitoring of the electronic means from the Engineer.
- D. The use of the electronic means of communication does not waive the requirement for the provision of hard copies of all formal correspondence, submittals and RFIs. All hard copies of documents shall match the electronic copies.
- E. In order to process formal correspondence and other required documentation, the Contractor shall have in place the required basic components outlined as follows:
 - 1. Use computer hardware that meets the requirements of the electronic means of communication.
 - 2. Software to be compatible with the Engineer's standards.

- F. Contractor shall be responsible for providing all computers, printers, plotters, scanners or other hardware and software for the Contractor's use.
- G. Provide all networking equipment and associated cabling within the Contractor's office.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Types of Submittals
 - 2. Submittal Procedures
 - 3. Submittal of Schedules
 - 4. Action Submittal Procedures
 - 5. Informational Submittal Procedures
 - 6. Transmittal of Submittals

1.02 TYPES OF SUBMITTALS

- A. General
 - 1. Submittals are categorized by the type of action or by sequence of construction.
 - 2. The following identifies the types of submittal designated in the respective Specification Sections.
 - 3. Schedules and Action Submittals require action by the Engineer.
 - 4. Informational Submittals do not require action by the Engineer other than to determine if complete, sufficient and results meet specified requirements.
- B. Schedules include:
 - 1. Progress Schedule
 - 2. Schedule of Submittals
 - 3. Schedule of Values
- C. Action Submittals include:
 - 1. Product Data

2. Shop Drawings
 3. Samples
 4. Delegated Design Submittals
 - a. Delegated design submittals, which include documents prepared, sealed, and signed by a design professional properly licensed in the jurisdiction of the Project and retained by Contractor, Subcontractor, or Supplier for materials and equipment incorporated into the completed Work.
 - b. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specification Section.
 - c. Delegated design submittals include: design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.
- D. Informational Submittals
1. Certificates
 2. Test and Evaluation Reports
 3. Manufacturers' Instructions
 4. Source Quality Control Submittals
 5. Field or Site Quality Control Submittals
 6. Manufacturer Reports
 7. Sustainable Design Submittals
 8. Special Procedure Submittals
 9. Qualification Statements
 10. Design data not sealed and signed by a design professional retained by Contractor, Subcontractor, or Supplier.
 11. Preconstruction Photo Documentation

12. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, potential Hazardous Environmental Condition, and similar reports.
13. Manufacturer/Supplier instructions, including installation data, and instructions for handling, starting-up, and troubleshooting.
14. Closeout Submittals
15. Maintenance Material Submittals

1.03 SUBMITTAL OF SCHEDULES

A. General

1. Prepare and submit for Engineer's review preliminary Progress Schedule, Schedule of Submittals and Schedule of Values (lump sum contracts) within 10 days after the Effective Date of the Agreement and prior to the Preconstruction Conference.
2. At least 10 days before submission of the first Application for Payment, attend a conference with the Engineer to review acceptability of the submitted preliminary schedules. If Contractor submits schedules to Engineer for review 10 days before the Preconstruction Conference, then the schedule review conference will occur at the Preconstruction Conference.
3. Within 10 days after the conference for determining acceptability of schedules, make corrections and adjustments, complete and resubmit schedules to Engineer to determine acceptability.
4. Provide three (3) copies of schedules for each submission to Engineer.

B. Contractor's Progress Schedule

1. Progress Schedule period starts at Notice to Proceed and ends at Substantial Completion.
2. Provide sufficient detail of the work activities comprising the schedule to assure adequate planning and execution of the work, such that in the judgement of the Engineer, it provides an appropriate basis for monitoring and evaluation of the progress of the Work. A work activity is defined as an activity which requires substantial time and resources (manpower, equipment and/or material) to complete and is required to be performed before the contract is considered complete.

3. The schedule shall indicate the sequence of work activities. Identify each activity with a description, start date, completion date and duration. Include, but do not limit to the following items, as appropriate to this contract:
 - a. Shop drawing review by the Engineer.
 - b. Material and Equipment:
 - (1) Order.
 - (2) Manufacture.
 - (3) Delivery.
 - (4) Installation.
 - (5) Startup.
 - (6) Operation and maintenance training
 - c. Performance tests and supervisory service activities.
 - d. Excavation and grading.
 - e. Concrete placement sequence.
 - f. Construction of various facilities.
 - g. Construction of various segments of utilities.
 - h. Subcontractor's items of work.
 - i. Allowance for inclement weather.
 - j. Contract interfaces, date of Substantial Completion.
 - k. Interfacing and sequencing with existing facilities and utilities.
 - l. Sequencing of major construction activities.
 - m. Milestones and completion dates.
4. Schedule Updating
 - a. Revise the Progress Schedule after each meeting, event, or activity where schedule changes have been recognized or made.

- b. Revised Progress Schedule shall present adjusted Work to meet milestones and Substantial Completion.
 - c. Submit revised Progress Schedule to Engineer for acceptance.
 - C. Schedule of Shop Drawing and Sample Submittals
 - 1. Coordinate Shop Drawing and Sample Schedule with subcontractors, suppliers, Schedule of Values, and Progress Schedule.
 - 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Scheduled date for each Shop Drawing and Sample submittal.
 - b. Related Specification Section number.
 - c. Name of the subcontractor or supplier.
 - d. Description of the part of the Work covered.
 - e. Scheduled date for the Engineer's final release or approval for each Shop Drawing and Sample submittal.
 - D. Schedule of Values
 - 1. Unit Price Bid Schedule shall be the Schedule of Values for the basis of progress payments.

1.04 ACTION SUBMITTAL PROCEDURES

- A. Submittal Identification System
 - 1. Use submittal identification system, consisting of Specification Section number, submittal number and resubmittal number.
 - 2. Use Specification Section number for items submitted within that section.
 - 3. Use submittal number for each submittal associated with items in that section; e.g. submittal number 1 could have 2 items from the Specification Section and submittal number 2 could have 3 additional items from the Specification Section.
 - 4. Use resubmittal number for items being resubmitted; e.g. submittal number 1 may require resubmittal, therefore, the number is Specification Section, submittal number 1, and resubmittal number 1. For subsequent resubmittals, add a consecutive number.

B. Action Submittal Transmittal Form

1. Provide separate completed Action Submittal Transmittal Form with each submittal.
2. Use the Action Submittal Transmittal Form, as attached to this Specification Section.
3. Use separate transmittal form for each Specification Section and each submittal.
4. Provide detailed description of the submittal on the Action Submittal Transmittal Form.
5. If there are any variations that a Shop Drawing or Sample may have from the requirements of the Contract Documents, then submit with the submittal a separate written communication to Engineer providing notice of any variations.

C. Contractor's Approval of Action Submittals

1. Before submitting Action Submittals to Engineer, Contractor shall:
 - a. Review and coordinate the submittal with other Action Submittals and with the requirements of the Work and the Contract Documents;
 - b. Determine and verify field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information;
 - c. Determine and verify the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. Determine and verify all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - e. Verify that submittal contains sufficient information for Engineer to determine compliance with the Contract Documents.

2. Contractor's stamp or written certification
 - a. Each submittal shall bear a stamp or specific written certification with signature representing that Contractor has reviewed the submittal in accordance with the requirements of the Contract Documents, and that Contractor approves the submittal.
 - b. Submittals without Contractor's stamp/certification and signature will be returned without review. Signatures that appear to be computer-generated will be treated as unsigned and the submittal will be returned without review.
 - c. Place the Contractor's stamp on each page or index page, which shows items contained in the Submittal, which shall contain as a minimum a statement of approval and a signature.
 - d. Signing the Action Submittal Transmittal Form does not replace the Contractor's stamp/certification on each submittal.

D. Action Submittal Process

1. Submit to individual and location established at the Preconstruction Conference.
2. Engineer's review time will be as established in the accepted Schedule of Shop Drawing and Sample Submittals.
3. In resubmittal, identify changes made from previous submittals.
4. Engineer will not recognize or process submittals not requested in the Contract Documents.
5. Contractor shall maintain a copy of approved submittals at the construction site.

E. Engineer's Action

1. Engineer will review Action Submittals in accordance with Paragraph 7.16.D of the General Conditions.
2. After review, Engineer will mark the submittal with an appropriate action and return to Contractor.
3. The Engineer will mark the Action Submittal Transmittal Form with one of the following dispositions:

- a. “No Exceptions Taken” – Work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents.
- b. “Make Corrections Noted” - Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.
- c. “Revise and Resubmit” - Do not proceed with work covered by the submittal. Revise submittal or provide new submittal in accordance with Engineer’s notations.
- d. “Rejected” - Do not proceed with work covered by the submittal. Indicates material or equipment that cannot be approved. Upon return of submittal marked "Not Approved", repeat initial submittal procedure utilizing approvable material or equipment.

4. Variation from Contract Document Requirements

- a. Engineer will review any Contractor identified variations identified in writing to Engineer.
- b. Engineer will determine if variation is acceptable.
- c. If the variation is acceptable, Engineer will provide written approval of each variation by specific written notation on the submittal and documented in a Field Order.

F. Sample Submittals

- 1. Submit full-size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
 - a. Mount or display samples in the manner to facilitate review of qualities indicated. Include the following:
 - b. Specification section number and reference.
 - c. Generic description of the sample.
 - d. Sample source.
 - e. Product name or name of the manufacturer.

- f. Compliance with recognized standards.
 - g. Availability and delivery time.
- 2. Submit samples for review of size, kind, color, pattern, and texture.
 - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three multiple units that show approximate limits of the variations.
 - b. Refer to other specification sections for requirements for samples that illustrate workmanship, fabrication techniques, and details of assembly, connections, operation, and similar construction characteristics.
 - c. Refer to other sections for samples to be returned to the Contractor for incorporation in the work. Such samples shall be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of sample submittals.
 - d. Samples not incorporated into the work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
- 3. Submittals
 - a. Except for samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit three samples for review. The Engineer will return one sample marked with the action taken.
 - b. Maintain reviewed samples at the project site for quality comparisons throughout the course of construction.

1.05 INFORMATIONAL SUBMITTAL PROCEDURES

- A. Submit identified Informational Submittals on a timely basis to Engineer for review.
- B. Informational Submittals will not receive a written response from the Engineer, if complete and results meet the requirements of the Contract Documents.
- C. A written response will respond to Contractor, if incomplete information is submitted or the results shown on the submittal does not meet the requirements of the Contract Documents.

1.06 TRANSMITTAL OF SUBMITTALS

A. Action Submittals and Informational Submittal

1. Provide each Action Submittal with completed Action Submittal Transmittal Form.
2. Provide informational submittals with project name, specification section and sufficient information to identify for what the information pertains.
3. Provide closeout submittals in accordance with Specification Section 01 78 00 Closeout Submittals.

B. Electronic Submittals

1. Electronic files shall be in "portable document format (PDF)". Files shall be electronically searchable.
2. Provide electronic files via e-mail.
3. Organization and Content
 - a. Each electronic submittal shall be one file; do not divide individual submittals into multiple files.
 - b. When submittal is large or contains multiple parts, provide PDF file with bookmark for each section of submittal.
 - c. Content shall be identical to paper submittal. First page of electronic submittal shall be Action Submittal Transmittal Form.
 - d. Provide electronic submittal files from the original and shall be clear and legible.
 - (1) Do not provide scans of faxed copies.
 - (2) Electronic file shall be full size of original paper documents.
 - (3) All pages shall be properly oriented for reading on a computer screen.
4. Provide sufficient Internet service and e-mail capability for Contractor's use in transferring electronic submittals and electronic correspondence.

C. Provide six (6) paper copies of final approved Action Submittals.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION



ACTION SUBMITTAL TRANSMITTAL FORM

SPECIFICATION NO.	_____
SUBMITTAL NO.	_____
RESUBMITTAL NO.	_____

DATE: _____ PROJECT NAME: _____

CONTRACTOR: _____ CONTRACT NO. _____

NO. OF COPIES	DESCRIPTION

I certify that the above-submitted item(s) satisfy the Contractor's obligations under the Contract Documents with respect to Contractor's review of the submittal, and that Contractor approves the submittal. A separate written communication to Engineer is provided as a notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. Each variation is noted on each Shop Drawing submitted.

(Signature of Contractor)

Submittal Review (<u>For Engineer's Use Only</u>)	
To:	Target Date:
Reviewer Initials and Date:	
Comments:	
Disposition:	
☐ No Exceptions Taken	
☐ Make Corrections Noted	
☐ Revise and Resubmit	
☐ Rejected	
Returned By:	Date:

**SECTION 01 71 13
MOBILIZATION**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Mobilization for preparatory work and operations required prior to beginning Work.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordination
 - 1. Determine appropriate personnel, tools, equipment, materials, supplies, and incidentals required to properly perform the Work.
 - 2. Move appropriate personnel, tools, equipment, materials, supplies, and incidentals to the Project Site as required to perform the Work.
 - 3. Upon completion of the Work, remove personnel, tools, equipment, materials, supplies, and incidentals from the Project Site.
 - 4. Restore disturbed areas outside the Project Site to a preconstruction condition.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 71 23
FIELD ENGINEERING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Engineering Surveys Provided by the Engineer.
 - 2. Surveys Provided by the Contractor.
 - 3. Profile and Topography Shown on the Drawings.
 - 4. Record Measurements and Markers.

1.02 SUBMITTALS

- A. Provide record measurements of facilities as installed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PREPARATION

- A. Investigate and verify the existence and location of site improvements, utilities, and other existing facilities.

3.02 ENGINEERING SURVEYS PROVIDED BY THE ENGINEER

- A. General
 - 1. Establish benchmarks for construction as shown on the Drawings.
- B. Site Improvements
 - 1. Provide construction reference stakes for location of construction limits.
 - 2. Provide benchmarks as shown on the Drawings.
 - 3. Silt Fence location.
 - 4. Pavement/Court limits.

3.03 SURVEYS TO BE PROVIDED BY THE CONTRACTOR

A. General

1. Locate, preserve, and protect established construction reference stakes, benchmarks, and control points.
2. Locate, preserve, and protect property corners and section corner monuments.
3. Provide additional construction staking as necessary to complete construction based on the construction reference stakes provided by the Engineer and the Drawings.
4. Before beginning with necessary construction staking, verify the information shown on the Drawings, in relation to the established construction reference stakes, benchmarks, control points and property corners. Notify the Engineer of any discrepancies.
5. Remove construction reference stakes when directed by the Engineer.

B. Site Improvements

1. Provide construction reference stakes for site improvements including pavements, grading, fill and topsoil placement, and utility line and grades.

3.04 PROFILE AND TOPOGRAPHY SHOWN ON THE DRAWINGS

- A. Contours or profiles of the ground are shown on the Drawings. These profiles and contours are reasonably correct, but are not guaranteed to be absolutely so, and together with any schedule of quantities are presented only as an approximation.

3.05 RECORD MEASUREMENTS AND MARKERS

- A. Provide record survey information of the completed facilities showing the horizontal and vertical location of fencing, pavement, court dimensions/linework, and installed accessories.

END OF SECTION

**SECTION 01 77 00
CLOSEOUT PROCEDURES**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion
 - 2. Final Completion
 - 3. Inspection Procedures
 - 4. Project Record Documents.
 - 5. Operation and Maintenance Manuals
 - 6. Warranties
 - 7. Instruction of Owner's Personnel
 - 8. Final Cleaning

1.02 SUBSTANTIAL COMPLETION

- A. Before notification that the Work is substantially complete, provide the following:
 - 1. Demonstrate to the Engineer that systems and system components operate as intended.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Prepare and submit Project Record Documents, operation and maintenance manuals, construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 5. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

6. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 7. Complete final cleaning requirements, including touchup painting.
 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Submit written notification to Owner and Engineer that the entire Work is ready for its intended use and the entire Work is substantially complete.
1. Provide Engineer and Owner an initial draft of punch list items to be completed or corrected before final payment.
 2. If the items in paragraph A. above are complete, then within 14 days Owner, Contractor and Engineer will make an inspection of the Work to determine status of completion.
 3. If Engineer considers the Work substantially complete, then Engineer will prepare and deliver to the Owner a tentative Certificate of Substantial Completion fixing the date of Substantial Completion with an attached tentative list of items to be completed or corrected before final payment.
 4. Engineer will issue a definitive Certificate of Substantial Completion with list of items to be completed or corrected or notify Contractor that the Work is not substantially complete within 21 days after submittal to Owner.
 5. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 6. Results of completed inspection will form the basis of requirements for Final Completion.

1.03 FINAL COMPLETION

- A. Before requesting final inspection for determining final completion, complete the following:
1. Items identified as requiring correction or completion.
 2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

- B. Submit a written notice that the entire Work is complete. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements.
 - 1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.04 WARRANTIES

- A. Submit written warranties for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Submit properly executed warranties of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8½ by 11 inch 115-by-280-mm paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.
- E. Provide three (3) copies of warranties.
 - 1. Two (2) copies in electronic form
 - 2. One (1) copies in hardcopy form

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 FINAL CLEANING

- A. Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean transparent materials.
 - f. Remove labels that are not permanent.
 - g. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 02 41 13
SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Demolition of Pavements, Curb and Gutter, Sidewalks, and Driveways

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Granular backfill material shall conform to Soil Class D-1 or D-2 stated in the appropriate Specification Section.
- B. Concrete for plugging pipe shall conform to the following:
 - 1. 28 day compressive strength: 3000 psi
 - 2. Maximum size coarse aggregate: 1 1/2"
 - 3. Minimum cement content: 4.75 bags per cubic yard
 - 4. Air content: 6±1
 - 5. Slump: 3 to 4 inches
 - 6. Maximum water/cement ratio: 0.58

PART 3 - EXECUTION

3.01 GENERAL

- A. Remove existing structures, with attached parts and connections, within limits shown on the Drawings or that interfere with new construction.
- B. Do not damage adjacent portions of existing structures not shown for removal.
 - 1. Complete operations necessary for the removal of any existing structure that might endanger the new construction, prior to the construction of the new Work.
 - 2. Do not use any equipment or devices that might damage structures, facilities, or property which are to be preserved and retained.
- C. Salvageable Material

1. Remove salvageable material without damage designated to remain the property of the Owner or designated for relocation designated by the Owner.
2. Safeguard and protect salvageable materials designated for relocation within the Project or until delivery to the Owner.

3.02 DEMOLITION OF PAVEMENTS, CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS

- A. Remove pavements, curb and gutter, sidewalks and driveways designated for removal on the Drawings or elsewhere.
- B. Dispose of removed materials offsite at Contractor's selected disposal site.
- C. Remove to an existing joint or saw cut to a true line, with vertical face, minimum depth of two (2) inches.
- D. Provide removal of materials sufficient to provide for proper grades and connections to new work.

3.03 DISPOSAL OF REMOVED MATERIALS

- A. Deliver materials designated for salvage to Owner's designated location.
- B. Haul and dispose of all other materials to a site provided by the Contractor in conformance with all governing authorities.

3.04 BACKFILLING

- A. Fill all trenches, holes, and pits resulting from the removal of structures with satisfactory soil, or with broken masonry and satisfactory soil, or with granular backfill.
- B. Place materials in layers not more than 12 inches in thickness.
- C. Thoroughly compact each layer by means of tampers, rollers, or vibrators.
- D. Do not use water to expedite settlement of backfill except with the approval of the Owner's Representative.
- E. Exclude broken masonry from the top 12 inches of the finished earth grades.
- F. Unless otherwise provided, backfill all trenches, holes, and pits to the elevation of the natural ground, the proposed finished earth subgrade, or finished slopes, as may be necessary due to the location of the removed structure.

END OF SECTION

SECTION 02 41 13.23
PAVEMENT REMOVAL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Saw Cutting and Pavement Butt Joints
 - 2. Asphalt and Concrete Pavement Removal

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 PROTECTION OF PAVEMENTS TO REMAIN

- A. If retaining a portion of the existing pavements, avoid damaging that portion during construction operations.
- B. Protect pavements to remain and do not use any equipment or devices that might damage pavements or property to be preserved.
- C. Pavements designated to remain and damaged by construction operations shall be removed and replaced to limits designated by the Engineer at no cost to Owner.

3.02 SAWCUTTING AND PAVEMENT BUTT JOINTS

- A. All concrete and asphalt pavements (including butt joints), shoulders and driveways shall be saw-cut to a minimum depth of three (3) inches prior to being shattered and removed.
- B. Where concrete pavements are covered with an asphalt overly, both the asphalt and concrete shall be saw-cut.
- C. Pavements shall be saw-cut in neat straight lines, at right angles to the street or driveway, to produce a clean joint for adjoining pavement installation.
- D. Protect saw-cut edges during construction operations. If a saw-cut edge is damaged during construction, saw-cut the pavement again immediately prior to paving at no additional cost to Owner.
- E. Milled butt joints are not required to be saw-cut if the milled edge is neat and straight.

- F. All concrete and asphalt pavements within state highway rights-of-ways shall be saw-cut full depth prior to being shattered and removed.

3.03 ASPHALT AND CONCRETE PAVEMENT REMOVAL

- A. Remove pavements to the removal limits shown on the Drawings.
 - 1. Prior to removals, saw-cut pavement in accordance to the removal limits shown on the Drawings or marked on site by the Engineer.
 - 2. Perform removal operations in a manner not to damage saw-cuts, remaining pavement, and structures such as curb and gutter.
- B. Load and haul pavement off-site as removed.
- C. Identify the locations and protect all structures/structure access castings from damage during the removal process.
- D. Provide proper traffic safety devices at all locations of structures/casting protruding above the grade.
- E. Provide and maintain temporary ramping at all locations at the limits of the removed pavement that provide vehicle access to roadways and driveways.

END OF SECTION

SECTION 02 41 16
STRUCTURE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Demolition, removal and salvage of buildings and site improvements.
 - 2. Removing below-grade construction.
 - 3. Disposal of Demolition Waste.
 - 4. Backfilling the Resulting Excavations.

1.02 REFERENCES

- A. National Fire Protection Association (NFPA)

NFPA 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations
- B. American National Standards Institute (ANSI),
American Society of Safety Engineers (ASSE)

ANSI/ASSE A10.6 Safety and Health Program Requirements for Demolition Operations – American National Standard for Construction and Demolition Operations
- C. Environmental Protection Agency (EPA).

1.03 PERMITS

- A. Unless otherwise noted, Contractor shall be responsible for obtaining and paying for all permits necessary to complete demolition work.
- B. If necessary, file and maintain Notification of Demolition and/or Renovation and Application for Permit Exemption (WDNR Form 4500-113) in accordance with the Wisconsin Administrative Code Chapter NR447.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Clean Earth backfill material shall conform to the requirements of Soil Class G-1 or G-2 in accordance to appropriate Specification Sections.

PART 3 - EXECUTION

3.01 DEMOLITION - GENERAL

- A. Remove by detaching items from existing construction and legally dispose of the off-site unless stated to be removed and salvaged.
- B. Remove and salvage items stated to be removed and reinstalled or to remain the Owner's property.
 - 1. Remove, clean, and pack or crate items to remain Owner's property to protect against damage.
 - a. Identify contents of containers and deliver to Owner's designated storage area.
 - b. Items indicated for salvage are to be disconnected and removed.
 - 2. Remove, clean, service and prepare items for reuse stated to be reinstalled.
 - a. Store and protect against damage.
 - b. Reinstall items in the same locations or in locations indicated.

3.02 DRAIN TILE

- A. Carefully protect and/or replace drain tiles encountered during demolition, which are necessary to maintain site drainage conditions. Immediately repair or replace any drain tiles not scheduled for demolition, but damaged. Report damage to the Engineer.
- B. Repairs to drain tile or replacement drain tile shall be comparable or better than the existing drain tile system.
- C. Test drain lines with water to assure free flow before covering. Remove all obstructions, which may be found, retest until satisfactory.

3.03 DUST CONTROL

- A. Control the amount of dust resulting from demolition operations to prevent the spread of dust to occupied portions of the construction site and to avoid creation of a nuisance in the surrounding area.
 - 1. Do not use of water to control dust when it will result in, or create, damage to existing building(s), damage materials specified for salvage, and hazardous or objectionable conditions such as ice, flooding and pollution.
 - 2. Comply with environmental protection regulations.

3.04 DEMOLITION BACKFILL

- A. Backfill and compact below grade areas and voids resulting from demolition of structures and other abandonment and demolition.
- B. Prior to placement of fill materials, ensure that areas to be filled are free of standing water, frost, frozen materials, trash and debris.
- C. Backfill type, lift thickness and compaction requirements shall be in accordance to appropriate Specification Sections.

3.05 SITE RESTORATION

- A. Below-Grade Areas: Completely fill below-grade areas and voids resulting from structure demolition operations with soil material in accordance to appropriate Specification Sections.

3.06 SALVAGE ITEMS

- A. Salvage items in a manner and as identified and in accordance to appropriate Specification Sections.

3.07 TRANSPORTATION AND DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Do not burn demolished materials.

- C. Transport and dispose all demolition waste in accordance with local, state, and federal guidelines.
- D. Whenever possible, or otherwise required by the Contract Documents, recycle demolition waste.
- E. Demolition waste shall be disposed of at a landfill or dumpsite designed and approved to accept the given waste.

3.08 CLEANING

- A. Clean roadways of debris caused by debris transport.

END OF SECTION

SECTION 02 42 00

REMOVAL AND SALVAGE OF CONSTRUCTION MATERIALS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Removal of Salvage Items
 - 2. Materials Salvaged for the Owner
 - 3. Protection of Salvaged Items
 - 4. Clean-up

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordination
 - 1. Prior to starting the removal and salvage Work, coordinate the delivery destination of the various salvage items with the Owner.

1.03 SUBMITTALS

- A. Informational Submittals
 - 1. Provide one (1) copy of inventory list related to salvage items delivered to the Owner to include delivered items, date delivered, condition and receipt signature by Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 SALVAGED ITEMS

- A. Salvage all items, materials or equipment identified by the Owner to be dismantled or left intact, removed, protected, stored and/or delivered to the Owner remaining as property of the Owner.
- B. Salvage items to the maximum extent possible.
- C. Prior to any demolition work, remove items to be salvaged from the structure or Work site.

- D. Remove of salvageable items by hand labor to the maximum extent possible.
- E. Care shall be taken not to damage portions of the structure to remain or items identified for salvage.
- F. Remove furnishings, equipment, and materials not scheduled for salvage or recycling prior to salvaging procedures.
- G. Keep a complete recording of all salvaged materials including the condition of such materials before, and after salvage operations.

3.02 SITE WORK

- A. The following site items shall be removed intact and salvaged:
 - 1. Fences and gates
 - 2. Benches
 - 3. Basketball Hoop Assemblies

3.03 PROTECTION OF ITEMS

- A. Protect all salvage items from during and the time of removal through to the delivery to the Owner's designated storage location.
- B. Protect from damage during removal and transport.
- C. If the salvaged items are to be reinstalled under this contract, properly store the items protecting them from other operation, weather conditions and theft.

3.04 CLEAN-UP

- A. Upon completion of the Work, clean all areas affected by the Work of dust, dirt and debris caused by the removal and salvage operations.
- B. Debris and rubbish shall be removed and transported in a manner that prevents spillage on streets or adjacent areas.
- C. Comply with all local regulations regarding hauling and disposal.

END OF SECTION

**SECTION 03 11 00
CONCRETE FORMING**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Formwork for cast-in-place concrete.
 - 2. Formwork Release Agents.
 - 3. Formwork Fasteners.

1.02 REFERENCES

- A. American Concrete Institute (ACI)
 - ACI 301 Specifications for Structural Concrete
 - ACI 347R Guide to Formwork for Concrete
- B. American Society for Testing and Materials (ASTM)
 - ASTM C31 Standard Practice for Making and Curing Concrete Test Specimens in the Field

1.03 SUBMITTALS

- A. Informational Submittals
 - 1. Proposed sequence of stripping and shoring formwork.

PART 2 - PRODUCTS

2.01 PERFORMANCE / DESIGN CRITERIA

- A. Design, engineer, and construct formwork, shoring, reshoring, and bracing to meet design requirements, so that resultant concrete conforms to required shapes, lines and dimensions.
- B. Design, construct and erect concrete formwork in accordance with ACI 301 and ACI 347R.

- C. Design, construct and erect reshoring system to result in loadings which do not exceed the design live loads. Do not use unshored structure for support until it has reached design strength.

2.02 MATERIALS

A. Forms

1. Forms for Exposed Finish Concrete:

- a. Provide form materials in largest practical sizes that will result in continuous, straight, smooth, exposed surfaces with minimum joints.
- b. Provide materials that will provide smooth, stain-free final appearance.
- c. Plywood - PS 1, BB grade, Class I; sound, undamaged sheets with straight edges.
- d. Prefabricated Metal.
- e. Metal-framed plywood faced.

2. Forms for Unexposed Finish Concrete:

- a. Plywood: PS 1, BB grade, Class I; sound, undamaged sheets with straight edges.
- b. Lumber: Douglas Fir species; minimum No. 2 grade; dressed on at least two edges and one side for tight fit with grade stamp clearly visible.
- c. Prefabricated Metal.

3. Forms for Cylindrical Columns and Supports:

- a. Provide form materials that will produce smooth surfaces without joint indications.
- b. Provide units with sufficient wall thickness to resist wet concrete loads without deformation.
- c. Prefabricated Metal

- d. Preformed glass-fiber-reinforced plastic
 - e. Preformed paper or fiber tubes
 - 4. Pan-Type Forms:
 - a. Provide forms that are stiffened to support weight of placed concrete without deformation.
 - b. Preformed glass-fiber-reinforced plastic
 - c. Preformed steel.
 - 5. Carton Forms:
 - a. Provide forms that are structurally sufficient to support weight of plastic concrete and other superimposed loads.
 - b. Biodegradable paper surface, treated for moisture-resistance
- B. Form Release Agent
 - 1. Provide commercial formulation, non-residual form release agent with a maximum of 350 g/L volatile organic compounds (VOCs).
 - 2. Provide agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- C. Form Ties
 - 1. Provide factory-fabricated, adjustable length, removable or snap-off metal form ties designed to prevent form deflection and to prevent spalling of concrete upon removal.
 - 2. Provide units that will leave no metal closer than 1½ inches to the plane of the exposed concrete surface.
 - 3. Provide ties that, when removed, will leave holes not larger than 1 inch in diameter in the concrete surface.
- D. Fillets for Chamfered Corners
 - 1. Wood strips or rigid plastic types
 - 2. 1 inch x 1 inch size or as specified elsewhere.

3. Provide maximum possible lengths to minimize joints
- E. Nails, Spikes, Lag Bolts, Through Bolts, and Anchorages
1. Provide size appropriate for application.
 2. Shall be of strength and character to maintain formwork in place while placing concrete.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and measurements before proceeding with formwork.

3.02 PREPARATION

- A. Preparation of Forms
1. Coat contact surfaces of forms with an approved form release agent before placing reinforcement.
 - a. Do not allow excess form-coating material to accumulate in forms or come into contact with in-place concrete surfaces against which fresh concrete will be placed.
 - b. Apply according to manufacturer's instructions.
 2. Coat steel forms with a nonstaining, rust preventative material. Rust-stained steel formwork is not acceptable.
 3. Minimize form joints; symmetrically align joints and make watertight to prevent leakage of mortar.
 4. Arrange and assemble formwork to permit stripping, so that concrete is not damaged during its removal.
- B. Preparation of Earth and other Surfaces
1. Hand-trim sides and bottoms of earth forms; remove loose dirt prior to placing concrete. Oversize member 2 inches on each side where earth is used as a form.
 2. Reinforcement, forms, fillers, and ground with which concrete will be in contact shall be free from frost and debris.

3. Remove water from place of deposit, unless tremie is specified to be used for underwater deposition.
4. Soak subgrade before placement of concrete slabs on grade unless a vapor barrier is used. When vapor barrier is used, overlap edges a minimum of 6 inches.
5. Have equipment on hand to protect newly placed concrete from rain until it has hardened sufficiently to resist damage.
6. Remove laitance and other unsound material before additional concrete is placed against hardened concrete.

3.03 ERECTION OF FORM WORK

A. Erection of Form Work

1. Provide forms that conform to shapes, lines and dimensions of members as required for final structure.
2. Install forms to be sufficiently tight to prevent leakage of mortar.
3. Properly brace or tie together forms to maintain position, shape and stability of forms.
 - a. Use tie rods for internal ties.
 - b. Arrange tie rods so that when forms are removed, no metal is within 1½ inches of surface.
4. Provide ¾ inch chamfer on external corners of exposed walls, beams, columns, equipment bases, and exposed edges of construction joints. Do not chamfer columns that are flush with concrete block walls.
5. Form work design and erection practices shall conform to recommendations of ACI 347R.
6. Tolerances for form work shall conform to ACI 347R.
 - a. Provide Class A tolerances for concrete surfaces exposed to view.
 - b. Provide Class C tolerances for other concrete surfaces.
7. Provide temporary ports in formwork to facilitate cleaning and inspection.

- a. Locate openings at bottom of forms to allow flushing water to drain.
 - b. Close ports with tight fitting panels, flush with inside face of forms, neatly fitting so that joints will not be apparent in exposed concrete surfaces.
- 8. Do not displace or damage any required vapor barrier.

3.04 INSTALLING INSERTS, EMBEDDED ITEMS

- A. Encase pipes, anchor bolts, electrical conduits, steps, castings, and other inserts as shown on Drawings or as specified and furnished by other trades.
- B. Place inserts in advance of pouring and brace to prevent movement during pouring process.
- C. Embedded conduits and pipes shall not be larger in outside dimension than one-third the overall thickness of wall, beam or slab.
- D. Embedded conduits and pipes shall not be spaced closer than 3 diameters or widths on center.
- E. Install accessories in accordance with manufacturer's instructions level and plumb. Ensure items are not disturbed during concrete placement.

3.05 FORM REMOVAL AND CURING

- A. Do not remove forms until member supported has attained sufficient strength to safely support its own weight and any superimposed loads.
- B. Reshore members as required to carry superimposed loads.
- C. Forms for non-structural work, at-grade, and flat work, shall remain in place for a minimum of 24 hours.
- D. Forms for vertical support of structural work including, but not limited to, basement walls, tankage walls, walls retaining earth, elevated slabs, beams and girders shall not be removed until one of the following has been met:
 - 1. At least four cylinders, field cured according to ASTM C31, reach 75% of the specified concrete strength.
 - 2. At least four cylinders, laboratory cured, reach 100% of the specified concrete strength, and the concrete has cured in the field the same

length of time. Length of time of field cure shall not include any day, or fraction thereof, when the air temperature is less than 50 degrees Fahrenheit.

- E. Forms shall be removed in such a manner as not to impair safety and serviceability of the work.
- F. If forms are removed prior to the concrete reaching its specified strength, reshores shall be provided if members support any superimposed loads.
 - 1. Place reshores as soon as possible after removal of forms, but not later than the same day forms are removed.
 - 2. Do not remove reshores until concrete has reached its specified strength.
 - 3. This provision includes reshoring of walls if backfill is placed prior to the concrete reaching its specified strength.
- G. Reshore structural members based on design requirements or construction conditions to permit successive construction. Reshores shall be designed to support the full superimposed load and the full dead load of the concrete.
- H. Do not apply construction loads to members being reshored during reshoring operations.
- I. Provide reshores for all two-way slabs until concrete has reached its specified strength.
- J. Remove formwork progressively so no unbalanced loads are imposed on structure.
- K. Do not damage concrete surfaces during form removal.
- L. Store reusable forms for exposed architectural concrete in such a manner as to prevent damage to contact surfaces.
- M. Curing of concrete shall be the lesser of:
 - 1. The time required to achieve 75% of the specified concrete strength, or
 - 2. 3 days for non-structural work or at-grade, flat work, or
 - 3. 7 days for structural work, elevated slabs, beams and girders

3.06 CLEANING

- A. Clean forms to remove foreign matter as part of the erection process.
- B. Ensure that water and debris drain to exterior through clean-out ports.
- C. During cold weather, remove ice and snow from forms.
 - 1. Do not use de-icing salts.
 - 2. Do not use water to clean out completed forms, unless formwork and construction proceed within heated enclosure.
 - 3. Use compressed air to remove foreign matter.

END OF SECTION

SECTION 03 30 53
MISCELLANEOUS CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Concrete work for non-structural use only.

1.02 REFERENCES

- A. American Concrete Institute (ACI) Manual of Practice

1.03 QUALITY ASSURANCE

- A. Conform to the ACI Manual of Practice.
- B. Material Testing
 - 1. Provide and pay for the following testing services:
 - a. Cylinder molds and compressive strength tests.
 - b. Furnishing and transporting of test specimens.
 - c. Provide one compressive test daily.
 - d. One test consists of three standard test cylinders.
 - (1) Test one cylinder at 7 days.
 - (2) Test one cylinder at 28 days.
 - (3) One spare cylinder to be tested if first two fail.
 - e. Provide test results to Owner representative.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Ready-mixed concrete shall conform to the following:

Class	28-day Comp. Str. (PSI)	Max. Size Coarse Aggregate	Min. Cement Content (Bags CY)	Air Content	Slump	Max. Water/Cement Ratio
A	4000	1½	6.0	6±1	3 inch - 4 inch	.44
B	3000	1½	4.75	6±1	3 inch - 4 inch	.58

- B. Job-mixed concrete shall be permitted for amounts of one cubic yard or less.
 - 1. Shall meet the same material and strength requirements as ready-mixed concrete.
 - 2. Intended Use: Patching, equipment bases, finishing, etc.
- C. Concrete Usage
 - 1. Class A: All locations except where Class B is specified.
 - 2. Class B:
 - a. Force main thrust blocks, tank and wet well fillets.
 - b. Supports for cleanout risers and monitoring well protection.
 - c. Fence post footings.

PART 3 - EXECUTION

3.01 FORM WORK

- A. Provide ¾ inch chamfer on external corners of exposed concrete work.

3.02 CONSTRUCTION JOINTS

- A. Use and Location
 - 1. Use and location of construction joints shall be as shown on plans or subject to prior approval of Engineer.

3.03 CURING

- A. Maintain concrete surfaces moist for a minimum of 7 days after placement.
- B. Protect curing concrete from all damage such as mechanical disturbances, water flow, loading, vibration, etc.

3.04 FINISHING FORMED SURFACES

- A. Repair tie holes, poor joints, voids, stone pockets, and other defective areas.
- B. Surface Finish
 - 1. Unless indicated otherwise in the plans, use the following finishes:
 - a. Rough form finish for surfaces not exposed to view.
 - b. Grout cleaned or cork floated finish for interior exposed walls, ceilings, beams, columns, and inside tank walls.
 - c. Smooth rubbed finish for exterior surfaces exposed to view.

3.05 FINISHING SLABS AND FLATWORK

- A. Tolerances
 - 1. Class "A": True plane within $\frac{1}{8}$ inch in 10 feet.
 - 2. Class "B": True plane within $\frac{1}{4}$ inch in 10 feet.
- B. Surface Finish Types
 - 1. Unless indicated otherwise in plans, use the following finishes:
 - a. Submerged slabs: Wood float finish, Class "B" tolerance.
 - b. Floors: Steel trowel finish, Class "A" tolerance.
 - c. Exposed slabs and walks: Wood float and broom finish, Class "A" tolerance.

END OF SECTION

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SECTION 11 68 25
TENNIS AND PICKLEBALL NETS AND ACCESSORIES AND BASKETBALL GOAL ASSEMBLIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Tennis Nets and Accessories
 - 1. Net
 - 2. Post
 - 3. Ground sleeve
 - 4. Net and post accessories
- B. Pickleball Nets and Accessories
 - 1. Net
 - 2. Post
 - 3. Ground sleeve
 - 4. Net and post accessories
- C. Basketball Goal Assemblies

1.02 REFERENCES

- A. United States Tennis Association (USTA)
- B. International Tennis Federation (ITF)
- C. American Sport Builders Association (ASBA)

1.03 SUBMITTALS

- A. Action Submittals
 - 1. Product Data
 - a. Provide physical characteristics such as shape, dimensions, material, and finish.

2. Shop Drawings
 - a. Provide installation details.
3. Samples
 - a. Provide finish samples for review and selection.

PART 2 - PRODUCTS

2.01 TENNIS NETS AND ACCESSORIES

- A. Tennis net shall be TN-36DMT Tennis Net, 3.5 mm, double mesh, tapered with 2-ply vinyl headband, black in color, by Douglas Sports, or approved equal.
- B. Tennis posts shall be Premier RD Tennis Post, 3" O.D., green in color, by Douglas Sports, or approved equal.
- C. Tennis ground sleeves shall be GS-24 RD/ST, 24" long, 3.5" O.D. galvanized steel, by Douglas Sports, or approved equal.
- D. Tennis accessories shall include self-locking tension reel with removable handle, internally wound cable, center strap and center strap anchor pipe, powder coated as per manufacturer specifications, by Douglas Sports, or approved equal.

2.02 PICKLEBALL NETS AND ACCESSORIES

- A. Pickleball nets shall be PN-30 Pickleball Net with Headband, black in color, by Douglas Sports, or approved equal
- B. Pickleball posts shall Premier RD-36 Pickleball Post, 3" O.D. green in color, by Douglas Sports, or approved equal.
- C. Pickleball ground sleeves shall be GS-24 RD/ST, 24" long, 3.5" O.D. galvanized steel, by Douglas Sports, or approved equal.
- D. Pickleball accessories shall include self-locking tension reel with removable handle, internally wound cable, center strap and center strap anchor pipe, powder coated as per manufacturer specifications, by Douglas Sports, or approved equal.

2.03 BASKETBALL GOAL ASSEMBLIES

- A. Basketball hoop assemblies shall be manufactured by Goalsetter and shall be their Signature Series, MVP, Captain model Ac-72" with 6" square 3/16" post, adjustment from 6'-2" to 10' with 48" offsets and internal compression jack, 72" acrylic backboard without backboard pad, heavy duty flex goal and hinge anchor system as provided within the APPENDIX of these specifications.
- B. The assembly shall be provided with a Keyed Pinlock as provided by the manufacturer.

PART 3 - EXECUTION

3.01 TENNIS NETS AND ACCESSORIES

- A. Install all tennis net, posts, ground sleeves, anchors, cables, and all required accessories, as indicated on the Drawings and in strict accordance with the manufacturer's printed instructions. All non-fixed equipment shall be assembled by the Contractor.

3.02 PICKLEBALL NETS AND ACCESSORIES

- A. Install all pickleball net, posts, ground sleeves, anchors, cables, and all required accessories, as indicated on the Drawings and in strict accordance with the manufacturer's printed instructions. All non-fixed equipment shall be assembled by the Contractor.

3.03 BASKETBALL GOAL ASSEMBLIES

- A. Install basketball hoop assemblies and accessories as indicated on the Drawings and in strict accordance with the manufacturer's printed instructions. All non-fixed equipment shall be assembled by the Contractor.

3.04 CLEAN UP

- A. Upon completion of the Work in any given area, remove all rubbish and debris from the Work area and leave it in clean condition.

3.05 SUPPLIER

- A. Douglas Sports Equipment, 3441 S. 11th Avenue, Eldridge, IA 52748, 800-553-8907.

PART 4 - APPENDIX

4.01 BASKETBALL GOAL ASSEMBLIES

- A. Installation and Instructions. (See Attachment A; 12 pages.)
- B. Specifications. (See Attachment B; 1 page.)

END OF SECTION



INSTALLATION AND OWNER'S INSTRUCTIONS

Signature Series Internal Jack Adjustable Height Goal System

- MVP
- Captain



800.362.4625
www.goalsetter.com

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Safety Instructions

Owner must ensure that all installers and players know and comply with these rules for safe assembly, installation, operation and use of the system. Proper and complete assembly, use and supervision is essential for proper operation of the product and to reduce the risk of accident or injury. **DO NOT ATTEMPT TO ASSEMBLE AND INSTALL THIS PRODUCT WITHOUT FOLLOWING THE INSTRUCTIONS CAREFULLY.**

WARNING

1. Failure to follow these instructions may result in death, serious injury and/or property damage and will void the warranty. Do not install or use this product unless the instructions within this manual have been carefully read and understood.
2. Locate your goal away from potential dangers, including walls, trip hazards, high-traffic areas or where a vehicle might come into contact with goal post, backboard or rim.
To avoid severe injury or death, do not locate goal under power lines that may come into contact with the goal as it is raised.
3. Two or three people in good physical condition and capable of lifting at least 90-100 lbs. (40-45 kg) each are recommended for safe installation and assembly.

- If using a ladder during assembly, use extreme caution. Follow all warnings and cautions on the ladder carefully.
- Installation and assembly of this product will require lifting and bending that may result in injury to anyone not accustomed to this type of activity.
- Before digging for the ground anchor, check for underground power, gas, telephone, water and other utility lines. Failure to do so could result in serious injury. See 811 One Call Warning box on this page for more information or call your local utility company.
- If an auger or post hole digger is used, be sure you read and follow all instructions, warnings and cautions for such equipment.
- Ensure there are no overhead power lines within a 20 ft. (7 m) radius of the goal location.
- Climate, corrosion or misuse could result in system failure.
- Keep organic material away from the pole base. Dirt, grass, litter etc. could cause corrosion or deterioration.
- Only use parts provided with your Goalsetter® basketball goal system or replacement parts provided by Goalsetter Systems, Inc. Use of other parts (a) may cause the goal system to fail, (b) could result in death, serious injury or property damage, and (c) will void the warranty.
- With rim set at 6'-0" playing height, the minimum operational height is 5'-4" (1.625 m) to the bottom of the backboard.
- **DO NOT CLIMB THE POLE OR HANG on the rim or any part of the goal system.** This includes the backboard, support braces and net. The product is not designed for such use and property damage or personal injuries such as cuts, broken bones, nerve, spinal cord or brain injury or death could occur.
- Use caution when performing dunking activities with this product.
- During play keep players' faces away from the backboard, rim and net or serious injury could result.
- Players must wear a mouth guard to avoid dental injuries.

WARNING

Before digging for the ground anchor, contact your local One-Call system (dial 811) in your area.



Know what's below.
Call before you dig.
1-888-258-0808

Utility Markings

Color	Definition
Red	Electric
Yellow	Gas, Oil, Petroleum
Orange	Communication, Phone, TV
Blue	Potable Water, Irrigation
Green/Brown	Sewer
White	Proposed Dig

- Do not wear jewelry (rings, watches, necklaces, etc.) or other loose objects that could become tangled in the net or injure another player.
- Before each use, check the goal system for loose hardware, excessive wear and signs of corrosion. Repair the system before use.
- **NEVER** play on damaged equipment.
- When adjusting the system height, keep hands and fingers away from moving parts. DO NOT allow children to adjust the system height.
- Check the goal system frequently for signs of corrosion. Remove surface rust and loose paint completely, and repaint with exterior enamel paint. If rust or corrosion has penetrated or pitted any components of the goal, DO NOT allow play and repair or replace parts immediately.
- DO NOT use the goal system to lift or hoist anything.
- Use caution when using this goal system. Most injuries are caused by misuse and/or not following these instructions.

IMPORTANT

Enclosed underneath the protective sheeting on your backboard is a warranty registration card. **YOU MUST FILL OUT AND MAIL IN THIS CARD IN ORDER TO HAVE A VALID WARRANTY.** You may also fill out a warranty registration online at www.goalsetter.com.

Retain this manual for future reference of operation, maintenance and parts information.

The information in this manual is based on the latest information available at the time of publication. Your goal may have product improvements and options not yet contained in this manual. Goalsetter Systems, Inc. reserves the right to make changes at any time without notice or obligation.

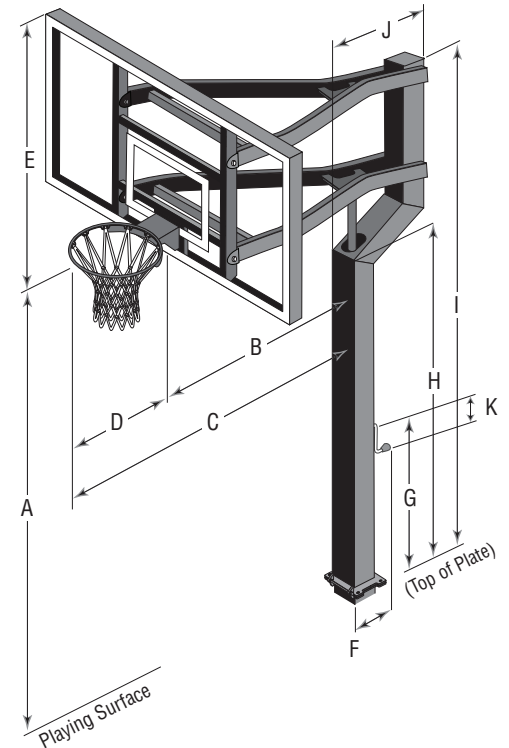
Contact the manufacturer if technical assistance is required.

Additional copies of these instructions are available from:

Goalsetter Systems, Inc.
1-800-362-GOAL (4625)
www.goalsetter.com

Goal Specifications

	MVP	Captain
Pole Size:	6"x6"	6"x6"
Backboard Size:	42"x72"	38"x60"
Weight w/Acrylic:	525 lbs.	510 lbs.
Weight w/Glass:	585 lbs.	560 lbs.
(A) Height Range:	6'-10'	6'-10'
(B) Extension Distance:	at 10'	51"
	at 8'	54"
	at 6'	48"
(C) Maximum Overhang:	79"	79"
(D) Distance Rim to Backboard:	25"	25"
(E) Distance Rim to Top of Goal:	33 3/4"	29 3/4"
(F) Crank Distance:	11 1/2"	11 1/2"
(G) Crank Height:	36 1/2"	36 1/2"
(H) Offset Height:	7'-0"	7'-0"
(I) Pole Height:	10'-5"	10'-5"
(J) Offset Distance:	21"	21"
(K) Crank Turn Radius	8"	8"



Determine Installation Location

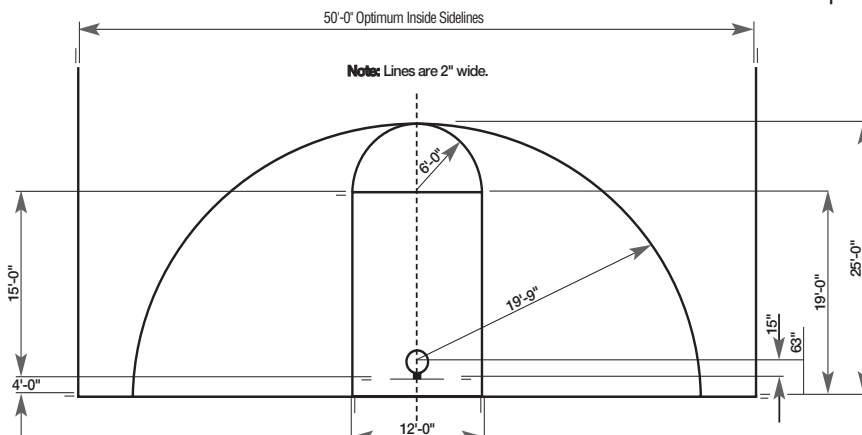
Consider the following to determine where to install your Goalsetter® Basketball Goal:

- When extended, will backboard overhang obstruct driveway or other important space? Maximum overhang: 79" (2 m) from the front of the pole to the front of the rim.
- Is there room so vehicles backing out of driveway do not strike backboard or rim?
- Will court markings be used?
- How much playing surface is needed?
- How much playing surface will be under the backboard? (Having the edge of the playing surface directly underneath the backboard can result in trip hazards and unpredictable ball action following a shot. Try to have as much playing surface as possible behind the backboard.)
- Other functions of playing surface (driveway, playground, etc.)

- Will the goal be at least 20 ft. (7 m) from any overhead power lines? (No overhead power lines should be within a 20 ft. (7 m) radius of the goal.)
- Will the ground anchor for the goal avoid underground power, gas, telephone, water and other utility lines? (See 811 One Call Warning box on page 2 for more information or call your local utility company.)

Required Tools and Materials:

- Spade
- Shovel
- Tape Measure
- Level
- Hoe
- Water
- Rubber Mallet
- Steel Punch
- Stepladder
- Wheelbarrow
- Cement Trowel
- Stir Rod
- Auger/Post Hole Digger (optional)
- 10-14, 60 lb Bags of Dry Concrete Mix (or 1/4-1/3 yard of ready mix concrete)
- 1/2" Drive Torque Wrench
- Phillips Screwdriver
- 9/16" & 3/4" Wrenches and Sockets



Court Markings

(Reference Only):

Regulation Court Lengths
High School: 84'
College & Professional: 94'

Ground Anchor Installation

Step 1: Locate and unpack a 6" ground anchor (G2660). Remove plastic plugs from bolt holes and ensure the threads are in good condition. **REPLACE THE PLUGS** – they will keep concrete and debris from the bolt holes during installation. Leave the hinge pin in place as well.

Step 2: Determine hole location. When installed, the edge of the ground anchor must be a minimum of 6" (15.2 cm) away from the playing surface. Follow One Call or your utility's recommendations as to how close you may dig to a marked utility.

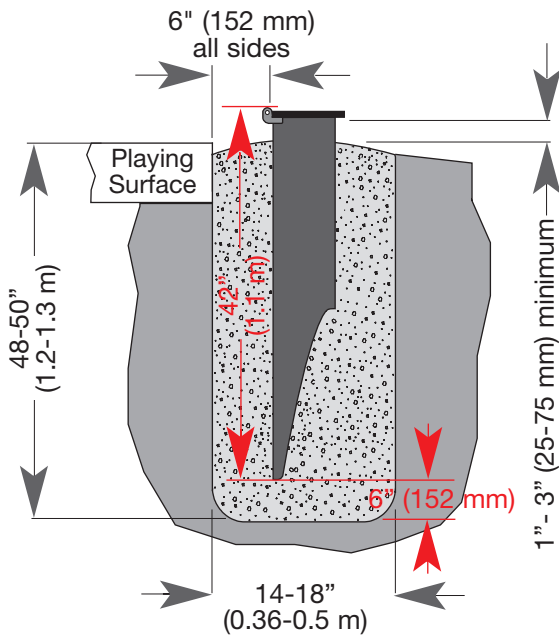
IMPORTANT

You **MUST** dig the anchor hole at least 48" (1.2 m) deep.

WARNING

Before digging for the ground anchor, check for underground power, gas, telephone, water and other utility lines. Failure to do so could result in serious injury. See 811 One Call Warning box on page 2 for more information or call your local utility company.

Step 3: Dig hole 48" to 50" (1.2 m – 1.3 m) deep and 18" (0.5 m) in diameter using a spade, shovel, auger or post hole digger.

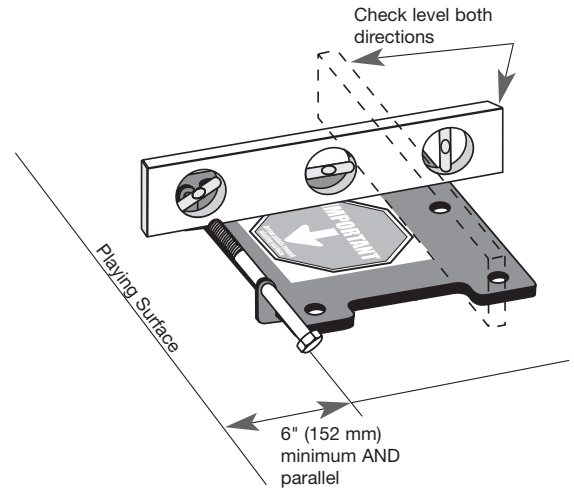


TIME OUT TIP: If you plan on mixing concrete in stages, work quickly to minimize time between batches.

Step 4: Mix concrete. Put cement in wheelbarrow. Add the amount of water recommended on the bag, and mix with hoe.

Step 5: Begin adding concrete into hole until concrete is approximately 28"- 30" (.7 m – .8 m) deep.

TIME OUT TIP: The arrow on the decal **MUST** be pointing toward the playing surface.



Step 6: Position 6" ground anchor (G2660) in center of hole with hinge side toward and parallel with playing surface. Using a level, ensure the anchor is level front-to-back and left-to-right. All edges of the ground anchor must be 6" (15.2 cm) away from all sides of hole and the top of the ground anchor within a range of 1" - 3" (25-75 mm) above the level of the playing surface.

TIME OUT TIP: As you add concrete, occasionally insert a stir rod (such as a broomstick) into three or four places in the concrete and plunge up and down to help eliminate air bubbles.

Step 7: Continue adding concrete until concrete is within 1" - 1.5" (25-38 mm) of anchor plate bottom, or level with the landscape – whichever comes first. Slope top of concrete away from pole with trowel to create a smooth surface.

IMPORTANT

- Periodically re-check the level of the anchor plate in both directions as you add more concrete.
- Slope the top of the concrete fill away from the ground anchor in all directions to shed moisture away.

TIME OUT TIP: If you must adjust the height, be sure to re-check level and that the anchor is parallel with playing surface!

Step 8: If needed, adjust anchor plate height. The top of the ground anchor should be within a range of 1" - 3" (25-75 mm) above playing surface. Be sure to re-check level.



Pole Assembly

IMPORTANT

- Allow 48 hours for concrete to cure before beginning.
- Check to see that no concrete or debris obstructs threads in ground anchor bolt holes by threading anchor bolts in and out.

Step 1: Remove five plastic plugs from threaded holes in ground anchor. Also remove hinge pin and hex nut and place near anchor plate. (These will be used in Step 3.)

 **TIME OUT TIP:** To protect pole finish, place square packing pad (included in pole box) on the ground at the bottom of pole and at the “neck” where pole offset begins. Remove once pole is held by installation clip.

Step 2: Unpack pole and jack. The jack is already assembled inside the pole.

Step 3: Align pole hinge with anchor plate hinge, then insert hinge pin and hand tighten hex nut.

Step 4: Lift pole to approximately 30° and attach installation clip to ground anchor and pole to maintain the installation angle.

IMPORTANT

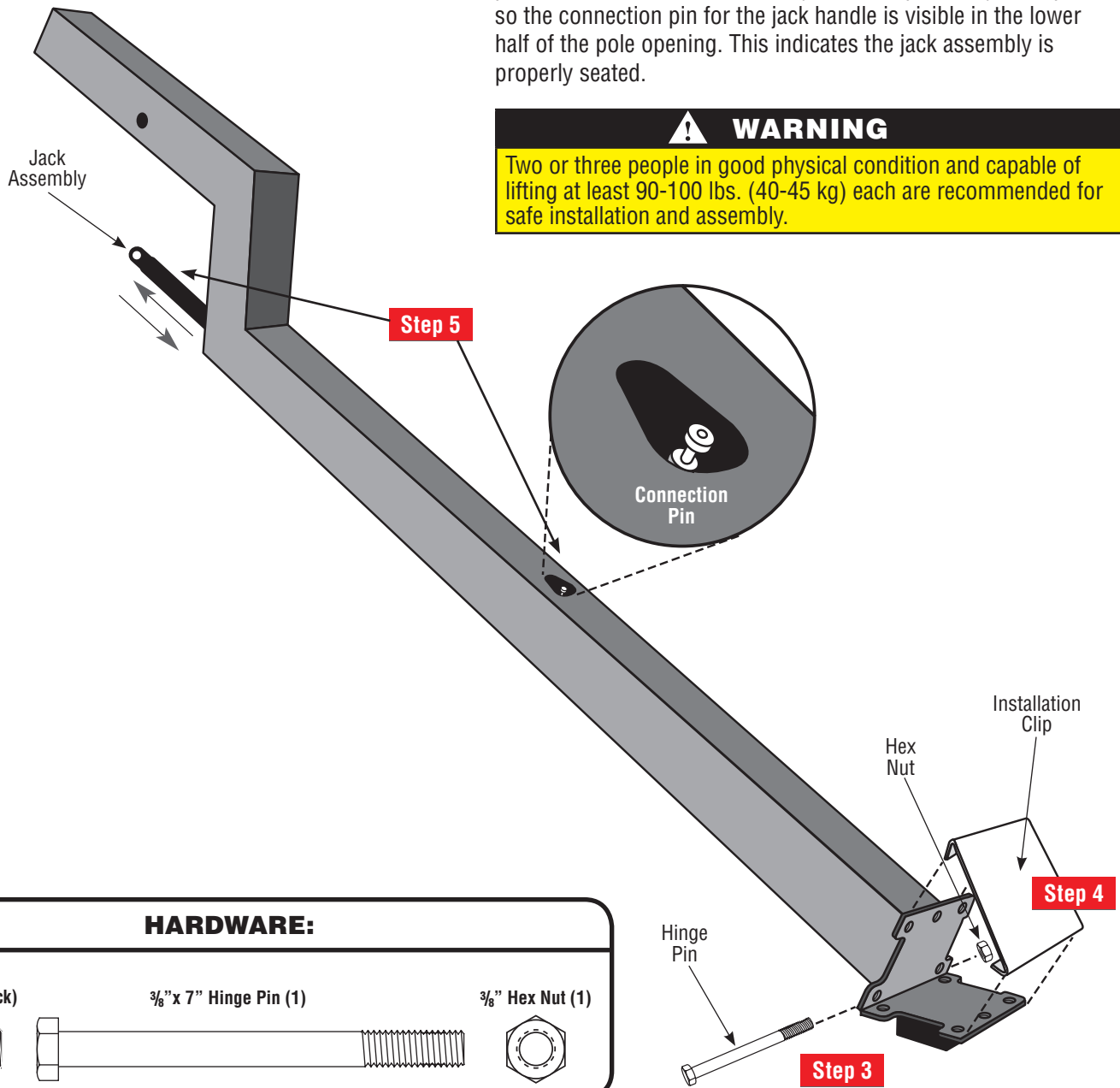
The installation clip **MUST** remain in place until pole is raised in Goal Alignment, page 8.

Step 5: Pull jack assembly out slightly, remove packing and protective materials from end of jack and reposition jack in pole so the connection pin for the jack handle is visible in the lower half of the pole opening. This indicates the jack assembly is properly seated.



WARNING

Two or three people in good physical condition and capable of lifting at least 90-100 lbs. (40-45 kg) each are recommended for safe installation and assembly.

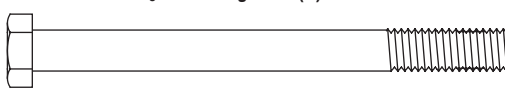


HARDWARE:

$\frac{1}{2} \times 1\frac{1}{4}$ "
Anchor Bolt (1-black)



$\frac{3}{8}$ " x 7" Hinge Pin (1)



$\frac{3}{8}$ " Hex Nut (1)



Extension Arm Attachments

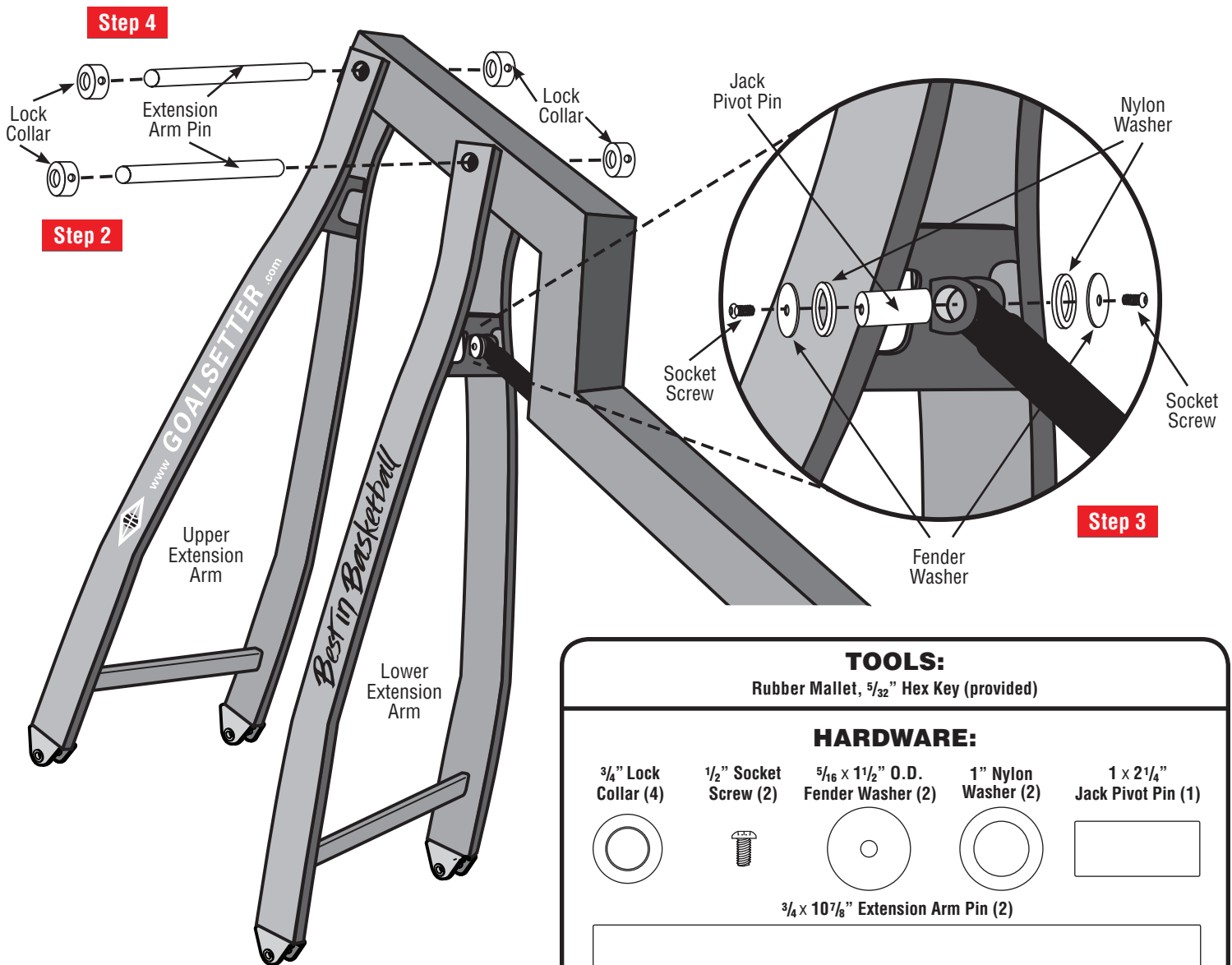
WARNING

Two or three people in good physical condition and capable of lifting at least 90-100 lbs. (40-45 kg) each are recommended for safe installation and assembly.

TIME OUT TIP: The lower extension arm says "Best in Basketball" and the upper extension arm says "Goalsetter.com".

Step 1: Unpack extension arms. Position lower extension arm with jack mount clevis toward pole offset. Align lower extension arm pivot holes with lower holes in pole.

Step 2: Attach lower extension arm pivot holes with lower bushing on pole using the following: one extension arm pin and two lock collars. Tighten with $\frac{5}{32}$ " hex key (provided) so the bushings on extension arm meet the bushing on the pole. Do not over-tighten.



TIME OUT TIP: You may have to adjust jack to align jack pin holes with holes in the lower extension arms. A rubber mallet may be needed to drive pins into holes.

Step 3: Attach upper mount of jack to lower extension arm using the following: one jack pivot pin, two nylon washers, two fender washers and two socket screws. Tighten with $\frac{5}{32}$ " hex key (provided). **NOTE: DO NOT** over-tighten. Snug tighten only.

Step 4: Attach upper extension arm pivot holes with upper bushing on pole following the same hardware and procedure as in Step 2.

Step 5: Remove protective material from extension arms.

Backboard Attachment



WARNING

Two or three people in good physical condition and capable of lifting at least 90-100 lbs. (40-45 kg) each are recommended for safe installation and assembly.

IMPORTANT

The installation clip **MUST** be in place to maintain the proper installation angle.



TIME OUT TIP: Lay the unopened box with Goalsetter logo upside down AND let the lid open up and fold away from the goal system.

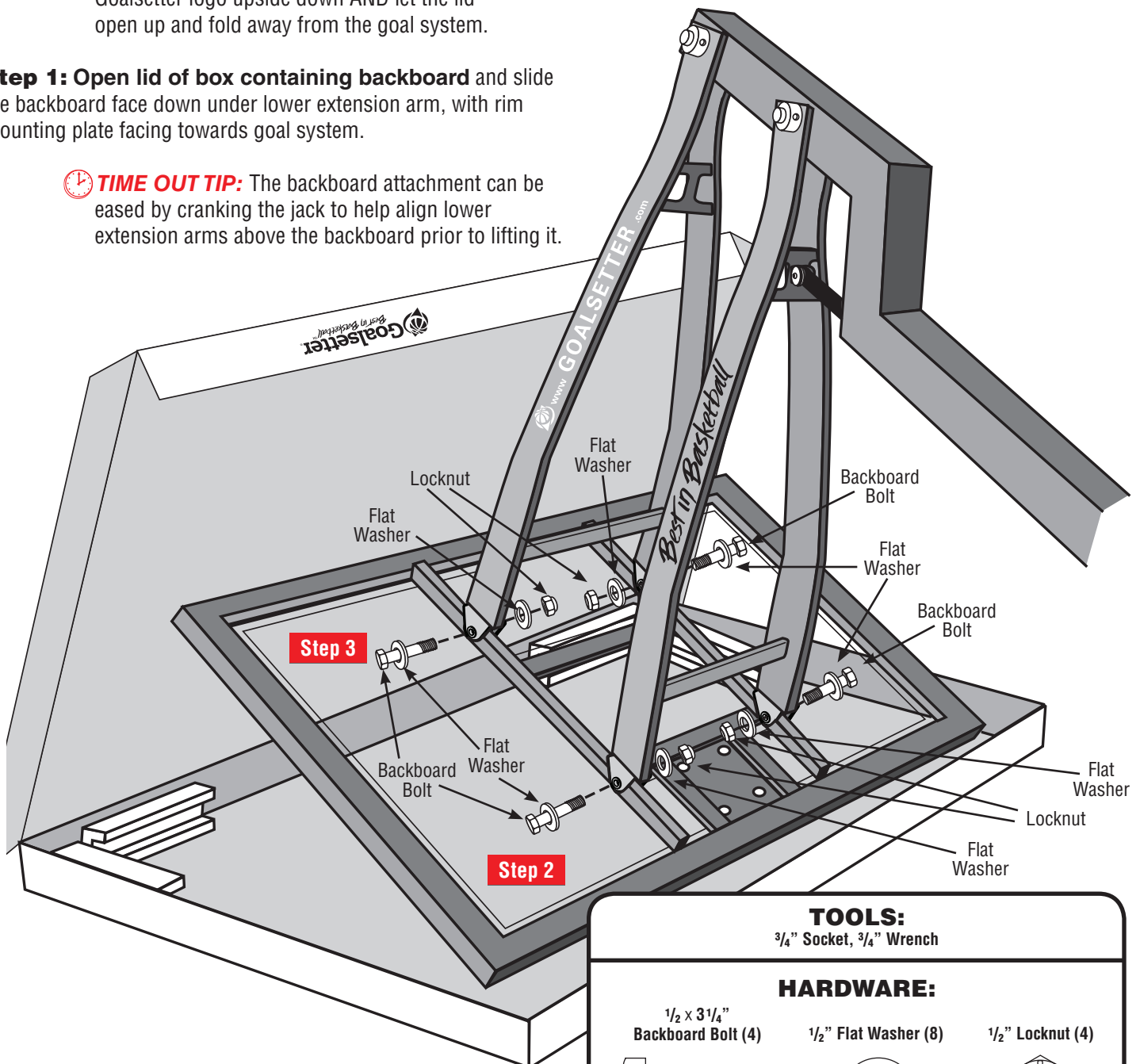
Step 1: Open lid of box containing backboard and slide the backboard face down under lower extension arm, with rim mounting plate facing towards goal system.



TIME OUT TIP: The backboard attachment can be eased by cranking the jack to help align lower extension arms above the backboard prior to lifting it.

Step 2: Carefully lift the bottom of the backboard to align lower backboard holes with lower extension arm holes. Using ratchet and wrench, attach backboard to arm using the following hardware: two backboard bolts, four flat washers and two locknuts. **NOTE:** This is a pivot point! **DO NOT** over-tighten. Snug tighten only.

Step 3: Lift top of backboard to align upper holes with upper extension arm holes using the same hardware and procedure as in Step 2.



TOOLS:

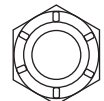
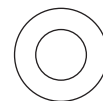
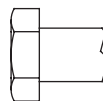
$\frac{3}{4}$ " Socket, $\frac{3}{4}$ " Wrench

HARDWARE:

$\frac{1}{2} \times 3\frac{1}{4}$ "
Backboard Bolt (4)

$\frac{1}{2}$ " Flat Washer (8)

$\frac{1}{2}$ " Locknut (4)



Goal Alignment

WARNING

For safe assembly, do the following:

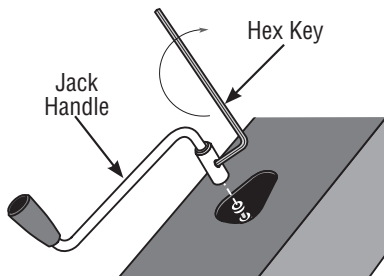
- Use two or three people to raise goal assembly and hold it in a vertical position. Two or three people in good physical condition and capable of lifting at least 90-100 lbs. (40-45 kg) each are recommended for safe installation and assembly.
- **DO NOT** adjust height of backboard or attach rim until pole is raised and appropriately bolted.
- Correct sequence of hardware installation **MUST** be followed during assembly.

To avoid injury, keep fingers and toes away from the ground plate while raising the goal assembly to the vertical position.

TIME OUT TIP: Set screws are included in bag with jack handle; open cautiously to avoid loss of screws. For ease of installation, start set screws in jack handle before inserting jack handle.

Step 1: Insert jack handle through access hole and slide onto shaft.

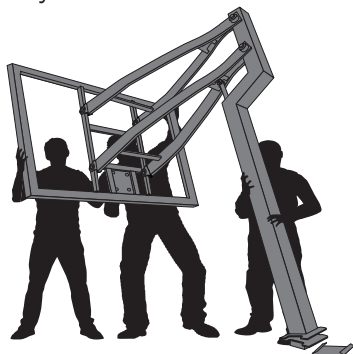
Step 2: Attach handle to shaft using both set screws; tighten with $\frac{5}{64}$ " hex key (provided.)



Step 3: Remove banding and edge protection from backboard. Peel back TOP 1/3 of protective sheeting from the backboard. This will allow you to reach the sheeting once the goal has been raised, yet protects the surface of the backboard during installation.

Step 4: Locate five anchor bolts. Prepare them for use by having lock washers slipped on and placed near ground anchor.

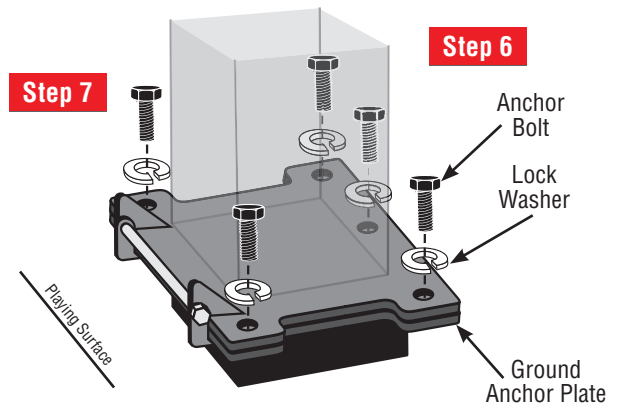
Step 5: Using at least two people, carefully push up on backboard to raise goal assembly to vertical position. The installation clip will fall away. Save installation clip for future disassembly.



Step 6: Fasten pole to threaded ground anchor plate by installing and hand tightening the three rear anchor bolts with lock washers.

Step 7: Fasten pole to threaded ground anchor plate by installing and hand tightening the two front anchor bolts with lock washers.

TIME OUT TIP: Install rear three anchor bolts first and then the front two anchor bolts.



Step 8: Snug tighten the five anchor bolts, then check goal assembly with a level and inspect visually to determine if it is parallel and plumb to the playing surface.

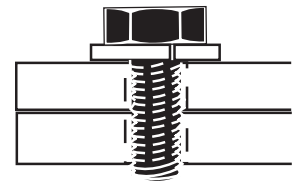
Step 9: If adjustments are necessary, slightly loosen bolts to rotate goal.

Step 10: Fully tighten five bolts using a $\frac{3}{4}$ " socket with a torque wrench. The torque wrench is to be set at 75 ft/lb on dry threads and 55 ft/lb on lubricated threads. **NOTE:** The anchor plate is threaded, so there is no need to use nuts on bolts.

IMPORTANT

The bolts must pass all the way through the ground anchor plate. If they do not pass through the ground anchor plate when fully tightened, **STOP** installation, contact Goalsetter Systems, Inc. and **DO NOT** allow play.

End of anchor bolt should extend $\frac{1}{8}$ " below anchor plate.



TOOLS:

$\frac{3}{4}$ " Socket, $\frac{1}{2}$ " Drive Torque Wrench, Level, $\frac{5}{64}$ " Hex Key (provided)

HARDWARE:

8-32
Set Screw (2)



$\frac{1}{2} \times 1 \frac{1}{4}$ "
Anchor Bolt (5-black)



$\frac{1}{2}$ " Lock
Washer (5)



Rim Attachment

NOTE: Use all steps of the following instructions to install a reflex rim. To install a static rim, follow all steps *except* Steps 2 and 6.

⌚ TIME OUT TIP: Your warranty card is located behind protective sheeting. You **MUST** fill out and return this card to activate your warranty.

Step 1: Unpack rim. Remove any remaining cardboard edge protectors and protective sheeting from backboard.

IMPORTANT

- Four bushings are factory installed on the backboard. If loose, make sure to have them seated properly when tightening rim bolts. If missing, contact Goalsetter or dealer. **DO NOT install rim without bushings. If the bushings are not in place, glass backboards can shatter and acrylic backboards can crack!**
- Correct sequence of hardware installation **MUST** be followed during assembly.

⌚ TIME OUT TIP: Level rim side to side before tightening backboard bolts.

Step 2: If not already removed, remove cover plate screws and cover plate from rim assembly.

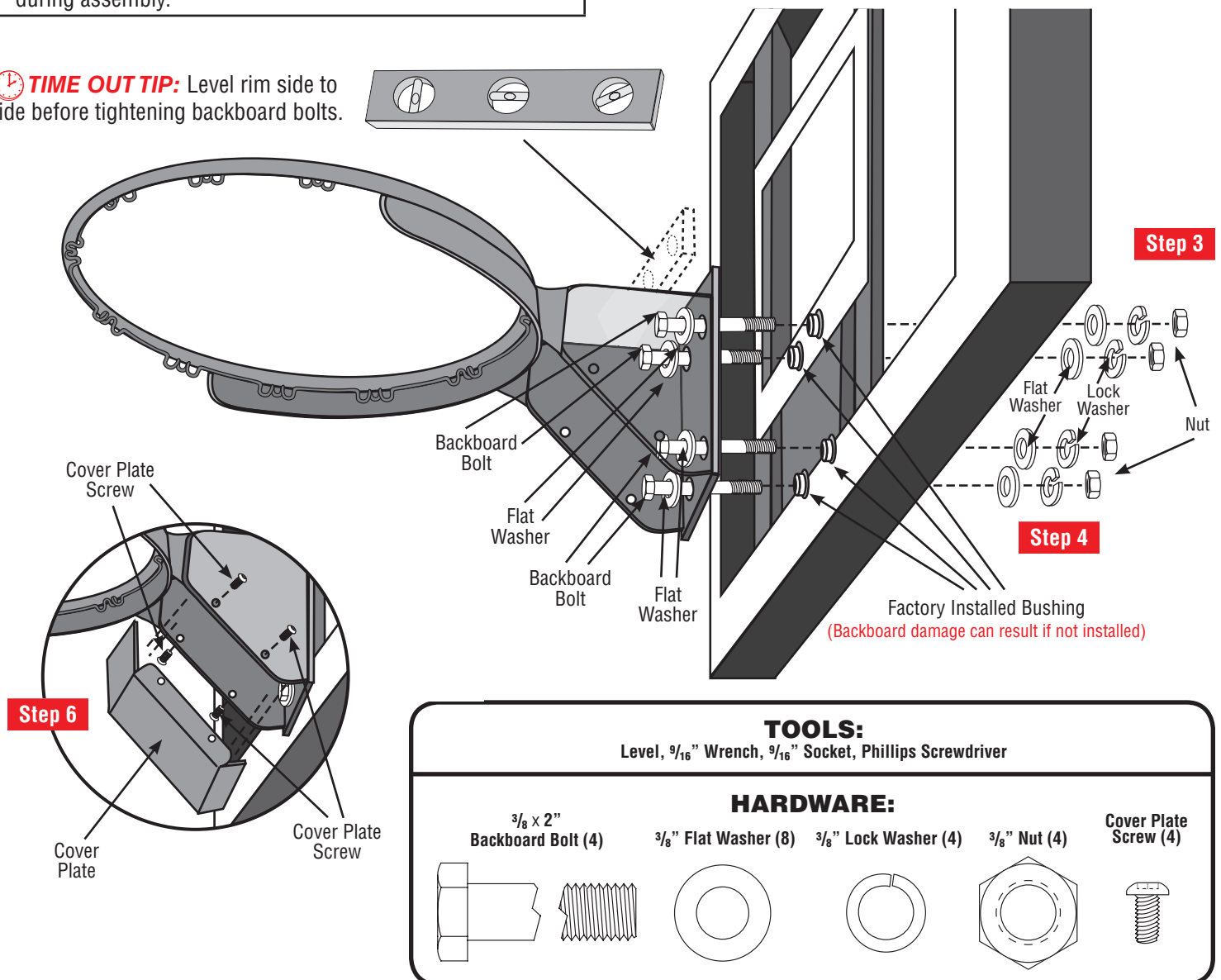
Step 3: Starting with the top two mounting holes, loosely attach rim to backboard following the hardware sequence as shown in the illustration below. Snug tighten hardware - a $\frac{9}{16}$ " open-end wrench may be necessary.

Step 4: Repeat hardware sequence outlined in Step 3 for lower rim mounting holes.

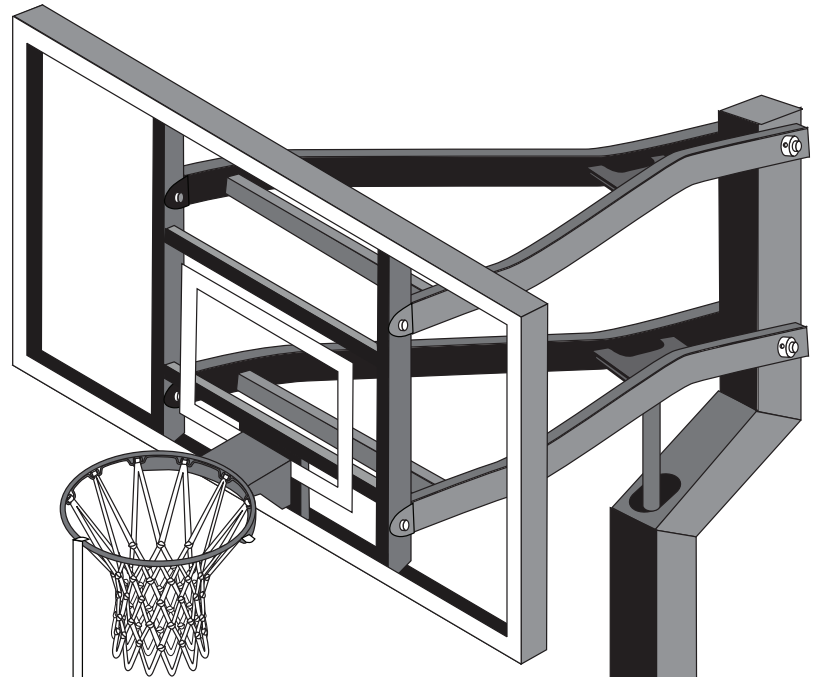
Step 5: Level rim side to side and then fully tighten hardware.

Step 6: Position cover plate and attach with cover plate screws.

Step 7: Attach net to rim.



Height Indicator Adjustment



Step 1: Using a tape measure to ensure accuracy, turn the jack handle until the rim is 6' above the playing surface.

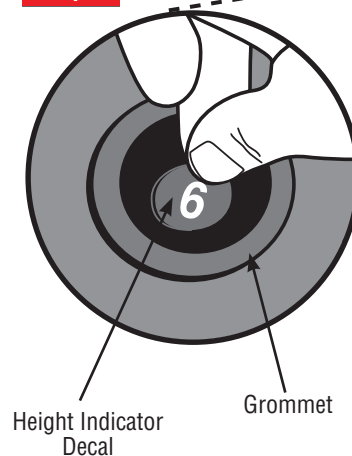
Step 2: Insert height decal with printed number '6' through indicator hole in pole and attach to internal height indicator plate in center of hole.

Step 3: Repeat steps for 6½', 7', 7½', 8', 8½', 9', 9½', and 10' rim heights; attach appropriate numbered decal.

Step 4: Install plastic grommet into indicator hole.

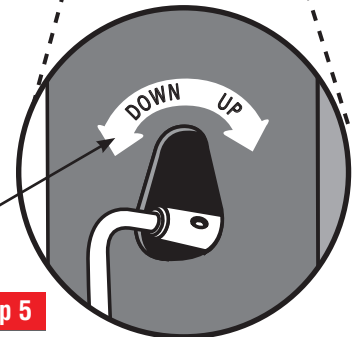
Step 5: Attach DOWN/UP decal to pole above crank handle hole. ("DOWN" will be on the left side)

Step 2

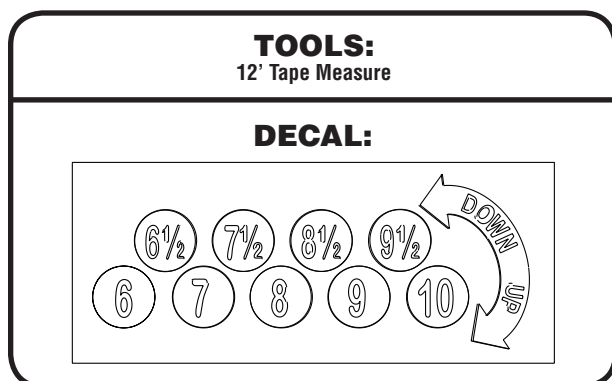


Down/Up Decal

Step 5



Step 1



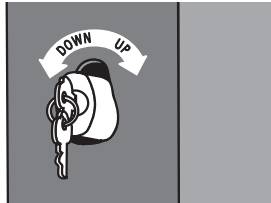
Ready to Play

Operation

Crank – Turn clockwise for goal to go up, turn counter clockwise for goal to go down.



Pinlock (option; order through Goalsetter Systems, Inc. or your Goalsetter Dealer) Remove handle and push lock onto jack handle shaft. Use key to remove.



Height Indicator indicates goal height from 6' to 10'.



Maintenance

The life of your basketball goal system depends on many variables. The climate, exposure to corrosives such as salt, organic materials, pesticides, or herbicides, and excessive use or misuse can all contribute to failure of the goal system, which may cause property damage or personal injury. Before each use, check the goal system for loose hardware, excessive wear, abuse, or vandalism or signs of rust or corrosion.

For safety reasons, and to prolong the life of your basketball system, you must take the following preventative measures:

- Check all nuts and bolts. Inspect the threads and replace if necessary. If any are loose, tighten them.
- Check all parts for excessive wear and tear. If necessary, replace any parts that have been worn or damaged through usage.
- Check all sections of the goal system for visible rust or chipped or cracked paint, and if present, repair appropriately. See Paint Touch-Up on this page.

IF RUST OR CORROSION HAS PENETRATED ANY COMPONENT, DO NOT ALLOW PLAY ON THE GOAL AND REPLACE PARTS IMMEDIATELY.

- Contact Goalsetter Systems, Inc. for replacement parts. Only use parts provided by Goalsetter Systems, Inc. Use of other parts (a) may cause the goal system to fail, (b) could result in death, serious injury or property damage, and (c) will void the warranty.
- Inspect the Warning Sticker on the pole. If it is ripped, faded, or illegible, contact Goalsetter Systems, Inc. to request a replacement Warning Sticker.

Cleaning

The exterior finish of your Goalsetter® goal is designed for outdoor environments and should only require periodic cleaning and inspection for imperfections that could develop over time.

When cleaning is necessary, Goalsetter Systems, Inc. recommends using water and a mild dish detergent applied with a soft, non-abrasive cloth.

IMPORTANT

DO NOT use abrasive cleaners to clean the goal. Damage to the finish may result.

Paint Touch-Up

Goalsetter Systems, Inc. uses a two-part acrylic-enamel paint on the goals. With periodic inspection and service when needed, the high-gloss finish is designed to last for many years. A small bottle of black paint with brush is provided in the hardware kit for touch up of imperfections as they develop. If more touch up is required, please contact Goalsetter Systems, Inc. or your local Goalsetter Dealer.



Lubrication

The jack is pre-lubricated. As with any mechanical component, periodic inspection and service is required. Goalsetter Systems, Inc. recommends applying lubrication each spring and fall to keep a smooth operation of the height actuator. Failure to do so could result in jack failure and not be covered under warranty. There are two lubrication service points provided.

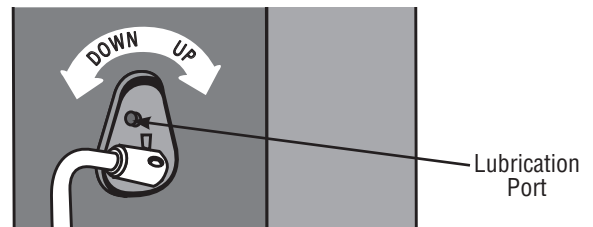
IMPORTANT

DO NOT use a penetrating oil (i.e. WD40.)

Step 1 Jack Assembly

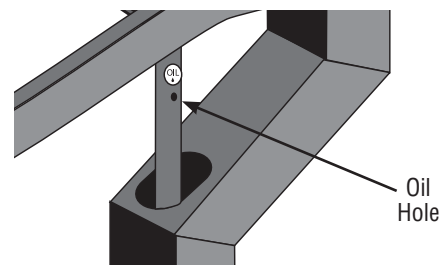
Use a liberal amount of general-purpose lubricating oil such as a 3-in-1 household oil or a light motor oil.

Step 1



Step 2 Use a liberal amount of general-purpose lubricating oil such as a 3-in-1 household oil or a light motor oil.

Step 2



Warranties

IMPORTANT

Enclosed underneath the protective sheeting on your backboard is a warranty registration card. **YOU MUST FILL OUT AND MAIL IN THIS CARD IN ORDER TO HAVE A VALID WARRANTY.** You may also fill out a warranty registration online at www.goalsetter.com.

LIMITED WARRANTY

LIMITED LIFETIME WARRANTY: Subject to proper installation and normal, intended use, and subject to the limitations set forth below, Goalsetter Systems, Inc. warrants to the original retail purchaser that all structural components of Goalsetter Systems™ Signature Series*, Extreme Series** and GS Wall Mount Series*** basketball systems are free of defects in material and workmanship for the duration of ownership by such original retail purchaser or five (5) years after discontinuation of the product by Goalsetter Systems, Inc..

*Signature Series – MVP, Captain, All-American, All-Star, Contender, Champion;

**Extreme Series – X672, X660, X560, X554, X454, X448;

***GS Wall Mount Series – GS72 Wall Mount, GS60 Wall Mount, GS54 Wall Mount, GS48 Wall Mount

LIMITED WARRANTY: Subject to proper installation and normal, intended use, and subject to the limitations set forth below, Goalsetter Systems, Inc. warrants to the original retail purchaser that all structural components of (a) Goalsetter Systems™ Tournament Series Elite Plus and GS Baseline Wall Mount Series* basketball systems are free of defects in material and workmanship for a time period of five (5) years from date of purchase (b) Goalsetter Systems™ Junior MVP and GS Junior Wall Mount basketball systems are covered for a time period of two (2) years from date of purchase.

*GS Baseline Wall Mount Series – GS72 Baseline, GS60 Baseline, GS54 Baseline

Any warranty on a basketball system excludes the rim. Rim warranties are as follows: Rims shall be free from defects in materials and workmanship from the date of purchase as follows: R10126 Single Ring Static Rim: one (1) year limited warranty; R10226 Double Ring Static Rim: unconditional lifetime warranty; R10326 Heavy Duty Breakaway Rim: two (2) year limited warranty; R10554 GS Collegiate Breakaway Rim: one (1) year limited warranty.

Padding Warranty: Padding shall be free from defects in materials and workmanship from the date of purchase as follows: Multi-Purpose Backboard Edge Padding: one-year limited warranty; Custom Fitted Pole Padding: one-year limited warranty; Wrap Around Pole Padding: one-year limited warranty.

The Limited Lifetime Warranty and the Limited Warranty shall cover damage or failure that occurs during the course of **NORMAL** or **INTENDED USE** of the product. Normal or intended use shall be described as activity that is necessary for the participation in the sport for which the equipment is designed. **NOT COVERED** is damage caused by deliberate hanging, multiple player hanging, vandalism, non-basketball activities or any other activity that could be regarded as abusive. Goalsetter Systems™ Junior MVP and GS Junior Wall Mount warranty voided if damage caused by the act of dunking.

A limited lifetime warranty is effective for the duration of ownership by the original retail purchaser or 5 years after discontinuation of the product by Goalsetter Systems, Inc.

Goalsetter Systems, Inc. shall have the right to require the purchaser to deliver at its expense the allegedly defective product to Goalsetter for testing, repair or replacement. Goalsetter shall not be responsible for any expenses associated with the replacement or removal of the product from its application for such delivery.

THE WARRANTY IS VOID IF THE PRODUCT HAS BEEN DAMAGED BY ACCIDENT, USE FOR PURPOSES FOR WHICH IT IS NOT INTENDED, AS THE RESULT OF IMPROPER INSTALLATION, FAILURE TO FOLLOW INSTALLATION, CARE OR MAINTENANCE INSTRUCTIONS PROVIDED WITH THE PRODUCT, USE OF PARTS NOT PROVIDED BY GOALSETTER SYSTEMS OR ANY MODIFICATION OF ANY PRODUCT BY THE CUSTOMER UNLESS APPROVED BY GOALSETTER SYSTEMS, INC., OR OTHER CAUSES NOT ARISING OUT OF DEFECTS IN MATERIALS OR WORKMANSHIP.

The sole obligation of Goalsetter Systems, Inc., and the exclusive remedy under the applicable warranty, is repair or replacement of any component part determined by Goalsetter Systems, Inc. to be defective and covered by the warranty. Goalsetter Systems, Inc. will not be liable for any other damages or expenses. The applicable warranty is expressly in lieu of all other warranties, express or implied. Goalsetter Systems, Inc. does not assume, and no other person or representative is authorized to assume for Goalsetter Systems, Inc. any other liability in connection with the sale of Goalsetter System™ products.

NOT COVERED BY WARRANTY

- Use in non-residential applications of Glass backboards on Signature Series systems.
- Use in non-residential applications of Extreme Series and Tournament Series complete systems.
- Any products subjected to abuse, negligence, improper installation, vandalism, acts of God, alteration of product and any other events beyond the control of Goalsetter Systems, Inc.
- Junior Series breakage caused by the act of dunking.
- Paint or rusted parts. Touch-up paint is included in all hardware kits.
- Deterioration of product due to time or wear and tear.

Normal deterioration of products due to atmospheric conditions, weather, wear and tear (including scratching or scuffing paint from normal use), or other causes that do not affect functional use are not covered by Goalsetter Systems, Inc. warranties. All warranties are valid only when product is used in the intended application & when installed according to Goalsetter Systems instructions. Warranty may be void if maintenance instructions in the Owner's Manual are not followed. If you did not receive an Owners Manual, please call 1-800-362-4625 and one will be mailed to you.

DISCLAIMERS: THE APPLICABLE WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. AND ALL OTHER WARRANTIES ARE HEREBY DISCLAIMED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES SHALL GOALSETTER SYSTEMS, INC. BE LIABLE FOR ANY INDIRECT, CONSEQUENTIAL, SPECIAL, INCIDENTAL, PUNITIVE, OR EXEMPLARY DAMAGES OF ANY KIND.

THE PRODUCT IS INTENDED TO BE USED TO PLAY THE SPORT OF BASKETBALL. ALL SPORTS INVOLVE RISK OF INJURY. THE USER ASSUMES ALL RISK OF INJURY RESULTING FROM THE USE OF THIS PRODUCT. ALL PRODUCTS ARE SOLD ON THIS CONDITION AND NO REPRESENTATIVE OF THE COMPANY MAY WAIVE OR CHANGE THIS POLICY.

Some states do not allow the exclusion or limitation of implied warranties or consequential or incidental damages, so the above limitations or exclusions may not apply to you.

LEGAL REMEDIES: This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

WARRANTY CLAIMS: All returns must be arranged through the Goalsetter Systems, Inc. dealer where the product was originally purchased. Warranties do not cover dealer service charges, labor charges, freight charges, and travel expenses associated with replacement, repair or removal of warranty items. Photos of the damaged product prior to any repair or clean-up actions must clearly show and permit analysis of the damaged product by Goalsetter Systems, Inc. A Goalsetter® Warranty Claim form must be completed, and photos submitted, together with proof of purchase, for any item you wish to claim under warranty. If the purchase was not made through a dealer, this form is available by email, fax or mail. In response to your claim, you will receive an order confirmation as well as a notice stating whether Goalsetter Systems, Inc. needs your warranty item returned. Goalsetter Systems, Inc. will notify you by fax or phone if we determine that the item cannot be claimed under warranty. **Goalsetter Systems, Inc. is not responsible for any charges for labor to install or repair defective product without prior authorization. Goalsetter Systems, Inc. will determine the most economical method to either repair or replace product before any work is to commence.**

Questions or Comments?

Phone 800.362.4625

Fax: 641.594.3343

Email: info@goalsetter.com

www.goalsetter.com

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This product is covered by various U.S. and Canadian patents, including U.S. Patent #5,211,393. Patent infringement will be prosecuted.

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Revised 8/13.

GS IM3602



Specifications

MVP

Internal Adjustment or Fixed Height

Ground Anchor:

6" square x 42" long structural steel tubing (3/16" wall thickness) with a hinged 1/2" x 7 3/4" x 9 1/2" steel mounting plate on top. **Ease of installation:** Goalsetter's patented hinge and clip assembly system allows the goal to be assembled without the use of ladders or scaffolding and a separate anchor allows for easy relocation of the goal. Limited lifetime warranty on steel.

Pole:

Offset design, 6" square structural steel tubing (3/16" wall thickness) with a hinged 1/2" x 7 3/4" x 9 1/2" steel mounting plate on bottom. Visual Height Indicator located on side of pole verifies rim height. Limited lifetime warranty on steel.

Height Adjustment System:

Internal Adjustment – Internal CHAS (Compression Height Adjustment System): Internally contained inside the pole. Designed to operate in compression rather than tension. This is a patented feature (US patent No. 5,211,393). Allows unit to infinitely adjust 6' to 10' with the Height Adjustment Crank Handle which extends from back of mast approximately 36" from the base and is removable. Limited Lifetime Warranty.

Fixed Height – Rim height can be locked in place between 6' to 10' by removing the Height Adjustment Crank Handle and inserting the Optional Keyed Pinlock.

Extension Arms:

1 1/2" x 3", 11 gauge rectangular steel tubing. Limited lifetime warranty on steel.

Backboard:

Regulation (NBA / NCAA) 42" x 72" x 3/8" Glass / Acrylic. Marked with a regulation border and target area. At any height the backboard extends from the pole a minimum of 48". Support frame is 1 1/2" square structural steel tubing. Steel rim mounting plate is 1/4" x 7 1/4" x 10". Limited lifetime warranty.

Rim:

Made of high tensile alloy steel with a ring diameter of 5/8. Protected with a durable baked on powdercoat finish. Customer to choose type of rim: Double ring static: Unconditional lifetime warranty. Single ring static: 1 year limited warranty, Heavy Duty Breakaway: 2 year limited warranty. GS Collegiate Breakaway: 1 year limited, unconditional. DOUBLE RING STATIC RECOMMENDED FOR INSTITUTIONAL / COMMERCIAL USE.

Hardware:

All fasteners, pivot pins, and set collars are zinc-plated with additional ultra coat for superior corrosion resistance. All pivot points are protected with nylon bushings to eliminate steel-to-steel contact. Anchor bolts use a Magni 577 corrosion resistant coating.

Paint:

One coat of surface primer with two coats high gloss acrylic enamel paint.

Maintenance:

On the Internal Adjustment goal, a grease zerk and oil port provide easy access for periodic maintenance.

Weight:

Glass Backboard – 585 lbs.
Acrylic Backboard – 525 lbs.

Optional Keyed Pinlock or Padlock:

Pinlock allows Internal Adjustment MVP to be locked at any height.



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**SECTION 31 23 00
EXCAVATION AND FILL**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Site Preparation
 - 2. Excavation
 - 3. Stockpiling
 - 4. Grading
 - 5. Compaction and Moisture Requirements

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - ASTM D1556 Test for Density of Soil in Place by the Sand-Cone Method
 - ASTM D1557 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Lb (4.54 kg) Rammer and 18 in. (457 mm) Drop
 - ASTM D2216 Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures
 - ASTM D2487 Standard Test Method for Classification of Soils for Engineering Purposes
 - ASTM D6938-07 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
- B. American Association of State Highway and Transportation Officials (AASHTO)
 - AASHTO T99 Standard Method of Test for Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305mm (12-in.) Drop
 - AASHTO T191 Standard Method of Test for Density of Soil In-Place by the Sand-Cone Method
 - AASHTO T310 Standard Method of Test for In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

- C. Wisconsin Department of Natural Resources (WDNR)
WDNR Wetland General/Individual Permit Conditions

1.03 SUBMITTALS

- A. Informational Submittals
 - 1. Location map of borrow site if not indicated on Drawings.
 - 2. Field or Site Quality Control Submittals –Submit two (2) copies of the results of quality control testing (include location where tests were performed).
 - 3. Borrow haul vehicle identification, determined capacity and daily haul log.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Topsoil
 - 1. Natural on-site upper layer of soil consisting of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils able to sustain plant life.

PART 3 - EXECUTION

3.01 SITE PREPARATION

- A. Provide erosion and sediment control prior to excavation in accordance to the appropriate Specification Sections and Drawings.
- B. Clear and grub as in accordance to the appropriate Specification Sections and shown on the Drawing.
- C. Remove and dispose of site debris.
 - 1. All debris materials removed from the project site shall be disposed of at a legally approved site.
 - 2. Do not burn materials onsite.
- D. Excavate wetland topsoil material from areas shown on the Drawings, stockpile and protect from contamination of other soils. Handle material in compliance with associated permits / permitting authorities / regulatory agencies.

- E. Remove structures, pavement and debris (such as vehicles, equipment, appliances, building materials or remains thereof, tires, and containers) from the site to an off-site disposal area selected by the Contractor in accordance with appropriate Specification Sections.

3.02 EXCAVATION

A. Topsoil Stripping

1. Segregate and stockpile stripped and/or excavated soils for use on the site as intended and stated on the Drawings.
2. Excavate/strip and stockpile topsoil within the project limits shown on the Drawings prior to beginning excavating, fill or hauling operation.
3. Provide excavating/stripping of topsoil in a manner that will minimize sediment runoff and not obstruct natural or intended drainage.
4. Do not strip topsoil when wet.
5. Do not mix topsoil with subsoils.

B. Excavation

1. Following clearing and grubbing, miscellaneous structure and debris removal, topsoil stripping, etc., excavate to finished subgrade (undisturbed soil or compacted soil layer) elevations shown on the Drawings.
2. Place suitable excavated material in fill areas to finished subgrade elevations shown on the Drawings.
3. Over excavate and remove unsuitable materials in areas requiring pavement and other structures including the following materials:
 - a. Frozen materials.
 - b. Materials subject to decomposition.
 - c. Clods of clay and stones larger than 3 inches.
 - d. Organic material including silts.
 - e. Soils with excessive moisture content.
4. Soils with excessive moisture content required to support pavement and other structure may not need to be removed if improvement by

compaction, diskings, drying and recompaction, or similar methods that when tested will meet optimum moisture content for compaction in accordance to appropriate Specification Sections.

C. Grading

1. Provide finish grade subgrade foundation within following tolerances:
 - a. When subgrade is prepared for placement of Granular Subbase or finished grading construction outside pavement areas, then elevation of finished surface shall not vary by more than 0.10 foot from prescribed elevation.
 - b. When subgrade is prepared for placement of Crushed Aggregate Base Course, then elevation of finished surface, at time the next layer is placed, shall not vary by more than 0.05 foot above or 0.10 foot below prescribed elevation.
 - c. When subgrade is prepared for placement of Asphaltic or Concrete Base, Stabilized Base, or Surface Course, then elevation of finished surface at time next layer is placed, shall not vary by more than 0.05 foot from prescribed elevation.
2. Subgrade Intermediate Consolidation and Trimming
 - a. Provide temporary drainage and efficient management of surface water.
 - (1) At the end of each workday, consolidate and trim the subgrade to aid drainage and to protect against erosion.
 - (2) Consolidate and trim those portions of the subgrade surface disturbed, operated over, or constructed during that workday.
 - (3) Consolidate and trim until float material is pressed firmly against the subgrade and produces a tight, smooth, well-drained surface.
 - (4) If rain is imminent during the workday, consolidate and trim the subgrade before the rain falls to avoid ponding and erosion.
 - b. No compensation will be provided for methods necessary to dry materials that have excessive moisture added due to surface water.

3. In lawn or unpaved areas foundations, finish areas to receive topsoil to within not more than 0.10 feet above or below required subgrade elevations.
4. In walkway foundation, shape surface of areas under walks with finish surface not more than 0.05 feet above or below required subgrade elevation.
5. In excavated slopes or areas and embankment slopes or areas designated to be covered with topsoil or salvaged topsoil, undercut or underfilled to the necessary depth to provide for the specified amount of topsoil or salvaged topsoil to be placed and finished to the required grade lines and sections.
6. Upon completion of finish grading in sloped areas with tracked equipment, provide a last pass to leave track mark imprints that are perpendicular to the direction of runoff flow. Blade work is not required during directional tracking.

D. Compaction and Moisture Requirements

1. Degree of compaction is expressed as a percentage of maximum density obtained by laboratory test procedure. This percentage of maximum density is provided from results of field test procedures in accordance to ASTM D1556.
2. Compact material using standard compaction methods unless the contract specifies special compaction.
 - a) Deposit, spread, and level material in layers generally no thicker than 8 inches before compaction. Compact each layer of material until the compaction equipment achieves no further significant consolidation. Provide the required compaction for each layer before placing any material for a succeeding layer.
 - b) Do not compact material if the moisture content causes excessive rutting by the hauling equipment, or excessive displacement or distortion under the compacting equipment. If these conditions exist, allow the materials to dry before compacting. If necessary, accelerate drying the materials by aerating or by using blade graders, harrows, discs, or other appropriate equipment to manipulate the material.

- c) If the material does not contain sufficient moisture to compact properly, add water in quantities the engineer deems necessary to aid, accelerate, and secure effective compaction.
 - d) All embankment material placed within the limits of assumed one to one slopes extending outward and downward from the outer limits of the finished shoulder lines or back of curb shall be compacted in accordance with these specifications.
 - 3. Compaction is required to a minimum of 95% of maximum dry density as determined by AASHTO Method T99 (Standard Proctor) will be required.
 - 4. Maintain proper soil moisture contents for compaction in accordance to optimum moisture content as determined by ASTM D1557. Use Proctor to determine acceptance moisture contents for soil compaction.
- E. Topsoil Placement / Re-spread
- 1. Place topsoil within the areas indicated on the Drawings. Place in a manner and thickness in accordance to applicable Specification Sections.

END OF SECTION

SECTION 31 23 13
SUBGRADE PREPARATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Unclassified excavation and grading
 - 2. Preparation of subgrade
 - 3. Drainage during construction
 - 4. Finish Grading

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - ASTM D1140 Test for Amount of Material in Soils Finer than the No. 200 Sieve
 - ASTM D1556 Test for Density of Soil in Place by the Sand-Cone Method
 - ASTM D1557 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Lb (4.54 kg) Rammer and 18 in. (457 mm) Drop
 - ASTM D2216 Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures
 - ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
 - ASTM D4318 Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
 - ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
- B. American Association of State Highway and Transportation Officials (AASHTO):
 - AASHTO Method T99 Moisture-Density Relations of Soils

1.03 QUALITY ASSURANCE

- A. Qualifications - Testing Agencies: Contractor shall secure soil sampling and

testing by a qualified testing agency, acceptable to Owner and independent from Contractor.

- B. Testing Requirements: Test soil materials for suitability for intended purpose. Determine mechanical analysis, liquid and plastic limit, and moisture-density curve (ASTM D1557) for each type of soil encountered. Test in accordance with standard recognized procedures.
1. Determine optimum moisture content and maximum density for compaction in accordance with ASTM D1557.
 2. Conduct field density test in accordance with ASTM D1556 and/or D6938.
 3. Minimum frequency for field density testing shall be two (2) acceptable tests per project or as follows, whichever number is greater:
 - a. One moisture/density test per 500 feet of roadway and in each compacted fill layer.
 4. Additional Density Testing:
 - a. Perform additional density testing under the following circumstances:
 - (1) Soil density does not meet project requirements.
 - (2) Change in method of compaction.
 - (3) Change in source or quality of soil.
 - (4) Disturbed cut areas.
 5. Where field-testing indicates that soils are below specified density, provide additional compaction and testing at no additional expense to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 GRADING TOLERANCES

- A. Finish grade subgrade foundation within following tolerances:
1. When subgrade is being prepared for placement of Granular Subbase or is being finished for acceptance of grading construction, then elevation of

finished surface shall not vary by more than 0.10 foot from plan elevation at any point where measurement is made.

2. When subgrade is being prepared for placement of Crushed Aggregate Base Course, then elevation of finished surface, at time the next layer is placed, shall not vary by more than 0.05 foot above or 0.10 foot below prescribed elevation at any point where measurement is made.
3. When subgrade is being prepared for placement of Asphaltic or Concrete Base, Stabilized Base, or Surface Course, then elevation of finished surface at time next layer is placed, shall not vary by more than 0.05 foot from prescribed elevation at any point where measurement is made.

B. Subgrade Intermediate Consolidation and Trimming

1. Provide temporary drainage and efficient management of surface water.
2. Provide work necessary to dry materials that have excessive moisture added due to surface water.
3. At the end of each work day, consolidate and trim the subgrade to aid drainage and to protect against erosion.
 - a. Consolidate and trim those portions of the subgrade surface disturbed, operated over, or constructed during that workday.
 - b. Consolidate and trim until float material is pressed firmly against the subgrade and produces a tight, smooth, well-drained surface.
 - c. If rain is imminent during the workday, consolidate and trim the subgrade before the rain falls to avoid ponding and erosion.

C. Lawn or Unpaved Areas Foundations: Provide finish areas to receive topsoil to within not more than 0.10 feet above or below required subgrade elevations.

D. Walkway Foundation: Shape surface of areas under walks with finish surface not more than 0.05 feet above or below required subgrade elevation.

3.02 EXCAVATION AND GRADING

- A. Following any required/specified clearing and grubbing, miscellaneous structure and rubble removal, topsoil stripping, etc., excavation to subgrade shall be performed to provide a finished subgrade prepared for the application of crushed aggregate, curb and gutter, sidewalks and topsoil as shown on the Drawings.

3.03 PREPARATION OF SUBGRADE

- A. Prepare or restore the subgrade by removing vegetation; excavating and removing materials of any nature encountered above the required elevations; filling depressions occurring below the required elevations; and smoothing, shaping, and compacting the subgrade to the required grade, section, and density.
- B. Shape and compact the subgrade for the full width of the roadbed, to the required lines, grade, cross-section, and density well in advance of base laying operations.
 - 1. Remove stones over 6 inches in greatest dimension encountered during the operations.
 - 2. Water subgrade as required or permit to dry to proper consistency and rolling the entire area with an approved self-propelled roller.
 - 3. Unless specified otherwise, uniformly compact the subgrade to not less than the density for standard compaction of the particular material existing in the subgrade.
 - 4. Maintain the prepared subgrade ahead of the base laying operations in a smooth condition and at not less than specified density.
 - 5. Remove any ruts or surface irregularities produced by hauling or other equipment or other traffic.
 - 6. Correct soft or yielding areas, holes, or other defects that occur due to traffic, hauling, poor drainage, unstable materials, or from any other cause before placing the base.
 - 7. Remove snow or ice, if any, from the foundation before placing the base.
- C. If the earth subgrade construction was substantially completed under a previous contract, do not presume that the previously completed work conforms to the requirements under this section.

3.04 COMPACTION AND MOISTURE REQUIREMENTS

- A. Compaction: Before placing materials, complete any required clearing and grubbing of the site and prepare the roadway foundation as specified above. Compact material using standard compaction methods unless the contract specifies special compaction.

1. Deposit, spread, and level material in layers generally no thicker than 8 inches before compaction. Compact each layer of material until the compaction equipment achieves no further significant consolidation. Provide the required compaction for each layer before placing any material for a succeeding layer.
 2. Do not compact material if the moisture content causes excessive rutting by the hauling equipment, or excessive displacement or distortion under the compacting equipment. If these conditions exist, allow the materials to dry before compacting. If necessary, accelerate drying the materials by aerating or by using blade graders, harrows, discs, or other appropriate equipment to manipulate the material.
 3. If the material does not contain sufficient moisture to compact properly, add water in quantities necessary to aid, accelerate, and secure effective compaction.
 4. All embankment material placed within the limits of assumed one to one slopes extending outward and downward from the outer limits of the finished shoulder lines or back of curb shall be compacted in accordance with these specifications.
- B. Compaction is required to a minimum of 95% of maximum dry density as determined by AASHTO Method T99 (Standard Proctor) will be required.
- C. In addition to maintaining drainage during construction, at the end of each workday consolidate and trim the subgrade to aid drainage and to protect against erosion.
1. Consolidate and trim those portions of the subgrade surface disturbed, operated over, or constructed during that workday.
 2. Consolidate and trim until material is pressed firmly against the subgrade and produces a tight, smooth, well-drained surface.
 3. If rain is imminent during the workday, consolidate and trim the subgrade before the rain falls to avoid ponding and erosion.
- D. Proper soil moisture contents for compaction are to be maintained in all soils.
1. Optimum moisture content as determined by ASTM D1557.
 2. Use Proctor to determine acceptance moisture contents for soil compaction.

3.05 FINISH GRADING

- A. Complete grading, trimming, and shaping before constructing the subbase, base, or surface courses.
 - 1. Transition constructed slopes with adjacent terrain to be smooth and gradual and that conform to the required Drawing cross-sections and grades.
 - 2. Use blading or other operations to smooth any ridges left by grading or excavating equipment and crests of cut banks.
 - 3. During grading operations and pending acceptance of grading or placement of subbase, base, or surface course, provide continuous maintenance of the entire roadbed and perform blading and repair work necessary to keep the grade smooth and to the required grade and cross-section specified.
 - 4. Refill and compact washouts caused by erosion.

3.06 DRAINAGE DURING CONSTRUCTION

- A. During construction, maintain roadway, ditches, and channels in a well-drained condition at all times by keeping the excavation areas and embankments sloped to the approximate section of the proposed earth grade.
 - 1. Perform blading or leveling operations when placing embankments and during the process of excavation.
 - 2. If it is necessary during the performance of the work to interrupt existing surface drainage, sewers, or under drainage, provide temporary drainage until completing permanent drainage work.
- B. If storing salvaged topsoil on the right-of-way during construction operations, stockpile it to prevent restriction with or obstruction of surface drainage. Seal subgrade surfaces intermediate subgrade consolidation and trimming.
- C. Protect and maintain existing tile drains, sewers, and other subsurface drains that should continue in service without change. Repair, at no expense to the Owner, any damage to drainage system resulting from the contractor's operations.

END OF SECTION

SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Temporary Erosion and Sediment Controls
 - a. Temporary Silt Fence
 - 2. Maintenance and Reporting

1.02 REFERENCES

- A. Wisconsin Department of Transportation (WisDOT)

WisDOT Erosion Control, Product Acceptability Lists for Multi-Modal Applications (PAL), latest edition.
- B. American Society for Testing and Materials (ASTM)

ASTM D1388 Test Method for Stiffness of Fabrics
ASTM D2487 Test Method for Classification of Soils for Engineering Purposes
ASTM D3776 Test Method for Mass Per Unit Area (Weight) of Woven Fabric
ASTM D4355 Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D4491 Test Method for Water Permeability of Geotextiles by Permittivity
ASTM D4632 Test Method for Grab Breaking Load and Elongation of Geotextiles
ASTM D4751 Test Method for Determining Apparent Opening Size of a Geotextile
ASTM D4833 Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D5035 Test Method for Breaking Strength and Elongation of Textile Fabric (Strip Method)
ASTM D5338 Test Method for Determining Aerobic Biodegradation of Plastic Materials Under Controlled Composting Conditions
- C. Wisconsin Department of Natural Resources (WDNR)

Stormwater Technical Standards,

- D. Local erosion control plans and ordinances.

1.03 SUBMITTALS

A. Action Submittals

1. Product Data
 - a. Provide product data showing listed on WisDOT PAL approval list.
 - b. Provide product data for manufactured products demonstrating conformance with the Specification.

PART 2 - PRODUCTS

2.01 SEED

A. Permanent Seeding

1. Provide permanent seeding and fertilizer including vegetative buffers in accordance with the appropriate Specification Section.

2.02 SILT FENCE

A. Geotextile Fabric

1. Provide either woven or non-woven polyester, polypropylene, stabilized nylon, polyethylene or polyvinylidene chloride fabric.
2. Provide fabric with the minimum strength values in the weakest principal direction.
3. Non-woven fabric may be needle punched, heat bonded, resin bonded or combination thereof.
4. Fabric shall meet the following requirements:
 - a. If silty soils on-site then the following can be used:
 - (1) Grab Tensile Strength: ASTM D4632 101 lbs. (450 N)
 - (2) Apparent Opening Size: ASTM D4751 0.3 mm

(3) UV Resistance Strength Retained: ASTM D4355 70 at 500 Hours (%)

(4) Permittivity (per second): ASTM D4491 0.14

b. If sandy soils on-site then the following can be used:

(1) Grab Tensile Strength: ASTM D4632 101 lbs. (450 N)

(2) Apparent Opening Size: ASTM D4751 0.3 mm to 0.8 mm

(3) UV Resistance Strength Retained: ASTM D4355 70 at 500 Hours (%)

(4) Permittivity (per second): ASTM D4491 0.14

B. Support Posts

1. Wood or steel construction minimum length 5 feet.

2. Wood posts - 2" x 2" or equivalent steel posts.

C. Silt fence shall conform to the Wisconsin Department of Natural Resources Conservation Practice Standard #1056 "Silt Fence".

2.03 MULCH

A. Provide mulch materials in accordance with the Wisconsin Department of Natural Resources Conservation Practice Standard #1058 "Mulching for Construction Sites".

B. Mulch Anchoring Devices

1. Where netting is required use polypropylene plastic, or biodegradable netting

2. Tackifiers

a. Latex Base

(1) Latex emulsion polymer by weight shall consist of:

(2) Styrene (%): 48

(3) Butadien (%): 50

(4) Additive (%): 2

- (5) Percent Solids: 42 to 46
- (6) pH (as shipped): 8.5 to 10.0
- (7) Emulsion shall not be frozen at any time or exposed to sunlight for extended periods of time.

PART 3 - EXECUTION

3.01 TEMPORARY EROSION AND SEDIMENT CONTROLS

A. General

- 1. Provide temporary erosion and sediment controls as shown on Drawings and additional erosion and sediment controls as determined by Contractor to be required based on construction means and methods prior to start of excavation.
- 2. Submit to Engineer proposed plan for additional erosion and sediment controls.
- 3. Minimize disturbed areas.
- 4. Place excavated trench material on the high side of the trench where appropriate.
- 5. Locate soil stockpiles no closer than 25 feet of a roadway, wetland, or drainage control channel and control by covering the pile with tarpaulins, temporary seed and mulch or other suitable means, if the pile is exposed for 14 days or more.
- 6. When it is necessary to cross waterways, provide crossing structures for machinery.
- 7. Repair, replace, and maintain erosion and sedimentation structures until vegetation is re-established or permanent structures installed.
- 8. Remove temporary erosion control structures and accumulated sediment and/or debris when vegetation is established.

B. Temporary Grading Practices for Erosion Control

- 1. Provide construction operations to minimize erosion and sediment transport during grading operations and other excavations.

2. Provide grade practices in accordance with the Wisconsin Department of Natural Resources Conservation Practice Standard #1067 "Grading Practices for Erosion Control - Temporary".
- C. Temporary Silt Fence
1. Provide temporary silt fence around the construction site where sheet form of runoff is possible.
 2. Periodically remove sediment to maintain effective function.
 3. Provide silt fence in accordance with the Wisconsin Department of Natural Resources Conservation Practice Standard #1056 "Silt Fence".
- D. Temporary Dust Control
1. Provide dust control measures for construction activities including minimizing soil disturbance, applying mulch and establishing vegetation, water spraying, surface roughening, applying additives (polymers), spray-on tackifiers, chlorides, and barriers.
 2. Provide dust control in accordance with the Wisconsin Department of Natural Resources Conservation Practice #1068 "Dust Control On Construction Sites".
- E. Mulching
1. Provide mulching on exposed soils in conjunction with temporary or permanent seeding.
 2. Anchoring Mulch
 - a. In areas establishing lawn type turf, use of tackifiers as the anchoring method.
 - b. In areas of temporary seeding, provide crimping to anchor the mulch.
 - c. In areas between a roadway curb and the property line, provide netting to anchor the mulch.
 3. Provide mulching in accordance with the Wisconsin Department of Natural Resources Conservation Practice Standard #1058 "Mulching for Construction Sites".

3.02 MAINTENANCE

- A. Provide inspections of the construction site and implemented erosion and sediment control WDNR best management practices (BMPs) performed weekly and within 24 hours after a rainfall event of 0.5 inches or greater and rapid snow melt conditions.
 - 1. Make any required repairs immediately.
 - 2. Maintain temporary erosion and sedimentation control structures until permanent soil erosion controls are completed and/or vegetation is established.
 - a. Repair damaged structures.
 - b. Replace lost structures.
 - 3. Regularly remove sediment from deposition areas adjacent to erosion control structures without damaging structures.
 - 4. Refill eroded areas as required for grade stabilization.
- B. If the fabric on a silt fence or filter barrier decomposes or becomes ineffective prior to the end of the expected usable life and the barrier is still to be necessary, replace the fabric promptly.
- C. Remove sediment deposits after each major storm event and when deposits reach approximately one-half the height of the barrier.
- D. Remove any sediment deposits remaining in place after the silt fence or filter barrier is no longer required and dress to conform with the existing grade, prepared and seeded.
- E. Repair/restore any washed out areas.
- F. Maintenance period to be entire project period including the one-year Correction Period.
- G. Owner may direct Contractor to remove the temporary erosion control measures any time during the one-year Correction Period.
- H. Construct permanent erosion control measures immediately after earthwork is completed.

END OF SECTION

SECTION 32 11 23
AGGREGATE BASE COURSES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Materials testing.
 - 2. Foundation preparation.
 - 3. Crushed aggregate base course for roads, shoulders, and parking areas.
 - 4. Preparation of crushed aggregate base course for paving.

1.02 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO):

AASHTO T2	Sampling Stone, Slag, Gravel, Sand, and Stone Block for Use as Highway Materials
AASHTO T27	Sieve Analysis of Fine and Coarse Aggregates
AASHTO T37	Sieve Analysis of Mineral Filler
AASHTO T89	Determining the Liquid Limit of Soil
AASHTO T90	Determining the Plastic Limit and Plasticity Index of Soils
AASHTO T104	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
- B. American Society for Testing and Materials (ASTM):

ASTM D1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Lb. (4.54 kg) Rammer and 18-In. (457 mm) Drop.
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

1.03 SUBMITTALS

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

- a. Materials source testing.
 - (1) Aggregate supplied from a previously approved source provide source testing report and approval letter from Owner the material was supplied.
 - b. Crushed aggregate base material installation testing.
 - c. Additional density and gradation testing, if required.
- 2. Submit daily one copy of weight tickets showing the net weight for each truckload of crushed aggregate base material delivered and placed. Tickets will only be considered for payment if received on the same day the material is placed.
 - 3. Field quality control testing results.

1.04 QUALITY ASSURANCE

- A. Obtain an independent testing laboratory approved by the Owner to provide quality control testing.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Aggregates
 - 1. Store aggregates to prevent contamination by foreign matter or by aggregates of different sizes.
- B. Delivery of Aggregates
 - 1. Vehicles used to transport aggregates shall be of a type to minimize loss of materials and excessive segregation of particles.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Aggregates
 - 1. Provide aggregate material substantially free of deleterious materials that include: shale, chert, phyllite or other altered rock formed from clay

materials, soft or porous rock fragments, clay lumps, coal, and other non-durable or organic particles.

2. Provide aggregates consisting of hard, durable particles of crushed stone and a filler of natural sand, stone sand or other finely divided mineral matter.
 - a. Remove oversize material by screening or by crushing to required sizes.
3. Liquid Limit and Plasticity Index:
 - a. Aggregate including any blended filler shall have a liquid limit of not more than 25 and a plasticity index of not more than 6.
4. Fracture Count:
 - a. At least 58 percent of particles retained on the No. 4 sieve shall have at least one fractured face.
5. Soundness:
 - a. When the fraction of aggregate retained on the No. 4 sieve is subjected to five cycles of the sodium sulfate soundness test, weighted loss shall not exceed 18 percent by weight.
6. Filler for Blending:
 - a. Additional mineral filler required to meet gradation requirements or for satisfactory binding of material shall be uniformly blended with base course material at the screening plant.
 - b. Mineral fillers shall be free from agglomerations or lumps and shall contain not more than 15 percent of material retained on a No. 4 sieve.
7. Moisture Content: Not to exceed 7 percent.
8. Aggregate shall be crushed stone of crushed angular particles of quarried rock retained on the No. 10 sieve.

9. Aggregate Gradation Requirements

a. 3 inch dense-graded base material:

<u>Sieve Size</u>	<u>% By Weight Passing Crushed Stone</u>
3 inch	90-100
1½ inch	60-85
¾ inch	40-65
No. 4	15-40
No. 10	10-30
No. 40	5-20
No. 200	2.0-12.0

b. 1½ inch dense-graded base material:

<u>Sieve Size</u>	<u>% By Weight Passing Crushed Stone</u>
1 ½ inch	95-100
¾ inch	70-93
3/8 inch	42-80
No. 4	25-63
No. 10	16-48
No. 40	8-28
No. 200	2.0-12.0

- (1) Limited to a maximum of 8.0 percent for base placed between old and new pavement.

c. ¾ inch dense-graded base material:

<u>Sieve Size</u>	<u>% By Weight Passing Crushed Stone</u>
1 inch	100
¾ inch	95-100
3/8 inch	50-90
No. 4	35-70
No. 10	15-55
No. 40	10-35
No. 200	5.0-15.0

2.02 SOURCE QUALITY CONTROL

- A. Test aggregate material per the following requirements:
 - 1. Sampling: AASHTO T2.
 - 2. Sieve Analysis:
 - a. AASHTO T27 for aggregates including fracture count.
 - b. AASHTO T37 for mineral fillers.
 - 3. Liquid Test: AASHTO T89.
 - 4. Plasticity Index: AASHTO T90.
 - 5. Soundness: AASHTO T104 using sodium sulfate

PART 3 - EXECUTION

3.01 PREPARATION OF FOUNDATION

- A. Prepare the foundation for aggregate base course in accordance with requirements of applicable Specification Section(s).
- B. Do not place the aggregate base course on a foundation that is soft, spongy or covered by ice or snow.
- C. Do not place base material on a dry or dusty foundation when existing condition would cause rapid dissipation of moisture from base material and hinder or preclude its proper compaction.
 - 1. Apply water to such dry foundations and rework or recompact as necessary.
- D. Before placing aggregate base course material, identify areas of yielding subgrade and perform corrective work.
 - 1. After rough grading, on all or a portion of the subgrade, identify yielding areas for Engineer evaluation.
 - 2. The Engineer will evaluate identified areas of yielding subgrade to determine if corrective work or excavation below subgrade (EBS) is required.

3. Provide loaded trucks and run the grade to confirm yielding areas.
4. Perform EBS in yielding areas and backfill with 1 1/4 -inch dense-graded base material.
5. Verify that yielded areas of the subgrade have been corrected by providing loaded trucks and run the grade to confirm the correction.

3.02 AGGREGATE BASE COURSE INSTALLATION

A. Use gradations as follows:

1. 3-inch dense-graded base material may be used only in the lower portion of the base layer (minimum 6 inches thick) when the base layer is 10 inches or greater in total thickness.
2. 1 1/4-inch dense-graded base material shall be used under the pavement at a minimum thickness of 4 inches.
3. 3/4-inch dense-graded base material shall be used under the paved shoulder and where aggregate material is exposed in the shoulder and driveways.

B. Placing aggregate base course

1. Place aggregate material in a method that minimizes hauling on the subgrade or in-place base material. Do not use vehicles or operations that damage the subgrade or in-place base material.
2. Route hauling equipment uniformly over previously placed base material.
3. Construct crushed aggregate base course to the width, thickness, section and location shown on the Drawings.
4. Shape the base surface to within 0.04 feet of the elevations shown on the Drawings.
5. Do not exceed 6 inches of compaction thickness for 1 1/4-inch or 3/4-inch dense-graded base material. Do not exceed 9 inches of compaction thickness for 3-inch dense-graded base material.
 - a. Install and compact approximate equal thicknesses when multiple courses are required.

6. Deposit the material on the foundation or previously placed layer in such a manner as to minimize segregation and to facilitate spreading to a uniform layer of the required dimensions.
7. Provide adequate moisture in the aggregate during placing, shaping, and compacting to prevent segregation and achieve adequate compaction.

C. Compaction

1. Provide compaction after a layer of aggregate has been placed and spread to the required thickness, width, and section.
2. Compact the base until there is no appreciable displacement, either laterally or longitudinally, under the compaction equipment.
3. Compact each layer before placing the subsequent layer.
4. If the material is deficient in moisture content to attain the required density, add necessary water during compaction operations by means, which provides a uniform application to achieve proper compaction.
5. Use specialized pneumatic or vibratory compaction equipment or a combination of both types of machines. Do not use tamping rollers.
6. Compact each layer or course placed to at least 95 percent of the maximum dry density as determined by the Modified Proctor Test (ASTM D1557).
7. Rework or remove areas where proper compaction is not obtainable due to segregation of materials, excess fines or other deficiencies. Replace removed material with material that will yield the desired results.
8. Prior to and during compaction operations, shape and maintain the material to the proper dimensions.

D. Proof (Test) Rolling

1. Prior to paving operations, test the base course strength by proof rolling.
2. Proof roll finished base course by rolling with a fully loaded tandem axle dump truck.
3. Proof rolling includes running fully loaded trucks over the entire roadway (pavement plus shoulders or extent beyond back of curb) width.

4. Stabilize weak or yielding areas in the base course by removing the placed/existing base course material and replace with clean base aggregate.
 5. Provide a subsequent proof roll test for all repaired/stabilized areas within the base course.
 6. In the event that weather, or other conditions change the condition of the base course after initial proof roll test and/or stabilization has been performed, provide a proof roll test of the entire base course after such event.
 7. Take necessary precautions to protect existing structures from damage during proof roll test.
- E. Maintenance
1. Provide maintenance of the base course until surface paving is complete or until the base is otherwise accepted.
- F. Dust Control
1. Minimize the dispersion of dust from the base course by the application of water or other approved dust control materials.
- G. Preparation of Base for Paving
1. Prior to paving, perform all necessary scarifying, shaping, and compacting to provide the required cross-sectional contour, a profile free from abrupt changes in elevation, and a surface free from pits, holes, depressions, or projections above the normal surface.
 2. Remove any standing or ponded water, and ice or snow from the base before paving begins.

3.03 FIELD QUALITY CONTROL

- A. Installation Testing
1. Perform a minimum of one (1) moisture/density test in accordance with ASTM D6938 (Nuclear Method) per 10,000 sq. ft. per layer of base course placed.
 2. Perform a minimum of one (1) sieve analysis per day conforming with:

- a. AASHTO T27 for aggregates including fracture count.
 - b. AASHTO T37 mineral fillers.
- B. Provide additional Density and Gradation Testing when:
 - 1. Aggregate density does not meet project requirements.
 - 2. There is a change in method of compaction.
 - 3. There is a change in source or quality of aggregate.

END OF SECTION

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**SECTION 32 12 00
FLEXIBLE PAVING**

PART 1 - GENERAL

1.01 SUMMARY

- A. Hot Mix Asphalt (HMA)

1.02 REFERENCES

- A. State of Wisconsin Department of Transportation (WisDOT)
 - 1. WisDOT Standard Specifications for Highway and Structure Construction ("State Specifications"), current edition, and all supplemental and interim supplemental specifications, as they may pertain, with the exception of the following items which shall not apply:
 - a. Method of measurement and basis of payment.
 - 2. Asphaltic concrete pavement shall comply and be constructed in accordance with:
 - a. WisDOT 450, General Requirements for Asphaltic Surface
 - b. WisDOT 455, Asphaltic Materials
 - c. WisDOT 460, Hot Mix Asphalt Pavement (HMA)

1.03 SUBMITTALS

- A. Action Submittals:
 - 1. Submit two (2) copies of each asphaltic concrete mix design proposed for the project.
- B. Informational Submittals:
 - 1. Submit two (2) copies of the results of quality control testing.
 - 2. Submit daily one (1) copy of weight tickets showing the net weight for each truckload of asphalt delivered and placed. Provide gross, tare, and net weights as well as date, time, ticket number, project, and mix type. Tickets will only be considered for payment if received on the same day the material is placed.

1.04 QUALITY ASSURANCE

A. Testing:

1. Obtain an independent testing laboratory approved by the Owner to provide quality control testing.
2. Testing agency shall perform a minimum of one density test for every 1,500 square yards of each layer of pavement placed or fraction thereof.
3. Retests are required within testing areas not meeting minimum density requirements.
4. If density testing results are below minimum requirements, submit proposed corrective action to Engineer.

1.05 FIELD OR SITE CONDITIONS

- A. Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free from loose and foreign material. Do not place pavement over frozen subgrade or base, when roadbed is unstable or during rain or snow.

B. Cold Weather Paving

1. Remove Subsections 450.3.2.1.1(1) of the State Specifications and replace with the following:

Asphaltic pavement shall not be placed when the air temperature in the shade and away from artificial heat sources is less than 36° F. If Engineer allows placing asphaltic mixtures below the specified minimum temperature, either at the Contractor's request or to complete the Work to the stage the contract requires, the Work will be performed at the Contractor's risk. Final inspection of the asphaltic concrete pavement will be deferred until May of the following year. Before final acceptance of the Work, restore all pavement damage or defects the Engineer attributes to temperature or other weather conditions. Repair or replace areas of pavement as identified by the Engineer.

C. Wet Weather Conditions

1. In the event of sudden or impending rain, material in transit will be permitted to be laid at the Contractor's risk providing the pavement is free of standing water and the proper temperature of the delivered asphalt material is maintained. Approval to unload the trucks in transit

shall in no way relax the requirements of quality, density, or smoothness of the asphalt being placed.

PART 2 - PRODUCTS

2.01 ASPHALT PAVEMENT MATERIALS

- A. Asphaltic pavement shall be in accordance with requirements for WisDOT Standard Specifications except as noted in the following:
 - 1. Hot mix asphalt pavement shall be:
 - a. 5 LT 58-28 S.
- B. Aggregate in the pavement mix shall conform to Section 460 of WisDOT "State Specifications", and comply with the minimum layer thicknesses as listed below:

<u>Gradation No.</u>	<u>Nominal Size</u>	<u>Minimum Layer Thickness</u>
1	1.5" (37.5 mm)	4.5"
2	1" (25 mm)	3.0"
3	3/4" (19.0 mm)	2.25"
4	1/2" (12.5 mm)	1.75"
5	3/8" (9.5 mm)	1.25"

- C. Pavement Mix Design
 - 1. Prior to beginning construction, submit copies of the State approved design mixes for materials proposed to be used on this project.
 - 2. Produce and incorporate the asphaltic mixture in the Work on the basis of job-mix formula. The Contractor shall be responsible for the asphaltic job-mix design report, conforming to Section 460 of WisDOT Standard Specifications, and shall submit a signed copy of the report to the Engineer for review at least two weeks prior to start of paving operations.

2.02 EQUIPMENT

- A. Paver: The paver shall have sufficient power and traction to operate on grades. Screed extensions with static extensions shall not exceed 12 inches. The paver shall have the ability to pave widths necessary to meet the lane paving width/passes requirements. Paver must have the ability to control the asphalt thickness and ride quality using a contact or non-contact grade reference system.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

- A. Prepare a compacted foundation in accordance with these specifications. All required corrections; filling of potholes, sags, depressions, must be addressed. Edges of match points, curb and gutter, castings, etc. must be cleared of excess material that may prevent installation of the specified pavement thickness.

3.02 PAVEMENT THICKNESS

- A. The pavement thickness shall match the existing thickness unless the minimum thickness(es) specified within these specifications apply.
- B. Place pavement in two or more lifts conforming to Section 460 of WisDOT Standard Specifications. The maximum compacted thickness of individual layers shall not exceed four inches for lower layers and three inches for upper layers.

3.03 TEMPERATURE OF ASPHALT PLACED

- A. All asphalt (both upper and lower layers) shall be delivered to the project site at a temperature not lower than 250° F.

3.04 PAVEMENT COMPACTION

- A. All pavements shall be built in accordance with the Maximum Density Method per Section 460 of WisDOT Standard Specifications. The maximum specific gravity value shall be indicated on the asphaltic job-mix design report.
- B. Compact pavements to a density not less than that shown in the table below:

Minimum Required Density ^[1]			
Location	Layer	Percent of Target Maximum Density	
		Mixture Type	
		LT and MT	HT
Traffic Lanes ^[2]	Lower	93.0 ^[3]	93.0 ^[4]
	Upper	93.0	93.0
Side Roads, Crossovers, Turn Lanes, & Ramps	Lower	93.0 ^[3]	93.0 ^[4]
	Upper	93.0	93.0
Shoulders & Appurtenances	Lower	91.0	91.0
	Upper	92.0	92.0

^[1] The table values are for average lot density. If any individual density test result fall more than 3.0 percent below the minimum required target maximum density, the engineer may investigate the acceptability of that material.

^[2] Includes parking lanes.

[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

- C. Verify the degree of compaction and submit a report to the Engineer which includes date paved, date tested, test locations, and degree of compaction.
- D. All compaction (rolling) operations shall be performed during daylight hours.
- E. Replace pavement full lane width with all joints saw cut and tacked when:
 - 1. Minimum density is not met.
 - 2. Minimum asphalt content is not met.
 - 3. There is significant segregation, raveling, rutting, or deformation.

END OF SECTION

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SECTION 32 16 23
CONCRETE SIDEWALKS AND DRIVEWAYS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Excavating
 - 2. Aggregate Base Course
 - 3. Bike Rack Pad Construction

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - ASTM A185 Specification for Welded Steel Wire Fabric for Concrete Reinforcement.
 - ASTM C31 Making and Curing Concrete Test Specimens in the Field.
 - ASTM C33 Specification for Concrete Aggregate.
 - ASTM C39 Test for Compressive Strength of Cylindrical Concrete Specimens.
 - ASTM C94 Specification for Ready-Mixed Concrete.
 - ASTM C143 Test for Slump of Portland Cement Concrete.
 - ASTM C150 Specification for Portland Cement.
 - ASTM C172 Sampling Fresh Concrete.
 - ASTM C231 Test for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - ASTM C1116 Standard specification for Fiber-Reinforced Concrete
 - ASTM C1315 Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
 - ASTM D1557 Test Methods for Moisture-Density Relations of Soils and Soils-Aggregate Mixtures Using 10-Lb. (4.54 Kg) Rammer and 18-In. (457 mm) Drop.
 - ASTM D1751 Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
 - ASTM E329 Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.
 - ASTM C618-15 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete

- B. American Concrete Institute (ACI)
 - ACI 304 Measuring, Mixing, Transporting and Placing Concrete.
 - ACI 305 Recommended Practice for Hot Weather Concreting
 - ACI 306 Recommended Practice for Cold Weather Concreting
 - ACI 347 Guide to Formwork for Concrete
- C. American Association of State Highway and Transportation Officials (AASHTO)
 - AASHTO M105 Standard Specification for Gray Iron Castings
 - AASHTO M148 Curing Compounds
- D. Americans with Disabilities Act (ADA): Accommodations Guidelines
- E. State of Wisconsin Department of Transportation (WisDOT):
Standard Specifications, WisDOT Section 501, Concrete

1.03 SUBMITTALS

- A. Action Submittals
 - 1. Current concrete design mix of composition and strength testing results for design mix for each type of concrete.

PART 2 - PRODUCTS

2.01 CONCRETE

- A. Conform to ASTM C94 and the following:
 - 1. Concrete shall be Grade A or A-FA (fly ash), air-entrained, in conformance with WisDOT Section 501.
 - 2. High early strength concrete shall be Grade C in conformance with WisDOT Section 501, Concrete.
 - 3. Seven-Day Compressive Strength: 3000 psi Minimum.
 - 4. Twenty-eight Day Compressive Strength: 4000 psi Minimum.
 - 5. Maximum Aggregate Size: 1½ inches.
 - 6. Air Content: 6 percent ± 1.5 percent.
 - 7. Maximum Water-Cement Ratio: 0.44.

8. Slump:
 - a. Slip-Formed Concrete Pavement: 2.5 inches or less.
 - b. Not Slip-Formed with Surface Vibration Concrete Pavement: 1.5 to 3 inches.
 - c. Not Slip Formed with Internal Vibration: 1 to 3 inches
- B. Admixtures to lower freezing point of concrete are not permitted.

2.02 AGGREGATES

- A. Conform to ASTM C33.

2.03 EXPANSION JOINT

- A. Conform with ASTM D1751.
- B. Thickness: 1/2 inch.

2.04 CURING MATERIALS

- A. Linseed Oil
 1. Furnish liquid membrane-forming curing compounds composed of a blend of boiled linseed oil and high viscosity, heavy bodied linseed oil emulsified in a water solution conforming to AASHTO M 148, Type 2 Class B. Test material at an application rate of 1 gallon per 200 square feet.
 2. Waive drying time requirements. The chemical requirements (volumes are exclusive of added pigments) are as follows:

<u>Oil Phase (50+/-4% by volume)</u>	<u>(Percent By Mass)</u>
Boiled Linseed Oil	80
Z-8 Viscosity Linseed Oil	20
Water Phase (50 +/-4% by volume)	100

2.05 CRUSHED AGGREGATE BASE MATERIAL

- A. Construct sidewalks and driveways on a layer of compacted base aggregate dense base course, placed to the thickness of:
 1. 4 inches for sidewalks, curb ramps and steps (excluding thickened sidewalk sections through driveways)

- B. Provide base material conforming:
 - 1. Use 1 ¼" crushed aggregate base course.
 - 2. Aggregates shall consist of hard, durable particles of crushed stone or crushed gravel and a filler of natural sand, stone sand or other finely divided mineral matter.
 - 3. Remove oversize material by screening or by crushing to required sizes.
 - 4. Composite material shall be free from organic matter, shale, and lumps or balls of clay and shall conform to the gradation requirements below.

PART 3 - EXECUTION

3.01 PREPARING THE FOUNDATION

- A. Prepare the foundation by excavating or filling to the required elevation of the subgrade. Tamp or compact the foundation to ensure stability. In cuts, make the foundation wide enough to allow placing forms and performing concrete placement and finishing. On embankments, construct the foundation at least 2 feet wider than the proposed concrete section and extend it at least one foot beyond each end of the concrete section.
- B. Unless specified otherwise, fill holes, ruts, and other depressions in the foundation with materials similar to those in the existing foundation. The contractor may use granular or aggregate base.

3.02 PLACING AND GRADING BASE COURSE

- A. Provide base material to the thickness specified within this Section.
- B. The subgrade shall be prepared by fine grading to the lines, grades, and cross-sections shown on the drawings.
- C. Compact to minimum 95 percent modified proctor density (ASTM D1557).
- D. Excess material shall be disposed of at a site provided by Contractor.

3.03 FORMS

- A. Conform to ACI 347.
- B. Forms shall be of the size, shape, and depth to construct the sidewalk and driveway as required.
- C. Brace and tie together forms to maintain position and shape.

- D. Clean and coat forms with clear, non-staining mineral or paraffin base form oil prior to placement of concrete against forms.
- E. Surfaces in contact with concrete shall be free from frost, debris, and other deleterious material.
- F. Moisten the base prior to placement of concrete.
- G. Remove laitance and other unsound material before freshly placed concrete is placed against previously placed concrete.
- H. Protect concrete from damage until it has hardened sufficiently to resist damage.

3.04 CONCRETE THICKNESS

- A. Unless noted otherwise, furnish the following minimum thicknesses:
 - 1. Bike Rack Pad: 4 inches.

3.05 ENVIRONMENTAL REQUIREMENTS

- A. Hot Weather Concreting
 - 1. Follow ACI 305 whenever mean surrounding air temperature equals or exceeds 80°F (27°C).
 - 2. Do not place concrete whenever air temperature equals or exceeds 90°F (32°C).
- B. Cold Weather Concreting
 - 1. Follow ACI 306 whenever mean surrounding air temperature is below 40°F (4.5°C).
 - 2. Do not place concrete during rain, sleet, or snow unless protection is provided.

3.06 PLACING CONCRETE

- A. Conveying Concrete
 - 1. Convey concrete from mixer to place of final deposit by methods that will prevent separation or loss of materials.

2. Equipment for chuting, pumping, or pneumatically conveying concrete shall be capable of providing a supply of concrete at site of work without separation of ingredients and without interruptions sufficient to permit loss of plasticity between successive placements.

B. Depositing Concrete

1. Place concrete on prepared and moistened foundation in a single lift.
2. Deposit concrete as nearly as practicable to its final position to avoid segregation due to rehandling or flowing.
3. Carry on concreting at such a rate that concrete is at all times plastic, and flows readily into spaces between reinforcing.
4. Do not deposit concrete that has partially hardened or that has been contaminated by foreign materials.
5. Do not use retempered or remixed concrete.
6. After concreting is started, it shall be carried on as a continuous operation until placing a section is completed.
7. Thoroughly consolidate concrete by suitable means during placement, and thoroughly work concrete around reinforcement and embedded fixtures, and into corners of forms.

3.07 CONTRACTION JOINTS

A. Locate in accordance with details and following criteria:

1. Through sidewalks at uniform intervals at a 5 foot typical spacing. Contraction joint spacing should typically match adjacent sidewalk sections.
2. Joints shall not deviate more than five degrees from a right angle measured at intersecting joints or flatwork edge, and more than ½ inch from a straight line.

B. Joint Dimensions

1. Depth:
 - a. Minimum 1 inch or one-fifth of slab depth whichever is greater.

2. Width:
 - a. Minimum $\frac{1}{8}$ inch for sawed joints, $\frac{1}{4}$ inch for other types.
 - b. Maximum $\frac{1}{4}$ inch for sawed joints, $\frac{3}{8}$ inch for other types.

3.08 FINISHING

- A. Strike off concrete to a true and even surface.
- B. Finish float and trowel surface smooth.
- C. Brush or lightly broom surface at right angles to traffic.

3.09 CURING

- A. Start curing activities as soon as free water has disappeared from the surface of concrete after placing and finishing.
- B. Apply curing compound to all exposed surfaces by spraying a uniform coating in such a manner as to provide a continuous water impermeable surface. Apply in accordance with manufacturer's recommendations to limit loss of water to not more than 0.40 kg/m² in 72 hours.
- C. Maintain all exposed concrete surfaces moist for the first 7 days after placement
- D. Under hot weather conditions, conform to ACI 305.
- E. Under cold weather conditions, conform to ACI 306.
- F. During curing period, protect concrete from damaging mechanical disturbances, water flow, loading, shock, and vibration.

3.10 PROTECTION OF WORK

- A. Place and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until pavement is opened for service. Protect the pavement against both public traffic and construction activities. Repair or replace pavement damaged by traffic or otherwise damaged before acceptance as the Engineer directs. Arrange to have available materials for protecting the unhardened concrete against rain damage.
- B. If rain is pending, cover unhardened concrete immediately with plastic or other approved material secured along pavement edges. Provide drainage as required to protect the work.

3.11 OPENING TO TRAFFIC

- A. No pedestrian traffic allowed for a period of at least 3 days after placing concrete. No vehicular traffic allowed for a period of at least 7 days or until concrete has attained a compressive strength of at least 3,000 pounds per square inch.

END OF SECTION

SECTION 32 18 39
TENNIS, BASKETBALL, AND PICKLEBALL COURT COLOR FINISH SYSTEM AND PAINTING

PART 1 - GENERAL

1.01 SUMMARY

- A. These specifications provide minimum standards for the preparation and installation of asphalt tennis and pickleball courts textured acrylic surfacing, color finishes, and striping of proposed asphalt tennis and pickleball courts.

1.02 REFERENCES

- A. National Asphalt Paving Association (NAPA)
- B. United States Tennis Association (USTA)
- C. International Tennis Federation (ITF)
- D. American Sport Builders Association (ASSA)
- E. National Federation of High School Associations (NFHS)

1.03 QUALITY ASSURANCE

- A. The Contractor shall be experienced in this type of work and shall submit a statement of qualifications listing his experience when requested by the Engineer.
- B. All surface coatings products shall be for a surfacing SYSTEM and shall be supplied by a single manufacturer.
- C. The Contractor shall record the batch number of each product used on the site and maintain it through the warranty period.
- D. The Contractor shall provide the Engineer, upon request, an estimate of the volume of each product to be used on the site.
- E. The installer shall be an authorized applicator of the approved surfacing system.
- F. The Contractor is responsible for the removal or correction of any overspray, spill or marking not in compliance with applicable track layout.

1.04 FIELD OR SITE CONDITIONS

- A. Cleaning Asphalt

1. Thoroughly clean surfaces to be coated. Remove all foreign debris (dirt, silt, gravel, leaves, etc.) using mechanically powered forced air sweepers, mechanical street sweepers, steel bristle brooms and/or high pressure water.
 2. Thoroughly scrape mud areas and scrub wash with clean water.
- B. Protection: Protect adjacent curbs, walks, fences, and other items from receiving color coat or resurfacer.
- C. New pavements which have been accepted by Architect/Engineer/Owner shall be allowed to cure and pass the “no water break” test before application. Cast one or two gallons of clean water from a suitable clean container (such as a 5 gallon pail) out on the surface. The water should sheet out and wet the surface uniformly without ribboning, crawling, or showing oil rings (comparable to water on very clean glass vs. dirty or greasy glass). If the clean water does not wet the surface uniformly, the asphalt is not ready for coating and should age longer.
- D. Do not install surfacing materials when rainfall is imminent or extremely high humidity prevents drying.
- E. Do not apply surfacing materials unless surface and air temperature are 50°F and rising.
- F. Do not apply surfacing materials if surface temperature is in excess of 140°F.

PART 2 - PRODUCTS

2.01 COLOR

- A. Color of various court sections are indicated within the Drawings, (as specific paints have not been specified).
- B. Provide color samples to Owner for specific color selection.

2.02 TENNIS, BASKETBALL, AND PICKLEBALL COURT SURFACING/COLOR SYSTEM

- A. Shall be a system intended for tennis, basketball, and pickleball courts on asphalt surfaces.
- B. Finish Color and Texture
1. Shall be 100% acrylic resin (with no vinyl copolymerization constituent) and selected UV inhibitors for color stability, and required color pigments and a minimum of 36.5% solids by weight and solids by weight of 10.0-10.2 lbs/gallon.

2. Color Base shall be 100% acrylic resin containing no vinyl copolymerization constituent, selected UV inhibitors for color stability, not more than 65% rounded silica sand, required color pigments and a minimum of 74% solids by weight and solids by weight of 13.1 to 14.1 lbs/gallon.
- C. Line Paint
1. Shall be 100% acrylic resin containing no alkyds or vinyl constituents. Shall contain selected UV inhibitors for color stability, required color pigments and silica sand for texture. Line paint shall have a minimum of 60.5% solids by weight and solids by weight of 12.0-12.3 lbs/gallon.
- D. All surfacing materials shall be non-flammable and shall have a VOC content of not less than 100g/ltr measured by EPA method 24. Local sands are not acceptable as an admixture to the color playing surfaces.

PART 3 - EXECUTION

3.01 COURT SURFACING APPLICATION

- A. The court surfacing material will be applied to the entire area of the tennis courts to the proposed perimeter fence line, in at least two 8 mm applications, in the selected and approved colors, as approved by the Engineer, in order to form a court surface with a true, uniform texture and color. Surfacing application work shall be performed by skilled mechanics, in a workmanlike manner, in accordance with the manufacturer's standard printed instructions. However, no work will be performed when rain is imminent or when the ambient air or asphalt surface temperature is below 55 degrees Fahrenheit.
- B. Install all surface coating materials in strict adherence to the manufacturers specifications. Blend all materials with a mechanical mixer during application to achieve a uniform mixture.
- C. Allow adequate time between applications for prior coat to dry thoroughly before applying next coat. Upon completion of final coat keep all foot traffic off sealed surface. Allow the final coat to cure at least twenty-four (24) hours, under good conditions, before allowing foot traffic on surface. Less favorable conditions will require longer drying times.
- D. Application shall be made by manufacturer recommended rubber faced squeegees. Surfacing mixtures shall be poured on to the court surface and spread to the specified, uniform thickness in a regular pattern.

- E. A total of 2 applications of color surfacing material shall be made to achieve the manufacturers recommended application rate and thickness. No application shall be made until the previous coat is thoroughly dry.
- F. Line Painting
 - 1. Base lines shall be not more than four inches (4") wide and playing lines not more than two inches (2") wide, accurately located, and marked in accordance with ASBA, USTA, and USPA guidelines. Line paint shall be as recommended or approved by the manufacturer of the color surfacing material; use of traffic, oil, alkyd, or solvent-vehicle type paint is prohibited. All measurements will be to the outer edge of the lines, except the center line and the center mark, which will be on the center line of the court. The painting will be done by skilled mechanics, in a workmanlike manner, in accordance with the manufacturer's standard printed instructions.
 - 2. Lines shall be white unless otherwise noted on the drawings. The edges of lines to be marked shall be taped to ensure a crisp line. The line paint shall have a texture similar to the surrounding play surface.
 - 3. Lines for the alternate item of pickleball lines on the tennis court shall be lines in the line width of 2-inches, in the color of the yellow.

3.02 PROTECTION

- A. Erect temporary barriers to protect coatings during drying and curing.
- B. Lock gates to prevent court use until acceptance by the Engineer.

3.03 CLEAN-UP

- A. Remove all containers, surplus materials, and debris. Remove all spills, and splatter from adjacent pavements, lawn, and site amenities. Dispose of debris and excess materials in accordance with local, state, and Federal regulations.
- B. Leave site in a clean, orderly, 'as new' condition.

3.04 WARRANTY

- A. The manufacturer will guarantee the surfacing material for two (2) years from date of finished application against chalking, checking, fading, discoloration, or other adverse effects from ultraviolet rays of the sun, from weather moisture or from weather temperatures.

END OF SECTION

SECTION 32 31 13
CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Chain link fence
 - 2. Posts
 - 3. Rails
 - 4. Tension wires
 - 5. Gates
 - 6. Latches

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - ASTM A153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - ASTM A392 Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
 - ASTM A491 Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric
 - ASTM A 817 Metallic-Coated Wire for Use in Chain Link Fence
 - ASTM F567 Standard Practice for Installation of Chain-Link Fence
 - ASTM F626 Standard Specification for Fence Fittings
 - ASTM F900 Standard Specification for Industrial and Commercial Swing Gates
 - ASTM F1043 Standard Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework
 - ASTM F1184 Standard Specification for Industrial and Commercial Horizontal Slide Gates
- B. Chain Link Fence Manufactures Institute (CLFMI) "Product Manual".

1.03 ALLOWANCES

- A. If so stated in the specification "Allowances", installation testing will be paid as an allowance. All other testing will be incidental to the Work.
- B. If there is no reference in the specification section to "Allowances", then testing costs will be incidental to other Work items.

1.04 SUBMITTALS

- A. Action: Shop Drawings
 - 1. Provide assembly and installation drawings including:
 - a. Gates.
 - b. Post spacing.
 - c. Location of gate, corner, end and pull posts.
- B. Informational: Product Data
 - 1. Chain-link fencing components.
 - 2. Accessories.
 - 3. Quality Assurance/Control Submittals
 - a. Provide certification that the material was manufactured, sampled, tested, and inspected in accordance with the referenced ASTM specification.
 - b. Provide copy of standard manufacturer's warranty.

1.05 QUALITY ASSURANCE

- A. Fencing material and accessories must be supplied by one manufacturer.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver material in manufacturer's original packaging with tags and labels intact.
- B. Deliver materials to the site in an undamaged condition.
- C. Store materials off the ground to protect against oxidation caused by ground contact.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Chain Link Fabric

1. Zinc-Coated Steel in accordance with ASTM A392 with Class 2 weight class.
2. Mesh Size
 - a. Non-Slatted Fence: 2-inch diamond pattern.
3. Coated wire size: 9 gauge core wire.
4. Selvages: Knuckle top and bottom.
5. One piece fabric for heights to 12 feet

B. Fence Posts, Rails and Braces

1. Provide round steel pipe in conformance with ASTM F1043, Material Group IC - Industrial Fence.
2. For fence requiring slats or screening, provide round steel schedule 80 pipe in accordance with ASTM F1083.
3. Provide ASTM F1043 Type A zinc coating external and internal.
4. Pipe sizes:

FENCE POST CLASSIFICATION TABLE

Type of Post	Wire Height	Outside Diameter	Min. Wt. per L.P. Post Material
Line	Over 10' to 12'	X-C-11 roll formed	2.73 lbs. Galv. Coated Steel
Line	Over 4' to 12'	2 1/2" OD	3.65 lbs. Galv. Steel
Terminal	Over 12'	4" OD	9.10 lbs. Galv. Steel
Gate	7' or less single panel	3" OD	5.79 lbs. Galv. Steel

C. Tension Wire

1. Provide 7 gauge coiled spring wire zinc-coated steel, Class 3 coating.

D. Fittings

1. Provide materials, coatings and inspections in accordance with ASTM F626.
2. Match fitting material and coatings with protective coatings for fence posts, rails and brace materials.

E. Gates

1. Provide swing gates in accordance with ASTM F900.
2. Provide slide (roller) gates in accordance with ASTM F1184.
3. Gate fabric to be same as fence fabric.
4. Hardware:
 - a. Provide pressed steel or malleable iron.
 - b. Galvanize in accordance with ASTM A153.
 - c. Non-lift type hinge, 180° swing, one pair per leaf.
 - d. Latch: Forked type or plunger-bar type for padlock
 - e. Provide keeper with automatic engagement when gate is open and manual release.
 - f. Provide mushroom or flat plate stops anchored in concrete and accept center drop or plunger bar with padlock eye.
5. Gate frame shall be 2" OD pipe, nominal weight 2.72 lbs./ft., hot dipped galvanized and shall conform to the latest ASTM F669 and A569. Welded corner construction. Double swing gate shall have a center plunger rod with double latch and semi-automatic outer catches.

2.02 ACCESSORIES

- A. Zinc coated in accordance with ASTM A153.
- B. Stretcher Bars
1. Cross section: 3/16-inch by 3/4-inch.

- 2. Length: One piece equal to fabric height.
- C. Diagonal Truss
 - 1. $\frac{3}{8}$ -inch diameter rod with adjustable take-up.
- D. Hog Rings: 11 gauge.
- E. Bands: Minimum 14 gauge, $\frac{3}{4}$ inches wide

2.03 VINYL COATED FRAMEWORK AND FITTINGS

- A. In accordance with ASTM F1043, PVC shall be applied to all pipe and framework by the fusion bonding process (thermally fused and adhered to a primer that is thermally cured to the galvanized steel) to produce a vinyl thickness of 10-14 mils. Test for adhesion shall be bond of vinyl coating to substrate will be greater than cohesive strength of vinyl itself. Color black.
- B. In accordance with ASTM F626, fittings shall have a polymer coating minimum thickness 0.006 (0.0152 mm) fused and adhered to zinc coated fittings. Color black.

2.04 CONCRETE

- A. Class "B" concrete conforming to these specifications.

2.05 WIND SCREEN

- A. Wind screen shall be vinyl coated polyester (VCP) by Douglas Industries, Inc., 344 S. 11th Avenue, Eldrich, IA 52748, 1-800-553-8907, or approved equal.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install fence in accordance with ASTM F567 except as modified herein.
- B. Unless indicated otherwise, provide a top rail and bottom tension wire.

3.02 INSTALLATION

- A. Corner, Pull, End and Gate Posts
 - 1. Set all corner, pull, end and gateposts in concrete.

2. Drill footing holes vertical and smooth in undisturbed or compacted soil.
 3. Provide postholes four times the largest cross section of the post.
 - a. Post depth:
 - (1) Minimum 60 inches for gate, corner, end, and pull posts.
 - (2) Minimum 42 inches for stops and keepers.
 - (3) Add 3 inches of depth for each foot over 6 feet.
- B. Line Posts
1. Drive line posts in place to a minimum depth of 42 inches.
- C. Post Spacing
1. Maximum Spacing: 10 feet.
 2. Install corner posts where fence changes direction more than 15 degrees.
 3. Install pull posts at maximum spacing of 300 feet on straight runs of fence.
- D. Framing
1. Run top rail continuously through line post caps with expansion and contraction joint couplings in top rail at intervals recommended by fence manufacturer but not to exceed a spacing of every 100 feet.
 2. Run top rail continuously through line post caps with
 3. Provide bracing and diagonal trusses at all corner, end, pull, and gateposts.
 4. Diagonally truss all gate leafs wider than 4 feet.
- E. Fabric and Tension Wire
1. Install on security side of fence and pull taut before fastening. Install approximately 2" between finish grade and bottom of selvage and anchor to framework so that fabric remains under tension after pulling force is released.
 2. Tie tension wire to all posts. Install within 6 inches of fabric and tie to each post.

3. Fasten fabric as follows:
 - a. Line Posts: Tie wire 12 inches on center.
 - b. Top Rails and Bracing: Tie wire 15 inches on center.
 - c. Tension Wire: Hog rings 24 inches on center.
4. Provide stretcher bars at following locations:
 - a. One per gatepost and end post.
 - b. Two per corner and pull post.
 - c. Two per gate leaf.
 - d. Thread through fabric and attach to posts or framing with steel bands 15 inches on center.
 - e. Pull posts so posts are plumb when diagonal rod is under proper tension.

F. Gates

1. Install gates according to manufacturer's instruction, plumb, level and secure for full opening without interference.

G. Adjusting and Finishing

1. Level and plumb finished fence.
2. Adjust gates providing smooth operation.

H. Wind Screen

1. Install vinyl coated polyester (VCP) wind screen as per manufacturer's specifications.

END OF SECTION

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**SECTION 32 33 00
SITE FURNISHINGS**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Site Bicycle Racks
 - 2. Site Seating (Benches)

1.02 REFERENCES

1.03 SUBMITTALS

- A. Action Submittals
 - 1. Product Data
 - a. Provide physical characteristics such as shape, dimensions, material, and finish.
 - 2. Shop Drawings
 - a. Provide installation details.

PART 2 - PRODUCTS

2.01 SITE BICYCLE RACKS

- A. Manufacturer
 - 1. Model No. H-2543BL as supplied by ULINE, or approved equal.
- B. Materials
 - 1. Provide a 3-loop wave style bicycle rack.
 - 2. Provide per Drawing Detail.
- C. Finishes
 - 1. Finish shall be Black in color, with all steel members electrostatically polyester powder coated.

2.02 SITE SEATING (BENCHES)

A. Manufacturer

1. Victor Stanley, Model RB-28, per Drawing Detail.

B. Materials

1. Benches shall be six feet in length.

C. Finishes

1. Finish shall be Black in color, with all steel members electrostatically polyester powder coated.

PART 3 - EXECUTION

3.01 SITE BICYCLE RACKS

A. Installation

1. Location

- a. Install centered on the length of concrete pad and one foot from back edge (opposite asphalt walkway) of concrete pad.

2. Install per manufacturer's guidelines.

3.02 SITE SEATING (BENCHES)

A. Installation

1. Location

- a. See Drawing Detail.

2. Install per manufacturer's guidelines.

- a. Surface mount tabs.

END OF SECTION

**SECTION 32 92 00
TOPSOIL, TURF AND GRASSES**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Site Preparation
 - 2. Topsoiling
 - 3. Fertilizing
 - 4. Seeding
 - 5. Mulching
 - 6. Maintenance and Monitoring

1.02 REFERENCES

- A. Association of Official Seed Analysis (AOSA)
 - AOSA Rules for Testing Seeds
- B. American Society for Testing and Materials
 - ASTM D5268 Standard Specification for Topsoil Used for Landscaping Purposes
- C. Wisconsin Department of Agriculture, Trade and Consumer Protection (ATCP)
 - ATCP Chapter 20 Noxious Weed Seed Content and Labeling
 - ATCP Chapter 40 Fertilizer and Related Products
- D. Wisconsin Erosion Control Product Acceptability List (PAL)
- E. USDA Natural Resource Conservation Service (NRCS)
 - NRCS Specified Soil Types

1.03 SUBMITTALS

- A. Action Submittals

1. Imported Topsoil
 - a. Provide topsoil analysis performed in accordance with ASTM D5268 and demonstrating the topsoil meets Natural Resource Conservation Service (NRCS) specified soil types.
 - b. Submit results of tests for nutrient levels and provide recommendations for fertilizer type and application.
 2. Fertilizer
 - a. Furnish certification from supplier attesting to: Brand name, chemical analysis, and guarantee of analysis.
 3. Seed
 - a. Furnish certification of conformance with AOSA "Rules for Testing Seed" and attest to: Mix, age, weed content, purity, and germination.
- B. Informational Submittals
1. Submit all tags from seed bags / containers.

1.04 QUALITY ASSURANCE

- A. Test seed according to the methods and procedures used for sampling and analyzing seed for purity, germination, and noxious weed seed content specified in the current addition of the AOSA Rules for Testing Seed.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store any seed delivered before use in a way that protects it from damage by heat, moisture, rodents, or other causes. Discard and replace any seed that becomes damaged.

PART 2 - PRODUCTS

2.01 TOPSOIL

- A. Imported Topsoil
 1. Topsoil shall be Soil Class F-1 as required by these specifications. Furnish topsoil consisting of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure this topsoil is in a pH range of 6.0 to 7.0.

B. Salvaged Topsoil

1. Topsoil salvaged from the project site may be used to restore lawn areas provided that the soil meets the requirements of *paragraph A.1 above*. If the volume of salvaged topsoil is not sufficient to restore all areas to the required depths, imported topsoil is required.

- C. Pulverize imported and salvaged topsoil completely breaking down all clods and lumps. The material shall be free of rocks, twigs and other foreign material. 100% of the material shall pass a one-inch sieve and at least 90% shall pass the No. 10 sieve (0.08 inch).

2.02 SEED

A. General Requirements

1. Conform to chapter ATCP 20 regarding noxious weed seed content and labeling.
2. Use seed within one year of the test date appearing on the label.

B. Lawn Type Turf

1. All lawn areas restored with topsoil, unless shown otherwise on Drawings, shall be seeded with grass seed meeting the following requirements:

Species	Purity Minimum %	Germination Minimum %	Mixture Proportions in Percent
Kentucky Bluegrass	98	85	35
Red Fescue	97	85	20
Hard Fescue	97	85	20
Improved Fine Perennial Ryegrass	96	85	25

2.03 FERTILIZER

- A. Furnish fertilizers for seeding and sodding that are standard commercial packaged or bulk products in granular or liquid form conforming to ATCP Chapter 40.
- B. Each container of packaged fertilizer must be plainly marked with the analysis of the contents showing minimum percentages of total nitrogen, available

phosphoric acid and soluble potash. Provide an invoice for each bulk material shipment indicating the minimum percentages of total nitrogen, available phosphoric acid and soluble potash in the contents.

- C. Furnish fertilizer meeting the following minimum requirements:
 - 1. Nitrogen, not less than 16%.
 - 2. Phosphoric Acid, not less than 6%.
 - 3. Potash, not less than 24%.
 - 4. The total of nitrogen, phosphoric acid and potash shall equal at least 50%.
 - 5. Fertilizer shall contain no phosphorus.

2.04 MULCH

- A. Mulch shall consist of straw or hay which are free of noxious weeds and other objectionable foreign matter.
- B. Furnish mulch binder (tackifier) as specified within the current Wisconsin Erosion Control Product Acceptability List (PAL).

PART 3 - EXECUTION

3.01 SITE PREPARATION

- A. Grade subgrade to a uniform depth accommodating specified topsoil thicknesses in accordance with the following:
 - 1. Seeded Areas – Four (4) inches.

3.02 TOPSOILING

- A. After preparing and finishing the areas designated for topsoil to the required lines, grades, slopes and cross-sections, place and spread the topsoil to a uniform depth as follows:
 - 1. Seeded Areas – Four (4) inches settled.
- B. Break down all clods and lumps using the appropriate equipment to provide a uniformly textured soil.

- C. Remove rocks, twigs, foreign material and clods that cannot be broken down. Dress the entire surface to present a uniform appearance.
- D. Topsoil shall not be compacted.
- E. Just before seeding, work the area being seeded with discs, harrows, or other appropriate equipment to obtain a reasonably even and loose seedbed.

3.03 SEEDING

- A. Broadcast Seeding
 - 1. Utilize a machine or combination of machinery intended for seed sowing and which will produce the following:
 - a. Apply seed uniformly at the rate specified.
 - b. Cover seed with approximately ¼ inch of topsoil.
 - c. Roll lightly.
 - d. Apply seed at right angles to surface drainage.
 - 2. If broadcasting by hand, perform this work with satisfactory hand seeders and only when the air is calm enough to prevent seeds from blowing away.

3.04 FERTILIZING

- A. Uniformly apply the fertilizer selected for the seeding areas and incorporate into the soil by light discing or harrowing. If applying granular fertilizer, ensure it is well pulverized and free from lumps.
- B. If incorporating fertilizer into topsoiled areas, the contractor may apply it just before, and in conjunction with, final discing or harrowing, or if hand manipulating the topsoil, apply it just before final raking and leveling.
- C. If sowing seeding areas by hydroseeding, then fertilize by placing the required quantity of fertilizer in the tank, mixing with the water and the seed, agitating constantly, and apply during the seeding operation. If applying fertilizer this way then discing and harrowing after placement is not required.
- D. If fertilizing areas to receive sod, spread the fertilizer uniformly over the soil before sodding at the rate specified, and then work the fertilizer into the soil while preparing as specified for preparing the earth bed.

3.05 APPLICATION RATES

- A. Seeding
 - 1. Four (4) pounds per 1,000 square feet.
- B. Fertilizer
 - 1. Seven (7) pounds per 1,000 square feet.

3.06 MULCHING

- A. Unless directed otherwise, place the mulch on the seed areas within two (2) days after completing the seeding. Place straw or hay uniformly over the area 1 to 1 ½ inches deep, using 2 to 3 tons of mulch per acre. Do not perform mulching during periods of excessively high winds that may prevent proper mulch coverage. Place the mulch loosely or open enough to allow some sunlight to penetrate and air to slowly circulate, but thick enough to shade the ground, conserve soil moisture, and prevent or reduce erosion. Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic or other causes.
- B. Secure mulch by using one of the following methods:
 - 1. Method "B":
 - a. Treat straw or hay with a tackifier, blow from a machine, and uniformly deposit over seeded areas in one operation. Use a machine intended for the purpose of mulch application that blows or ejects by constant air stream a controlled quantity of mulch and applies a spray of tackifier to partially coat the straw or hay, sufficient to hold together and keep in place the deposited mulch material. Throughout the process, feed the mulch material into the blowing machine to produce a constant and uniform ejection from the discharge spout, and operate in a position to produce mulch of uniform depth and coverage.

3.07 RESTORATION TIMETABLE

- A. Weather permitting, seeding and sodding may be performed at any time during the growing season when soil conditions are suitable.
- B. All lawn restoration work in areas constructed during winter months shall be completed by May 15th of that year. All lawn restoration work in areas constructed after May 15th shall be completed in accordance with Paragraph A above.

3.08 MAINTENANCE AND MONITORING

A. Seeded Areas:

1. Maintain all seeded areas performed under this contract, which includes the destroying of weeds within the seeded areas by cutting, or by other means, and preventing the weed plants from maturing to the bloom or flower stage. The term "weeds" as defined here shall constitute plant life other than those included within the seed mixture specified.
2. Maintain and monitor seeded areas upon initial seeding and throughout the Correction Period to ensure uniform and consistent growth of the specified seed, as determined by the Owner. Water seeded areas as required to establish proper growth. Fully established growth will be determined when average seed growth coverage is a consistent 85% of the seeded area with uniform density and color, is capable of resisting erosion, and growth is a minimum height of 3".

- B.** The cost of providing maintenance and monitoring will be considered incidental to other Work items within this section.

END OF SECTION

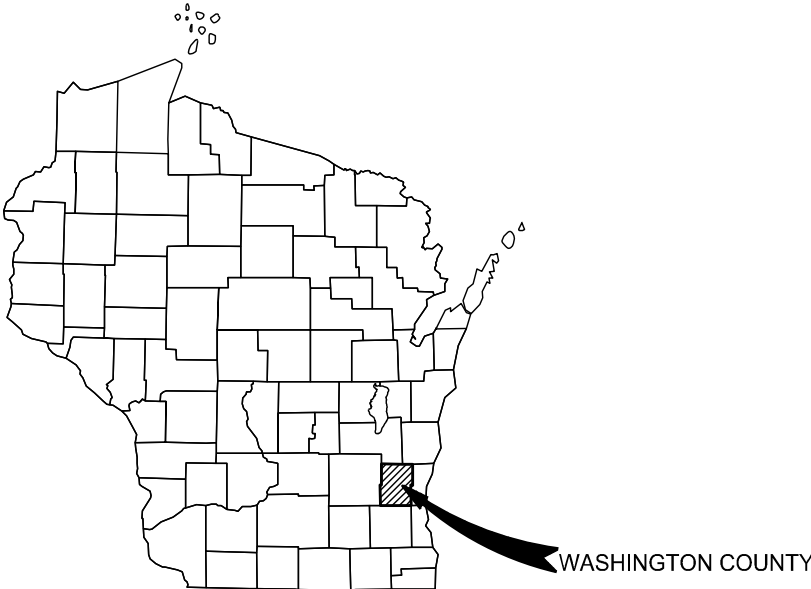
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CONSTRUCTION DRAWINGS
FOR
JACKSON PARK TENNIS-PICKLEBALL COURTS
VILLAGE OF JACKSON
WASHINGTON COUNTY, WI
M 12, 2022

Prepared By



PROJECT I.D. 05789-0015

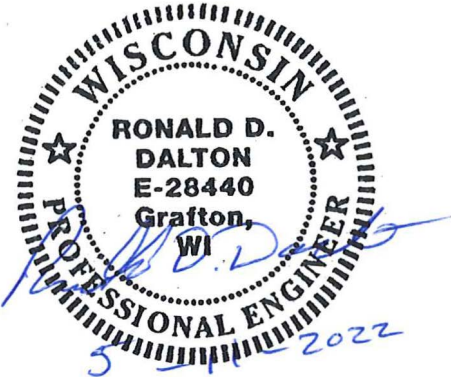


COUNTY LOCATION MAP

INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STANDARD SYMBOLS ABBREVIATIONS & STAMPS
3	EXISTING CONDITIONS
4	REMOVAL PLAN
5	SITE PLAN
6	GEOMETRY PLAN
7	GRADING AND EROSION CONTROL
8 - 9	STANDARD DETAILS



SITE LOCATION MAP



ATTENTION:
DOWNLOADED PLANS ARE NOT SCALABLE, NEITHER THE OWNER NOR THE
ENGINEER SHALL BE HELD RESPONSIBLE FOR THE SCALE OR PRINT
QUALITY OF DOWNLOADED PLANS. ONLY PRINTED PLANS FROM CEDAR
CORPORATION SHALL BE CONSIDERED TO BE SCALEABLE PLANS.

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	EXISTING	PROPOSED
SANITARY SEWER (PLAN) - LENGTH-DIA. MATERIAL @ GRADE	(SIZE & MAT'L) SAN		LENGTH - SIZE MATL SAN
STORM SEWER (PLAN) - LENGTH-DIA. MATERIAL @ GRADE	(SIZE & MAT'L) STM		LENGTH - SIZE MATL STM
WATER MAIN (PLAN)- LENGTH-DIA. MATERIAL-(FITTING-FITTING)	(SIZE & MAT'L) WTR		LENGTH - SIZE MATL WTR
SANITARY SEWER (PROFILE) - LENGTH-DIA. MATERIAL @ GRADE	(SIZE & MAT'L)		XXX'- XX" PVC SAN @ 0.00%
SANITARY FORCEMAIN (PROFILE) - DIA. MATERIAL	(SIZE & MAT'L)		XXX'- XX" FORCEMAIN @ 0.00%
STORM SEWER (PROFILE) - LENGTH-DIA. MATERIAL @ GRADE	(SIZE & MAT'L)		XXX'- XX" RCP STM @ 0.00%
WATER MAIN (PROFILE)- DIA. MATERIAL	(SIZE & MAT'L)		X" PVC WM.
GAS MAIN			GAS
ELECTRIC - BURIED			UGE
ELECTRIC - OVERHEAD			OE
TELEPHONE - BURIED			TEL
TELEPHONE - BURIED (FIBER OPTIC)			FO
TELEPHONE - OVERHEAD			OH
CABLE TELEVISION - BURIED			TV
CABLE TELEVISION - OVERHEAD			OH
CENTERLINE			
RIGHT-OF-WAY LINE			
PROPERTY LINE			
PAVEMENT (STREET, DRIVE, SIDEWALK, ETC.)			
GRAVEL			
CURB & GUTTER			
RAILROAD			
GUARDRAIL			
FENCE - AS LABELED			

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	EXISTING	PROPOSED
BENCHMARK			
CATCH BASIN/INLET			
CONTROL POINT			
CULVERT		(DIA. & TYPE)	(LENGTH-DIA. & TYPE)
CURB STOP			
G=GAS W=WATER			
ELECTRIC PEDESTAL			
FIRE HYDRANT			
IRON PIPE = IP IRON ROD = IR			
LIGHT - ORNAMENTAL			
LIGHT - STREET			
MAILBOX			
MANHOLE ELECTRIC			
MANHOLE GAS			
MANHOLE MISCELLANEOUS			
MANHOLE SANITARY			
MANHOLE SIGNAL			
MANHOLE STORM			
MANHOLE STORM INLET CATCH BASIN			
MANHOLE WATER			
MANHOLE TELEPHONE			
METER - GAS			
METER - WATER			
PEDESTAL CABLE TV			
PEDESTAL TELEPHONE			
SIGN			
BUSH CONIFER			
BUSH DECIDUOUS			
TREE DECIDUOUS/INCH DIA			
TREE CONIFEROUS/INCH DIA			
TREE LINE			
VALVE: W=WATER, G=GAS			
UTILITY POLE			
SILT FENCE			
MAJOR CONTOURS			
MINOR CONTOURS			
SPOT ELEVATIONS			
INLET PROTECTION			

GENERAL NOTES:

- THESE DRAWINGS ARE NEITHER A LEGALLY RECORDED MAP, NOR A SURVEY, AND IS NOT INTENDED TO BE USED AS ONE.
- ALL PROPERTY LINES SHOWN ARE ESTABLISHED FROM COUNTY GIS FILES. PROPERTY LINES MAY NOT REFLECT ACTUAL LOT LINE LOCATIONS AND ARE FOR INFORMATIONAL PURPOSES ONLY.
- UTILITY LOCATIONS SHOWN ON THE PLANS WERE PROVIDED BY THE UTILITY OWNER. FIELD LOCATIONS MAY VARY AND ADDITIONAL UTILITIES MAY EXIST. CONTRACTOR SHALL CONTACT DIGGERS HOTLINE A MINIMUM OF 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
- ALL LENGTHS OF PROPOSED UTILITIES SHOWN ON THE PLANS ARE PER DESIGN, ACTUAL LENGTHS MAY VARY DURING CONSTRUCTION.

LIST OF STANDARD ABBREVIATIONS

ASPH	ASPHALT	NTS	NOT TO SCALE
B/B	BACK TO BACK	PC	POINT OF CURVATURE
BOC	BACK OF CURB	PCC	POINT OF COMPOUND CURVE
BLDG	BUILDING	PED	PEDESTAL
BM	BENCHMARK	PVMT	PAVEMENT
BSMT	BASEMENT	PI	POINT OF INTERSECTION
C	CUT	PL	PROPERTY LINE
C&G	CURB AND GUTTER	PP	POWER POLE
C/C	CENTER TO CENTER	PROP	PROPOSED
CABC	CRUSHED AGGREGATE BASE COURSE	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVC	POLYVINYL CHLORIDE
CI	CAST IRON PIPE	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	PVT	POINT OF VERTICAL TANGENCY
CMP	CORRUGATED METAL PIPE	R	RANGE OR RADIUS
CO	CLEAN OUT	RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE	REBAR	REINFORCEMENT BAR
CP	CONTROL POINT	REQD	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RL	REFERENCE LINE
CTV	CABLE TV	ROW	RIGHT-OF-WAY
CS	CURB STOP	SAN	SANITARY
DIA	DIAMETER	WALK	SIDEWALK
DI	DUCTILE IRON PIPE	SF	SILT FENCE
EA	EACH	SL	SANITARY LATERAL
ELEC	ELECTRIC (E WHEN USED IN LINE STYLE)	SHLDR	SHOULDER
EP	EDGE OF PAVEMENT	STA	STATION
EXIST	EXISTING	STH	STATE TRUNK HIGHWAY
FH	FIRE HYDRANT	STM	STORM OR STORM SEWER
FL	FLOW LINE	TEL	TELEPHONE
FM	FORCE MAIN	TEMP	TEMPORARY
FO	FIBER OPTIC	TOC	TOP OF CURB
G	GAS	TYP	TYPICAL
GV	GAS VALVE	VC	VERTICAL CURVE
GW	GUY WIRE	WM	WATER MAIN
INV	INVERT	WS	WATER SERVICE
IP	IRON PIPE OR PIN	WV	WATER VALVE
L	LENGTH (OF CURVE)		
LC	LONG CHORD OF CURVE		
LP	LIGHT POLE		
MB	MAILBOX		
MG	METER-GAS		
MH	MANHOLE		

BENCHMARKS

	TOP OPERATING NUT OF HYDRANT ALONG JACKSON DRIVE SOUTH OF PARK STREET	885.18
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NOTE: ALL BENCHMARK LOCATIONS ARE SHOWN ON PLAN

VILLAGE OF JACKSON
JACKSON PARK TENNIS-PICKLEBALL COURTS
WASHINGTON COUNTY, WI
STANDARD SYMBOLS AND ABBREVIATIONS



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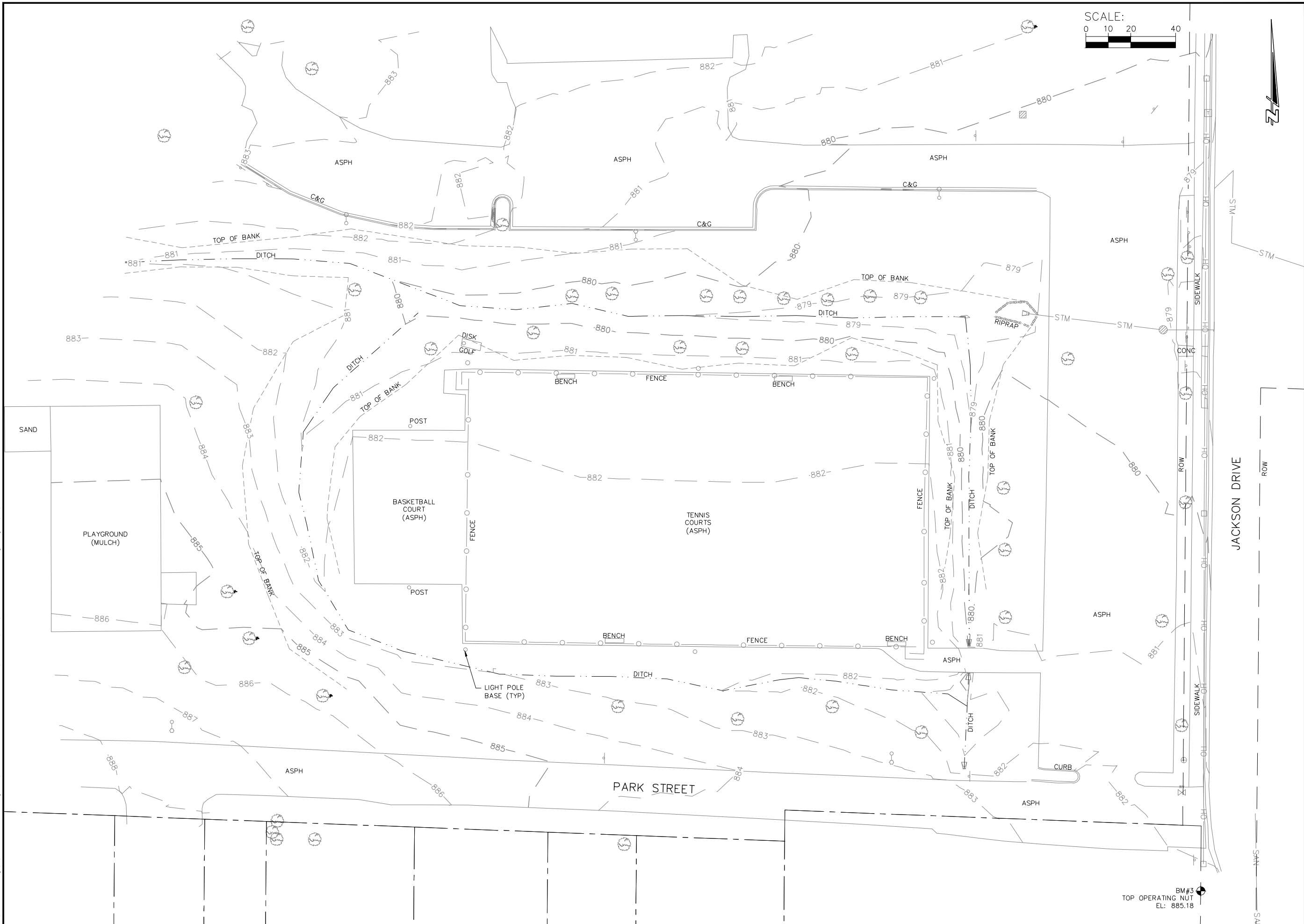
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SHEET NO.

2 OF 9

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BM#3
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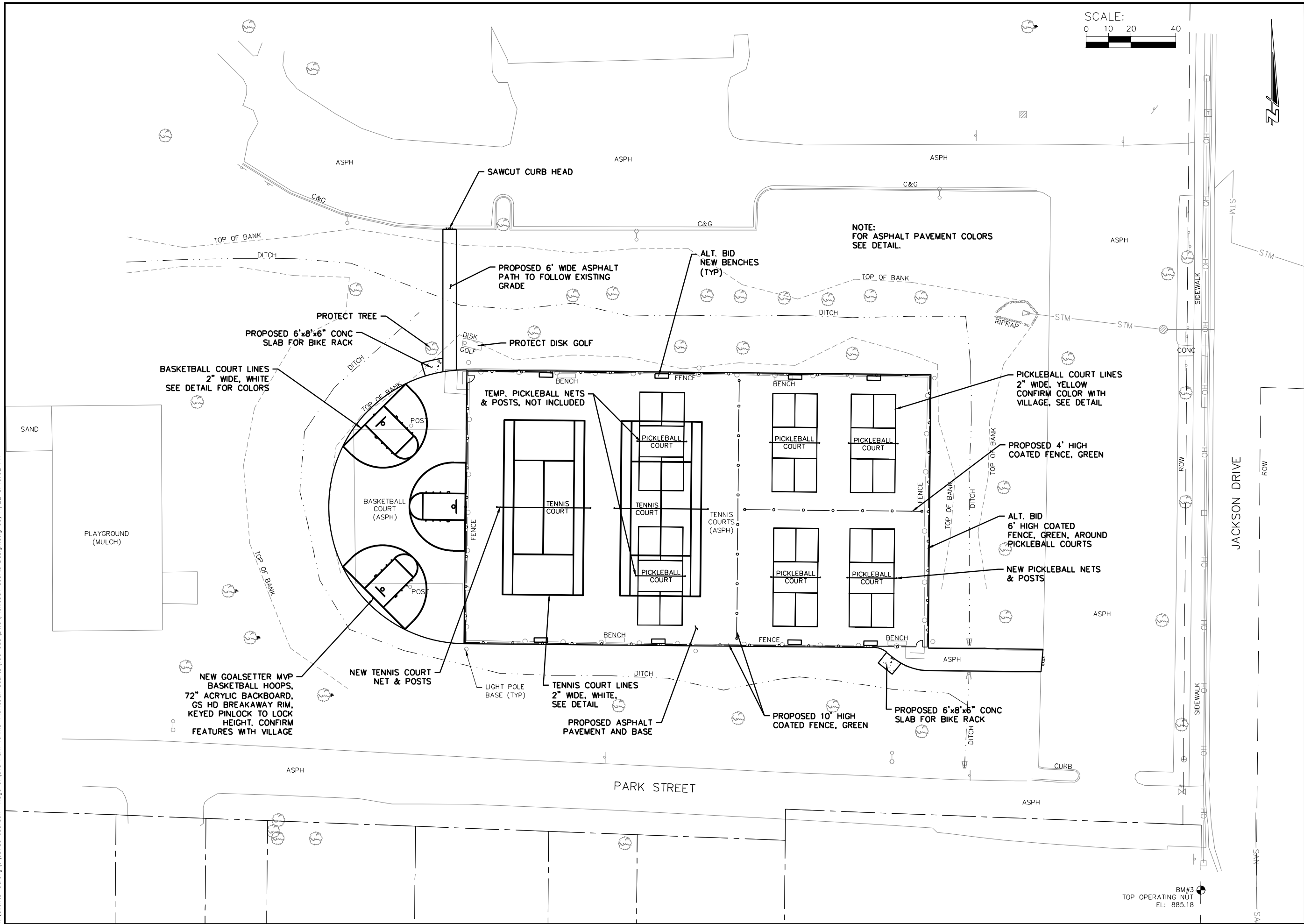
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VILLAGE OF JACKSON
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WASHINGTON COUNTY, WISCONSIN
EXISTING CONDITIONS

SHEET NO.
3 OF 9

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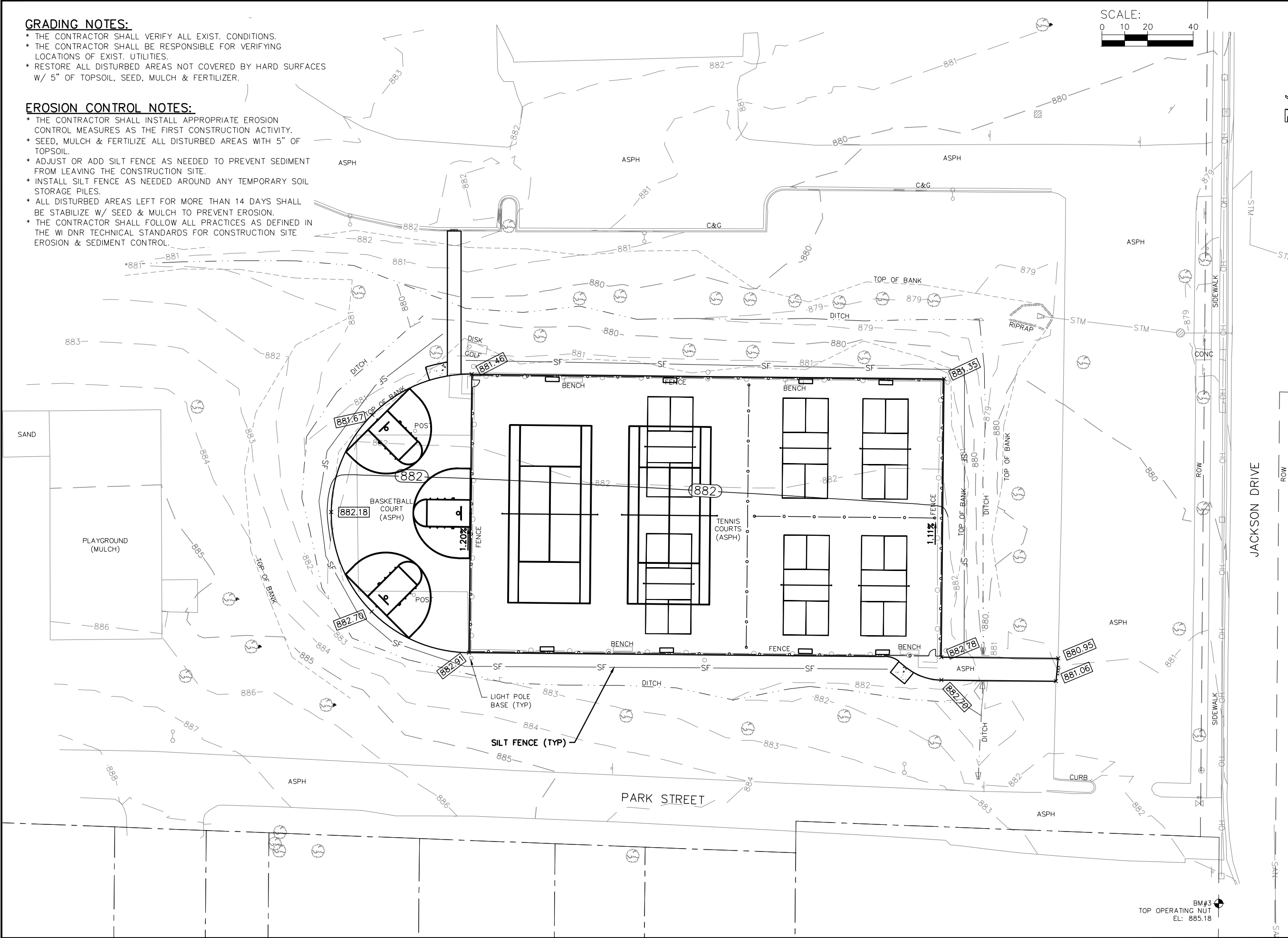
VILLAGE OF JACKSON
JACKSON PARK TENNIS-PICKLEBALL COURTS
WASHINGTON COUNTY, WISCONSIN
SITE PLAN

GRADING NOTES:

- * THE CONTRACTOR SHALL VERIFY ALL EXIST. CONDITIONS.
- * THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF EXIST. UTILITIES.
- * RESTORE ALL DISTURBED AREAS NOT COVERED BY HARD SURFACES W/ 5" OF TOPSOIL, SEED, MULCH & FERTILIZER.

EROSION CONTROL NOTES:

- * THE CONTRACTOR SHALL INSTALL APPROPRIATE EROSION CONTROL MEASURES AS THE FIRST CONSTRUCTION ACTIVITY.
- * SEED, MULCH & FERTILIZE ALL DISTURBED AREAS WITH 5" OF TOPSOIL.
- * ADJUST OR ADD SILT FENCE AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
- * INSTALL SILT FENCE AS NEEDED AROUND ANY TEMPORARY SOIL STORAGE PILES.
- * ALL DISTURBED AREAS LEFT FOR MORE THAN 14 DAYS SHALL BE STABILIZE W/ SEED & MULCH TO PREVENT EROSION.
- * THE CONTRACTOR SHALL FOLLOW ALL PRACTICES AS DEFINED IN THE WI DNR TECHNICAL STANDARDS FOR CONSTRUCTION SITE EROSION & SEDIMENT CONTROL.



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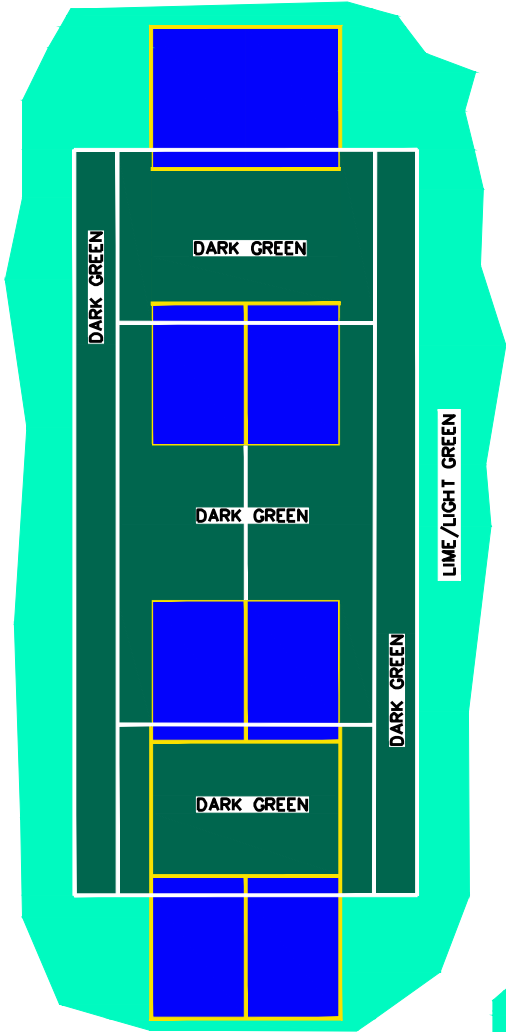
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WASHINGTON COUNTY, WISCONSIN
GRADING AND EROSION CONTROL PLAN

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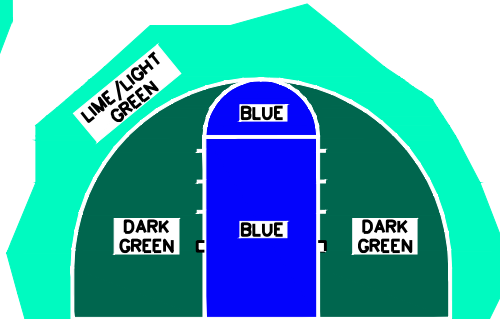
TENNIS COURT COLORS

NOTE: ALL LINES, 2" WIDE, WHITE. AREAS OUTSIDE OF COURTS, LIME/LIGHT GREEN, VERIFY EXACT COLOR WITH VILLAGE.



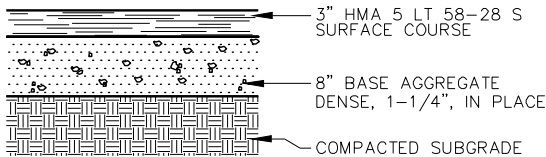
PICKLEBALL COURT COLORS

NOTE: ALL LINES, 2" WIDE, YELLOW. AREAS OUTSIDE OF COURTS, LIME/LIGHT GREEN, VERIFY EXACT COLOR WITH VILLAGE.



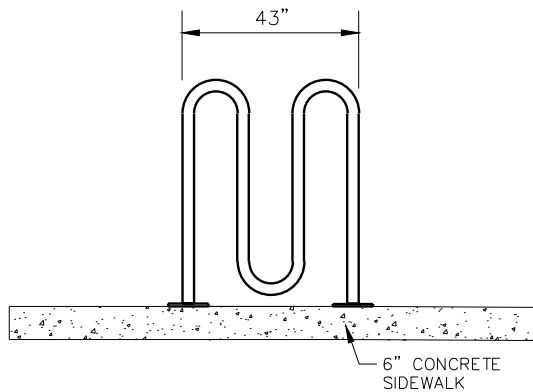
BASKETBALL COURT COLORS

NOTE: ALL LINES, 2" WIDE, WHITE. AREAS OUTSIDE OF COURTS, LIME/LIGHT GREEN, VERIFY EXACT COLOR WITH VILLAGE.



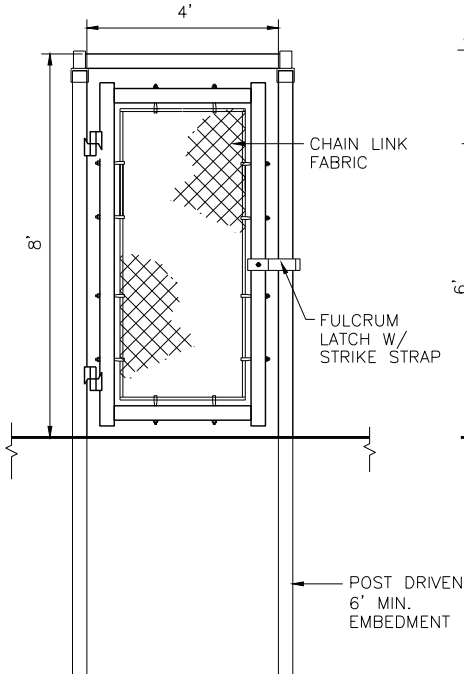
ASPHALT TYPICAL SECTION

NOTE: ASPHALT, BASE COURSE & COMPACTION SHALL BE SUPPLIED & INSTALLED AS PER WI DOT STANDARD SPEC. FOR HWY & STRUCTURE CONSTRUCTION, LATEST ED.



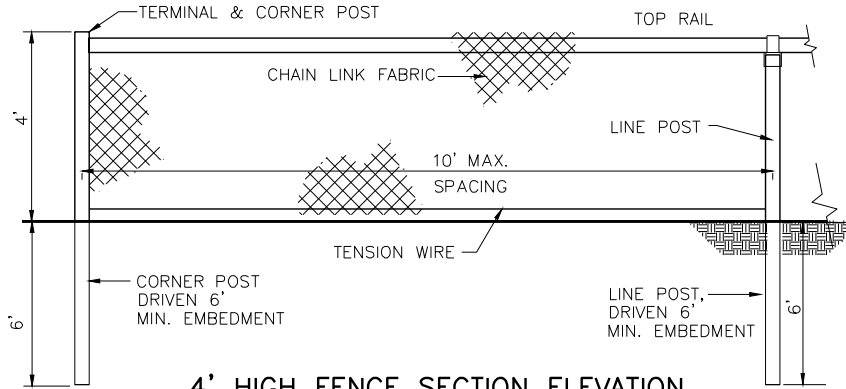
3 LOOP WAVE BIKE RACK DETAIL

NOTES:
* 3 LOOP WAVE RACK BY ULINE
MODEL NO. H-2543BL OR APPROVED EQUAL.
* FINISH SHALL BE BLACK POWDER COATING.



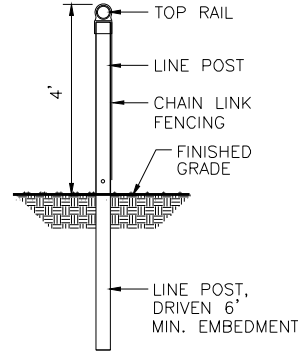
3' GATE ELEVATION

NO SCALE



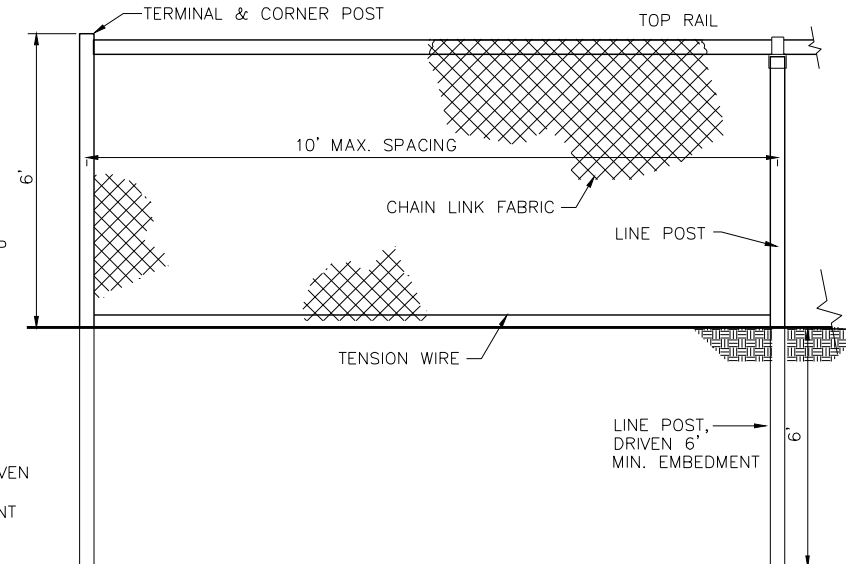
4' HIGH FENCE SECTION ELEVATION

NO SCALE



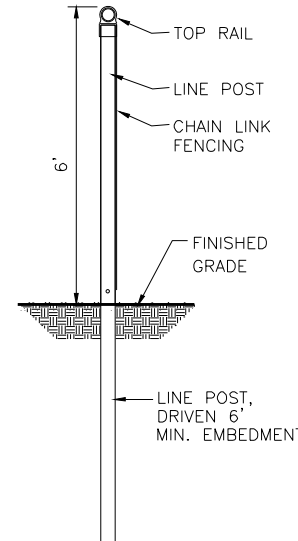
LINE POST DETAIL

NO SCALE



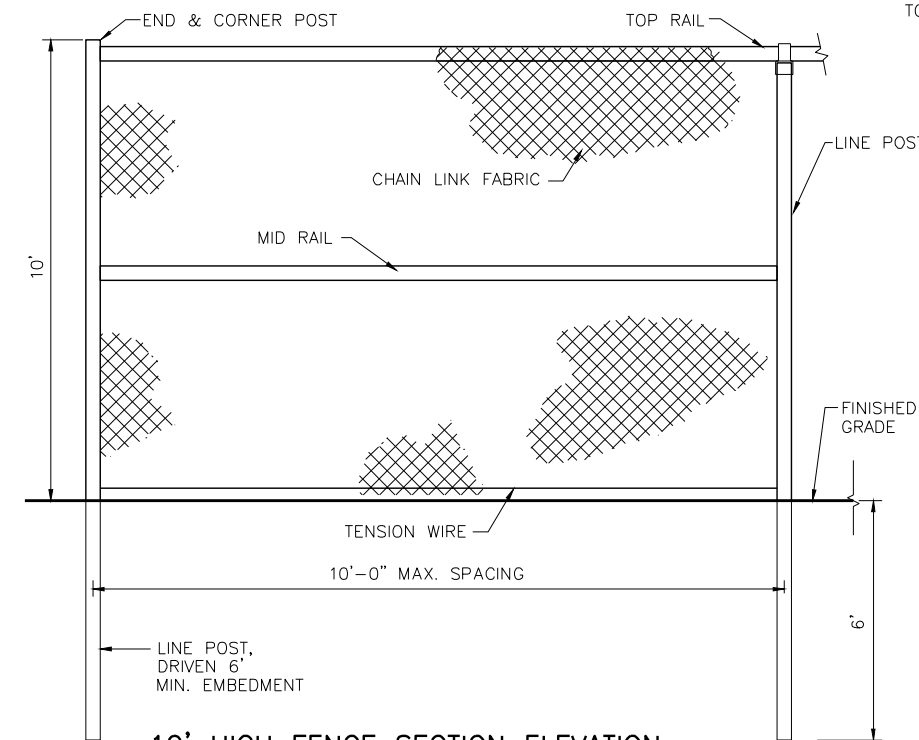
ALT. BID 6' HIGH FENCE SECTION ELEVATION

NO SCALE



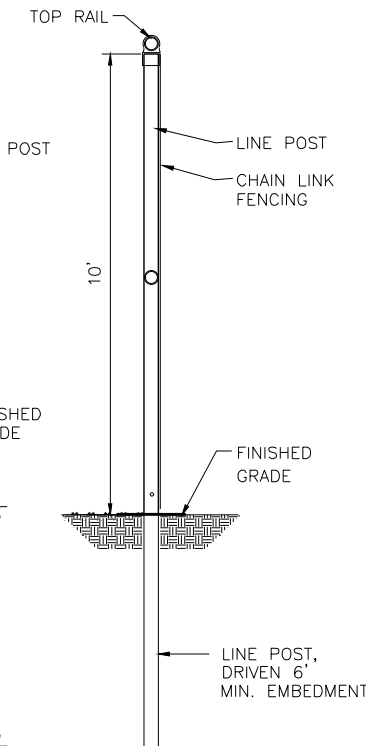
LINE POST DETAIL

NO SCALE



10' HIGH FENCE SECTION ELEVATION

NO SCALE



LINE POST DETAIL

NO SCALE

VILLAGE OF JACKSON
JACKSON PARK TENNIS-PICKLEBALL COURTS
WASHINGTON COUNTY, WI
STANDARD DETAILS

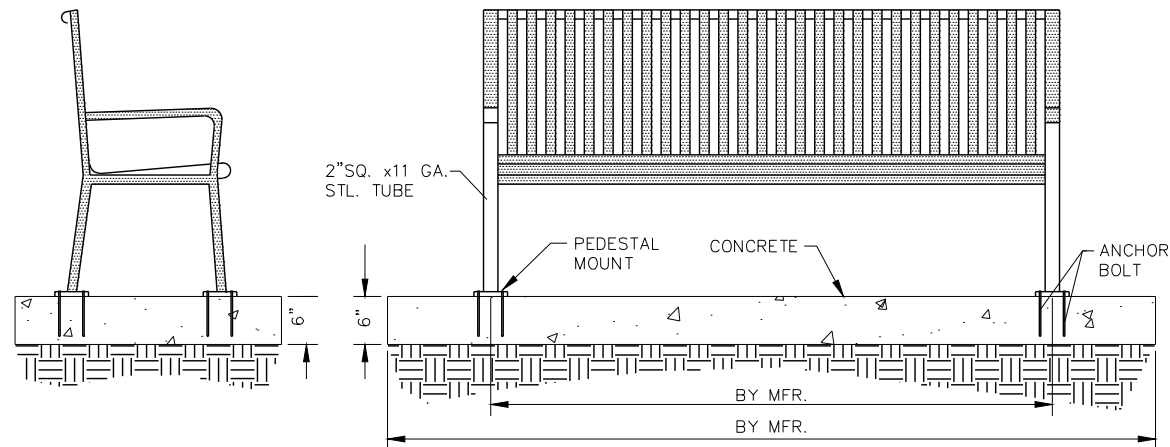
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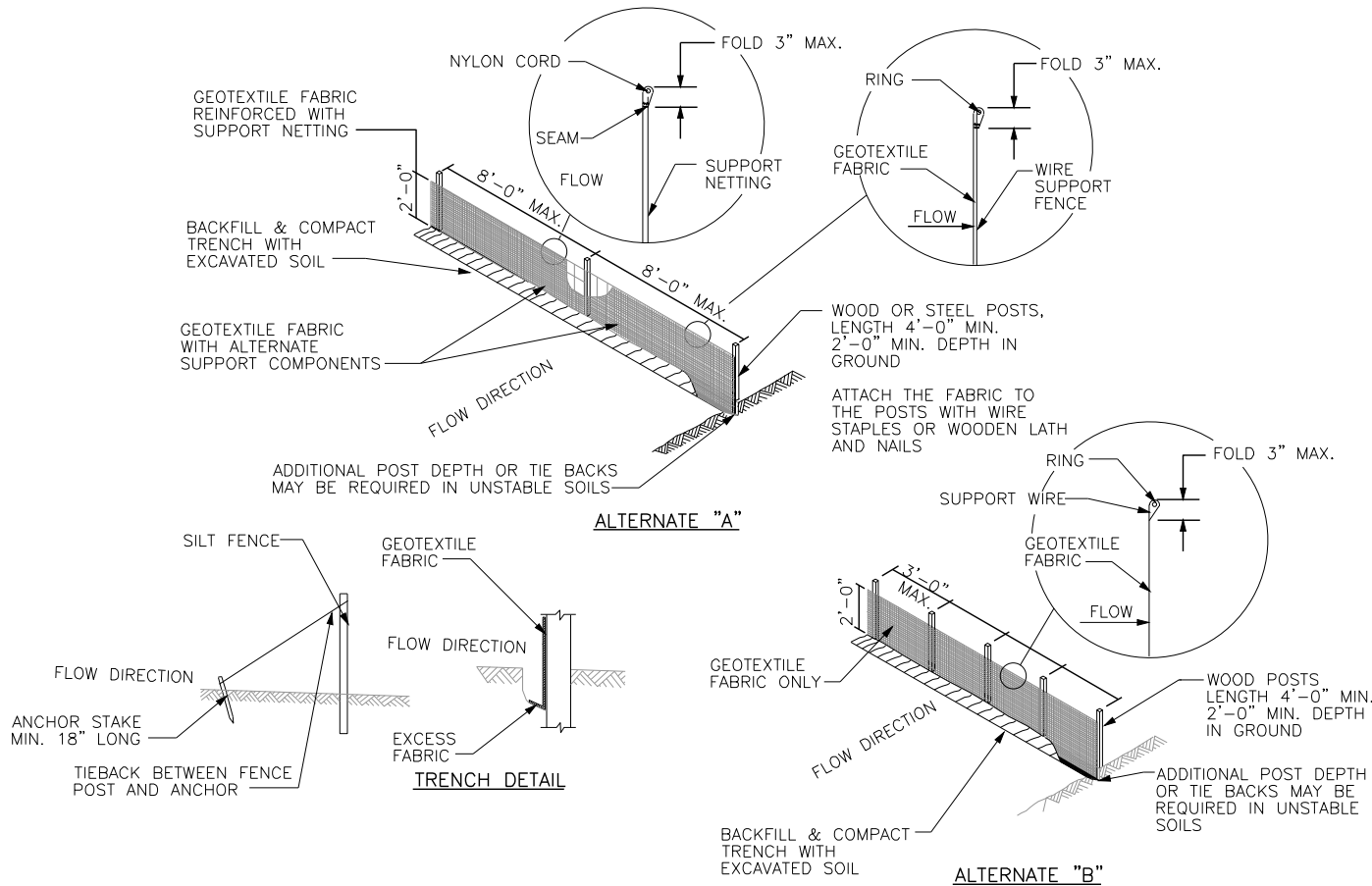
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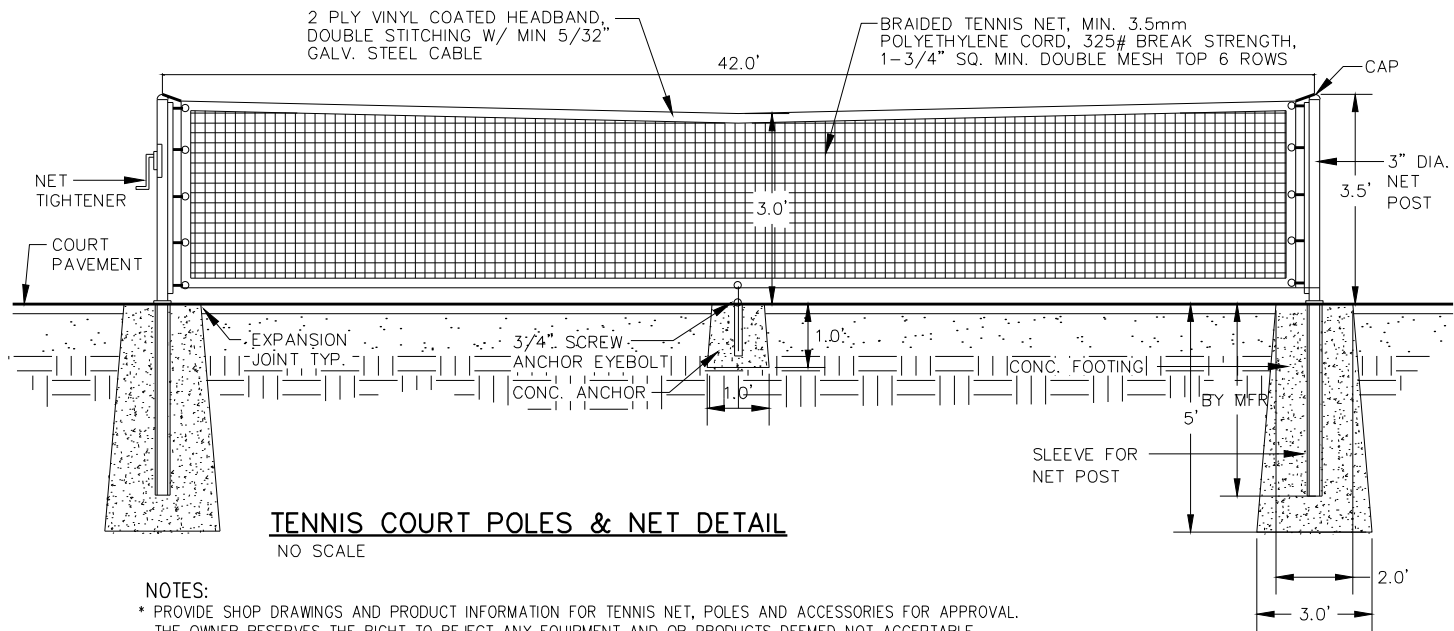


- NOTES:
- * BENCH MODEL RB-28, 6-FOOT LENGTH, BLACK IN COLOR, BY VICTOR STANLEY.
 - * ALL STEEL MEMBERS ELECTROSTATICALLY POLYESTER POWDER COATED.
 - * ALL WELDS SHALL BE GROUND SMOOTH BEFORE FINISHING.
 - * ANCHOR BENCH W/ SURFACE MOUNT AS PER MFR'S SPECIFICATIONS.

ALT. BID BENCH DETAIL
NO SCALE

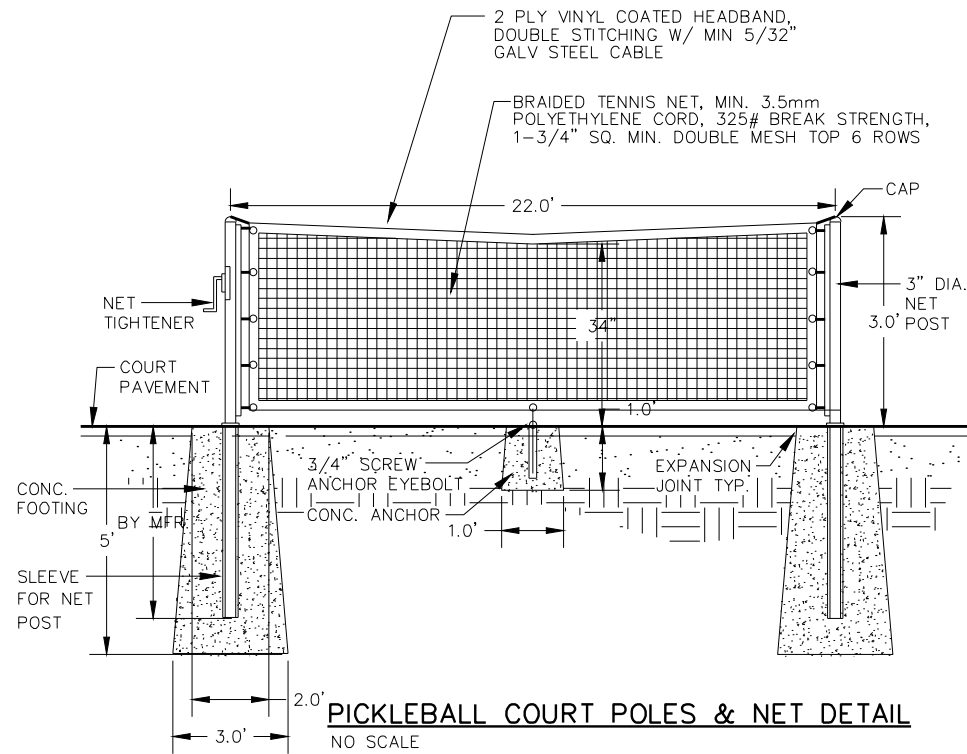


SILT FENCE



- NOTES:
- * PROVIDE SHOP DRAWINGS AND PRODUCT INFORMATION FOR TENNIS NET, POLES AND ACCESSORIES FOR APPROVAL.
 - * THE OWNER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT AND OR PRODUCTS DEEMED NOT ACCEPTABLE.
 - * ALL COMPONENTS SHALL BE UV, ROT, MILDEW & RUST RESISTANT.
 - * PROVIDE SYSTEM FOR ADJUSTING THE TENTION OF THE NET.

TENNIS COURT POLES & NET DETAIL
NO SCALE



- NOTES:
- * PROVIDE SHOP DRAWINGS AND PRODUCT INFORMATION FOR PICKLEBALL NET, POLES AND ACCESSORIES FOR APPROVAL.
 - * THE OWNER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT AND OR PRODUCTS DEEMED NOT ACCEPTABLE.
 - * ALL COMPONENTS SHALL BE UV, ROT, MILDEW & RUST RESISTANT.
 - * PROVIDE SYSTEM FOR ADJUSTING THE TENTION OF THE NET.

PICKLEBALL COURT POLES & NET DETAIL
NO SCALE

VILLAGE OF JACKSON
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WASHINGTON COUNTY, WI
STANDARD DETAILS

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RESOLUTION #22-09

A RESOLUTION ADOPTING THE 2021 COMPLIANCE MAINTENANCE ANNUAL REPORT FOR THE JACKSON WASTEWATER TREATMENT FACILITY

WHEREAS, the State of Wisconsin Department of Natural Resources requires a Compliance Maintenance Annual Report for the Village of Jackson Wastewater Treatment Plant; and

WHEREAS, the Village of Jackson Wastewater Treatment Plant Superintendent, the Village's Engineer, the Village Clerk and the Village Treasurer have completed the necessary information requested in the annual report; and

NOW, THEREFORE, BE IT RESOLVED, that the Village Board of the Village of Jackson, Washington County, Wisconsin, does hereby resolve that the Village Board has reviewed the Compliance Maintenance Annual Report, and has approved it for submission.

Introduced by: _____

Seconded by: _____

Vote: _____ Aye _____ Nay

Passed and Approved: _____

Michael E. Schwab – Village President

Attest: _____
Jilline S. Dobratz – Village Clerk

Proof of Posting:

I the undersigned, certify that I posted this Resolution on bulletin boards at the Village Hall, Post Office, and one other location in the Village.

Village Official

Date

Compliance Maintenance Annual Report

Jackson (Village) Wastewater Treatment Plant

Last Updated: Reporting For:

5/25/2022

2021

Influent Flow and Loading

1. Monthly Average Flows and BOD Loadings

1.1 Verify the following monthly flows and BOD loadings to your facility.

Influent No. 701	Influent Monthly Average Flow, MGD	x	Influent Monthly Average BOD Concentration mg/L	x	8.34	=	Influent Monthly Average BOD Loading, lbs/day
January	1.0748	x	292	x	8.34	=	2,616
February	1.0150	x	357	x	8.34	=	3,025
March	1.5252	x	197	x	8.34	=	2,500
April	1.2637	x	259	x	8.34	=	2,730
May	1.1081	x	250	x	8.34	=	2,311
June	1.0913	x	248	x	8.34	=	2,260
July	0.9832	x	253	x	8.34	=	2,072
August	1.2806	x	244	x	8.34	=	2,607
September	0.9323	x	288	x	8.34	=	2,238
October	0.9300	x	275	x	8.34	=	2,130
November	0.8537	x	321	x	8.34	=	2,282
December	0.9526	x	349	x	8.34	=	2,776

2. Maximum Monthly Design Flow and Design BOD Loading

2.1 Verify the design flow and loading for your facility.

Design	Design Factor	x	%	=	% of Design
Max Month Design Flow, MGD	1.875	x	90	=	1.6875
		x	100	=	1.875
Design BOD, lbs/day	2980	x	90	=	2682
		x	100	=	2980

2.2 Verify the number of times the flow and BOD exceeded 90% or 100% of design, points earned, and score:

	Months of Influent	Number of times flow was greater than 90% of	Number of times flow was greater than 100% of	Number of times BOD was greater than 90% of design	Number of times BOD was greater than 100% of design
January	1	0	0	0	0
February	1	0	0	1	1
March	1	0	0	0	0
April	1	0	0	1	0
May	1	0	0	0	0
June	1	0	0	0	0
July	1	0	0	0	0
August	1	0	0	0	0
September	1	0	0	0	0
October	1	0	0	0	0
November	1	0	0	0	0
December	1	0	0	1	0
Points per each		2	1	3	2
Exceedances		0	0	3	1
Points		0	0	9	2
Total Number of Points					11

11

Compliance Maintenance Annual Report

Jackson (Village) Wastewater Treatment Plant

Last Updated: Reporting For:

5/25/2022

2021

3. Flow Meter

3.1 Was the influent flow meter calibrated in the last year?

- ☒ Yes Enter last calibration date (MM/DD/YYYY)

2021-09-22

- ☐ No

If No, please explain:

4. Sewer Use Ordinance

4.1 Did your community have a sewer use ordinance that limited or prohibited the discharge of excessive conventional pollutants ((C)BOD, SS, or pH) or toxic substances to the sewer from industries, commercial users, hauled waste, or residences?

- ☒ Yes

- ☐ No

If No, please explain:

4.2 Was it necessary to enforce the ordinance?

- ☐ Yes

- ☒ No

If Yes, please explain:

5. Septage Receiving

5.1 Did you have requests to receive septage at your facility?

Septic Tanks

Holding Tanks

Grease Traps

- ☒ Yes

- ☒ Yes

- ☐ Yes

- ☐ No

- ☐ No

- ☒ No

5.2 Did you receive septage at your facility? If yes, indicate volume in gallons.

Septic Tanks

- ☒ Yes 2788860 gallons

- ☐ No

Holding Tanks

- ☒ Yes 16620325 gallons

- ☐ No

Grease Traps

- ☐ Yes gallons

- ☒ No

5.2.1 If yes to any of the above, please explain if plant performance is affected when receiving any of these wastes.

The plant responses well to the hauled waste

6. Pretreatment

6.1 Did your facility experience operational problems, permit violations, biosolids quality concerns, or hazardous situations in the sewer system or treatment plant that were attributable to commercial or industrial discharges in the last year?

- ☐ Yes

- ☒ No

If yes, describe the situation and your community's response.

6.2 Did your facility accept hauled industrial wastes, landfill leachate, etc.?

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☐ Yes ☒ No If yes, describe the types of wastes received and any procedures or other restrictions that were in place to protect the facility from the discharge of hauled industrial wastes.	
--	--

Total Points Generated	11
Score (100 - Total Points Generated)	89
Section Grade	B

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Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

1.1 Verify the following monthly average effluent values, exceedances, and points for BOD or CBOD

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit > 10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	17	15.3	4	1	0	0
February	17	15.3	4	1	0	0
March	17	15.3	4	1	0	0
April	17	15.3	4	1	0	0
May	12	10.8	4	1	0	0
June	12	10.8	3	1	0	0
July	12	10.8	2	1	0	0
August	12	10.8	2	1	0	0
September	12	10.8	3	1	0	0
October	12	10.8	4	1	0	0
November	17	15.3	5	1	0	0
December	17	15.3	7	1	0	0
* Equals limit if limit is <= 10						
Months of discharge/yr				12		
Points per each exceedance with 12 months of discharge					7	3
Exceedances					0	0
Points					0	0
Total number of points						0

NOTE: For systems that discharge intermittently to state waters, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge. Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is $12/6 = 2.0$

1.2 If any violations occurred, what action was taken to regain compliance?

2. Flow Meter Calibration

2.1 Was the effluent flow meter calibrated in the last year?

● Yes Enter last calibration date (MM/DD/YYYY)
2021-09-22

○ No

If No, please explain:

3. Treatment Problems

3.1 What problems, if any, were experienced over the last year that threatened treatment?

none

4. Other Monitoring and Limits

4.1 At any time in the past year was there an exceedance of a permit limit for any other pollutants such as chlorides, pH, residual chlorine, fecal coliform, or metals?

○ Yes

● No

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If Yes, please explain:

4.2 At any time in the past year was there a failure of an effluent acute or chronic whole effluent toxicity (WET) test?

☐ Yes

☒ No

If Yes, please explain:

4.3 If the biomonitoring (WET) test did not pass, were steps taken to identify and/or reduce source(s) of toxicity?

☐ Yes

☐ No

☒ N/A

Please explain unless not applicable:

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Effluent Quality and Plant Performance (Total Suspended Solids)

1. Effluent Total Suspended Solids Results

1.1 Verify the following monthly average effluent values, exceedances, and points for TSS:

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit >10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	12	10.8	2	1	0	0
February	12	10.8	3	1	0	0
March	12	10.8	5	1	0	0
April	12	10.8	4	1	0	0
May	12	10.8	4	1	0	0
June	12	10.8	4	1	0	0
July	12	10.8	4	1	0	0
August	12	10.8	3	1	0	0
September	12	10.8	2	1	0	0
October	12	10.8	3	1	0	0
November	12	10.8	3	1	0	0
December	12	10.8	4	1	0	0
* Equals limit if limit is <= 10						
Months of Discharge/yr				12		
Points per each exceedance with 12 months of discharge:					7	3
Exceedances					0	0
Points					0	0
Total Number of Points						0

NOTE: For systems that discharge intermittently to state waters, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.

Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is $12/6 = 2.0$

1.2 If any violations occurred, what action was taken to regain compliance?

0

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Effluent Quality and Plant Performance (Ammonia - NH3)

1. Effluent Ammonia Results

1.1 Verify the following monthly and weekly average effluent values, exceedances and points for ammonia

Outfall No. 001	Monthly Average NH3 Limit (mg/L)	Weekly Average NH3 Limit (mg/L)	Effluent Monthly Average NH3 (mg/L)	Monthly Permit Limit Exceed ance	Effluent Weekly Average for Week 1	Effluent Weekly Average for Week 2	Effluent Weekly Average for Week 3	Effluent Weekly Average for Week 4	Weekly Permit Limit Exceed ance
January	7		.356	0					
February	7		.475	0					
March	7		.521	0					
April	4.3		.188	0					
May	5.7		.264	0					
June	3.9		.243	0					
July	3.9		.632	0					
August	3.9		.309	0					
September	3.9		.244	0					
October	4.3		.262	0					
November	7		.428	0					
December	7		.871	0					
Points per each exceedance of Monthly average:									10
Exceedances, Monthly:									0
Points:									0
Points per each exceedance of weekly average (when there is no monthly average):									2.5
Exceedances, Weekly:									0
Points:									0
Total Number of Points									0

NOTE: Limit exceedances are considered for monthly OR weekly averages but not both. When a monthly average limit exists it will be used to determine exceedances and generate points. This will be true even if a weekly limit also exists. When a weekly average limit exists and a monthly limit does not exist, the weekly limit will be used to determine exceedances and generate points.

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Effluent Quality and Plant Performance (Phosphorus)

1. Effluent Phosphorus Results

1.1 Verify the following monthly average effluent values, exceedances, and points for Phosphorus

Outfall No. 001	Monthly Average phosphorus Limit (mg/L)	Effluent Monthly Average phosphorus (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance
January	.85	0.706	1	0
February	.85	0.738	1	0
March	.85	0.645	1	0
April	.85	0.808	1	0
May	.85	0.755	1	0
June	.85	0.673	1	0
July	.85	0.833	1	0
August	.85	0.598	1	0
September	.85	0.804	1	0
October	.85	0.792	1	0
November	.85	0.757	1	0
December	.85	0.769	1	0
Months of Discharge/yr			12	
Points per each exceedance with 12 months of discharge:				10
Exceedances				0
Total Number of Points				0

0

NOTE: For systems that discharge intermittently to waters of the state, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.

Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is $12/6 = 2.0$

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Biosolids Quality and Management

1. Biosolids Use/Disposal

1.1 How did you use or dispose of your biosolids? (Check all that apply)

- ☐ Land applied under your permit
- ☐ Publicly Distributed Exceptional Quality Biosolids
- ☒ Hauled to another permitted facility
- ☐ Landfilled
- ☐ Incinerated
- ☐ Other

NOTE: If you did not remove biosolids from your system, please describe your system type such as lagoons, reed beds, recirculating sand filters, etc.

1.1.1 If you checked Other, please describe:

3. Biosolids Metals

Number of biosolids outfalls in your WPDES permit:

3.1 For each outfall tested, verify the biosolids metal quality values for your facility during the last calendar year.

Outfall No. 002 - ANAEROBIC LIQUID

Parameter	80% of Limit	H.Q. Limit	Ceiling Limit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	80% Value	High Quality	Ceiling
Arsenic		41	75				<7.8										0	0
Cadmium		39	85				<.4										0	0
Copper		1500	4300	13			7.79				27		16.6				0	0
Lead		300	840				<7.8										0	0
Mercury		17	57				<.061										0	0
Molybdenum	60		75				<.78									0		0
Nickel	336		420				<1.56									0		0
Selenium	80		100				<15.6									0		0
Zinc		2800	7500				7.6										0	0

3.1.1 Number of times any of the metals exceeded the high quality limits OR 80% of the limit for molybdenum, nickel, or selenium = 0

Exceedence Points

- 0 (0 Points)
- 1-2 (10 Points)
- > 2 (15 Points)

3.1.2 If you exceeded the high quality limits, did you cumulatively track the metals loading at each land application site? (check applicable box)

- Yes
- No (10 points)
- N/A - Did not exceed limits or no HQ limit applies (0 points)
- N/A - Did not land apply biosolids until limit was met (0 points)

3.1.3 Number of times any of the metals exceeded the ceiling limits = 0

Exceedence Points

- 0 (0 Points)
- 1 (10 Points)
- > 1 (15 Points)

3.1.4 Were biosolids land applied which exceeded the ceiling limit?

- Yes (20 Points)
- No (0 Points)

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3.1.5 If any metal limit (high quality or ceiling) was exceeded at any time, what action was taken?
Has the source of the metals been identified?

0

4. Pathogen Control (per outfall):

4.1 Verify the following information. If any information is incorrect, use the Report Issue button under the Options header in the left-side menu.

Outfall Number:	002
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2021 - 12/31/2021
Density:	5,792
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic Digestion

Outfall Number:	002
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	01/01/2021 - 03/31/2021
Density:	5,792
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	No
Process:	Anaerobic Digestion
Process Description:	Anaerobic Digestion

Outfall Number:	002
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	04/01/2021 - 06/30/2021
Density:	5,792
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic Digestion

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Outfall Number:	002
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	07/01/2021 - 09/30/2021
Density:	5,792
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic Digestion

Outfall Number:	002
Biosolids Class:	B
Bacteria Type and Limit:	Fecal Coliform
Sample Dates:	10/01/2021 - 12/31/2021
Density:	5,792
Sample Concentration Amount:	MPN/G TS
Requirement Met:	Yes
Land Applied:	Yes
Process:	Anaerobic Digestion
Process Description:	Anaerobic Digestion

4.2 If exceeded Class B limit or did not meet the process criteria at the time of land application.

4.2.1 Was the limit exceeded or the process criteria not met at the time of land application?

☐ Yes (40 Points)

☒ No

If yes, what action was taken?

5. Vector Attraction Reduction (per outfall):

5.1 Verify the following information. If any of the information is incorrect, use the Report Issue button under the Options header in the left-side menu.

Outfall Number:	002
Method Date:	12/31/2021
Option Used To Satisfy Requirement:	Injection when land apply
Requirement Met:	Yes
Land Applied:	Yes
Limit (if applicable):	
Results (if applicable):	

Outfall Number:	002
Method Date:	03/31/2021
Option Used To Satisfy Requirement:	Injection when land apply
Requirement Met:	Yes
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

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Outfall Number:	002	0
Method Date:	06/30/2021	
Option Used To Satisfy Requirement:	Injection when land apply	
Requirement Met:	Yes	
Land Applied:	Yes	
Limit (if applicable):		
Results (if applicable):		
Outfall Number:	002	
Method Date:	09/30/2021	
Option Used To Satisfy Requirement:	Injection when land apply	
Requirement Met:	Yes	
Land Applied:	Yes	
Limit (if applicable):		
Results (if applicable):		
Outfall Number:	002	
Method Date:	12/31/2021	
Option Used To Satisfy Requirement:	Injection when land apply	
Requirement Met:	Yes	
Land Applied:	Yes	
Limit (if applicable):		
Results (if applicable):		
5.2 Was the limit exceeded or the process criteria not met at the time of land application? ☐ Yes (40 Points) ☒ No If yes, what action was taken?		
6. Biosolids Storage 6.1 How many days of actual, current biosolids storage capacity did your wastewater treatment facility have either on-site or off-site? ☒ >= 180 days (0 Points) ☐ 150 - 179 days (10 Points) ☐ 120 - 149 days (20 Points) ☐ 90 - 119 days (30 Points) ☐ < 90 days (40 Points) ☐ N/A (0 Points) 6.2 If you checked N/A above, explain why.		
7. Issues 7.1 Describe any outstanding biosolids issues with treatment, use or overall management: No Issues at this time		

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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Staffing and Preventative Maintenance (All Treatment Plants)

1. Plant Staffing 1.1 Was your wastewater treatment plant adequately staffed last year? ● Yes ○ No If No, please explain: Could use more help/staff for: 1.2 Did your wastewater staff have adequate time to properly operate and maintain the plant and fulfill all wastewater management tasks including recordkeeping? ● Yes ○ No If No, please explain:	
2. Preventative Maintenance 2.1 Did your plant have a documented AND implemented plan for preventative maintenance on major equipment items? ● Yes (Continue with question 2) ☐☐ ○ No (40 points) ☐☐ If No, please explain, then go to question 3: 2.2 Did this preventative maintenance program depict frequency of intervals, types of lubrication, and other tasks necessary for each piece of equipment? ● Yes ○ No (10 points) 2.3 Were these preventative maintenance tasks, as well as major equipment repairs, recorded and filed so future maintenance problems can be assessed properly? ● Yes ○ Paper file system ○ Computer system ● Both paper and computer system ○ No (10 points)	0
3. O&M Manual 3.1 Does your plant have a detailed O&M and Manufacturer Equipment Manuals that can be used as a reference when needed? ● Yes ○ No	
4. Overall Maintenance /Repairs 4.1 Rate the overall maintenance of your wastewater plant. ○ Excellent ● Very good ○ Good ○ Fair ○ Poor Describe your rating: WWTF staff maintains the plant in an timely and efficient manner.	

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Score (100 - Total Points Generated)	100
Section Grade	A

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Operator Certification and Education

1. Operator-In-Charge 1.1 Did you have a designated operator-in-charge during the report year? ● Yes (0 points) ○ No (20 points) Name: CHAD M RUSS Certification No: 35582	0																																																																																								
2. Certification Requirements 2.1 In accordance with Chapter NR 114.56 and 114.57, Wisconsin Administrative Code, what level and subclass(es) were required for the operator-in-charge (OIC) to operate the wastewater treatment plant and what level and subclass(es) were held by the operator-in-charge? <table border="1"><thead><tr><th rowspan="2">Sub Class</th><th rowspan="2">SubClass Description</th><th>WWTP</th><th colspan="3">OIC</th></tr><tr><th>Advanced</th><th>OIT</th><th>Basic</th><th>Advanced</th></tr></thead><tbody><tr><td>A1</td><td>Suspended Growth Processes</td><td>X</td><td></td><td></td><td>X</td></tr><tr><td>A2</td><td>Attached Growth Processes</td><td></td><td></td><td></td><td></td></tr><tr><td>A3</td><td>Recirculating Media Filters</td><td></td><td></td><td></td><td></td></tr><tr><td>A4</td><td>Ponds, Lagoons and Natural</td><td></td><td></td><td></td><td></td></tr><tr><td>A5</td><td>Anaerobic Treatment Of Liquid</td><td></td><td></td><td></td><td></td></tr><tr><td>B</td><td>Solids Separation</td><td>X</td><td></td><td></td><td>X</td></tr><tr><td>C</td><td>Biological Solids/Sludges</td><td>X</td><td></td><td></td><td>X</td></tr><tr><td>P</td><td>Total Phosphorus</td><td>X</td><td></td><td></td><td>X</td></tr><tr><td>N</td><td>Total Nitrogen</td><td></td><td></td><td></td><td></td></tr><tr><td>D</td><td>Disinfection</td><td>X</td><td></td><td></td><td>X</td></tr><tr><td>L</td><td>Laboratory</td><td>X</td><td></td><td></td><td>X</td></tr><tr><td>U</td><td>Unique Treatment Systems</td><td></td><td></td><td></td><td></td></tr><tr><td>SS</td><td>Sanitary Sewage Collection</td><td>X</td><td>NA</td><td>NA</td><td>NA</td></tr></tbody></table> 2.2 Was the operator-in-charge certified at the appropriate level and subclass(es) to operate this plant? (Note: Certification in subclass SS is required 5 years after permit reissuance.) ● Yes (0 points) ○ No (20 points)	Sub Class	SubClass Description	WWTP	OIC			Advanced	OIT	Basic	Advanced	A1	Suspended Growth Processes	X			X	A2	Attached Growth Processes					A3	Recirculating Media Filters					A4	Ponds, Lagoons and Natural					A5	Anaerobic Treatment Of Liquid					B	Solids Separation	X			X	C	Biological Solids/Sludges	X			X	P	Total Phosphorus	X			X	N	Total Nitrogen					D	Disinfection	X			X	L	Laboratory	X			X	U	Unique Treatment Systems					SS	Sanitary Sewage Collection	X	NA	NA	NA	0
Sub Class			SubClass Description	WWTP	OIC																																																																																				
	Advanced	OIT		Basic	Advanced																																																																																				
A1	Suspended Growth Processes	X			X																																																																																				
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B	Solids Separation	X			X																																																																																				
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N	Total Nitrogen																																																																																								
D	Disinfection	X			X																																																																																				
L	Laboratory	X			X																																																																																				
U	Unique Treatment Systems																																																																																								
SS	Sanitary Sewage Collection	X	NA	NA	NA																																																																																				
3. Succession Planning 3.1 In the event of the loss of your designated operator-in-charge, did you have a contingency plan to ensure the continued proper operation and maintenance of the plant that includes one or more of the following options (check all that apply)? ☒ One or more additional certified operators on staff ☐ An arrangement with another certified operator ☒ An arrangement with another community with a certified operator ☐ An operator on staff who has an operator-in-training certificate for your plant and is expected to be certified within one year ☒ A consultant to serve as your certified operator ☐ None of the above (20 points) If "None of the above" is selected, please explain:	0																																																																																								
4. Continuing Education Credits 4.1 If you had a designated operator-in-charge, was the operator-in-charge earning Continuing Education Credits at the following rates?																																																																																									

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OIT and Basic Certification: ○ Averaging 6 or more CECs per year. ○ Averaging less than 6 CECs per year. Advanced Certification: ● Averaging 8 or more CECs per year. ○ Averaging less than 8 CECs per year.	
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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Financial Management

1. Provider of Financial Information Name: Brian W. Kober Telephone: (262)677-0707 (XXX) XXX-XXXX E-Mail Address (optional): brian.kober@villageofjacksonwi.gov		
2. Treatment Works Operating Revenues 2.1 Are User Charges or other revenues sufficient to cover O&M expenses for your wastewater treatment plant AND/OR collection system ? ● Yes (0 points) ☐ ☐ ○ No (40 points) If No, please explain: 2.2 When was the User Charge System or other revenue source(s) last reviewed and/or revised? Year: 2021 ● 0-2 years ago (0 points) ☐ ☐ ○ 3 or more years ago (20 points) ☐ ☐ ○ N/A (private facility) 2.3 Did you have a special account (e.g., CWF required segregated Replacement Fund, etc.) or financial resources available for repairing or replacing equipment for your wastewater treatment plant and/or collection system? ● Yes (0 points) ○ No (40 points)		0
REPLACEMENT FUNDS [PUBLIC MUNICIPAL FACILITIES SHALL COMPLETE QUESTION 3]		
3. Equipment Replacement Funds 3.1 When was the Equipment Replacement Fund last reviewed and/or revised? Year: 2021 ● 1-2 years ago (0 points) ☐ ☐ ○ 3 or more years ago (20 points) ☐ ☐ ○ N/A If N/A, please explain: 3.2 Equipment Replacement Fund Activity 3.2.1 Ending Balance Reported on Last Year's CMAR \$ 1,067,077.62 3.2.2 Adjustments - if necessary (e.g. earned interest, audit correction, withdrawal of excess funds, increase making up previous shortfall, etc.) \$ 0.00 3.2.3 Adjusted January 1st Beginning Balance \$ 1,067,077.62 3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.) + \$ 273,600.00		

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3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) -

\$ 86,446.61

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year

\$ 1,254,231.01

All Sources: This ending balance should include all Equipment Replacement Funds whether held in a bank account(s), certificate(s) of deposit, etc.

3.2.6.1 Indicate adjustments, equipment purchases, and/or major repairs from 3.2.5 above.

Pump W/external speed control, Vault repipe and materials

3.3 What amount should be in your Replacement Fund?

\$ 273,600.00

0

Please note: If you had a CWFP loan, this amount was originally based on the Financial Assistance Agreement (FAA) and should be regularly updated as needed. Further calculation instructions and an example can be found by clicking the SectionInstructions link under Info header in the left-side menu.

3.3.1 Is the December 31 Ending Balance in your Replacement Fund above, (#3.2.6) equal to, or greater than the amount that should be in it (#3.3)?

● Yes

○ No

If No, please explain.

4. Future Planning

4.1 During the next ten years, will you be involved in formal planning for upgrading, rehabilitating, or new construction of your treatment facility or collection system?

● Yes - If Yes, please provide major project information, if not already listed below. □ □

○ No

Project #	Project Description	Estimated Cost	Approximate Construction Year
1	The current discharge permit has a August 31, 2026 compliance date requirement for lower phosphorus limit. We are investigating a variety of options to meet the lower limit. Also, a new Facilities Planning Study is being created.	120000	2024

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

6. Collection System

6.1 Energy Usage

6.1.1 Enter the monthly energy usage from the different energy sources:

COLLECTION SYSTEM PUMPAGE: Total Power Consumed

Number of Municipally Owned Pump/Lift Stations: 1

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Jackson (Village) Wastewater Treatment Plant

Last Updated: Reporting For:

5/25/2022

2021

	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	317	
February	262	
March	316	
April	330	
May	238	
June	261	
July	265	
August	260	
September	288	
October	219	
November	251	
December	251	
Total	3,258	0
Average	272	0

6.1.2 Comments:

6.2 Energy Related Processes and Equipment

6.2.1 Indicate equipment and practices utilized at your pump/lift stations (Check all that apply):

- ☐ Comminution or Screening
- ☐ Extended Shaft Pumps
- ☐ Flow Metering and Recording
- ☐ Pneumatic Pumping
- ☒ SCADA System
- ☐ Self-Priming Pumps
- ☒ Submersible Pumps
- ☐ Variable Speed Drives
- ☐ Other:

6.2.2 Comments:

6.3 Has an Energy Study been performed for your pump/lift stations?

● No

○ Yes

Year:

By Whom:

Describe and Comment:

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2021

6.4 Future Energy Related Equipment

6.4.1 What energy efficient equipment or practices do you have planned for the future for your pump/lift stations?

No plans at this time

7. Treatment Facility

7.1 Energy Usage

7.1.1 Enter the monthly energy usage from the different energy sources:

TREATMENT PLANT: Total Power Consumed/Month

	Electricity Consumed (kWh)	Total Influent Flow (MG)	Electricity Consumed/Flow (kWh/MG)	Total Influent BOD (1000 lbs)	Electricity Consumed/Total Influent BOD (kWh/1000lbs)	Natural Gas Consumed (therms)
January	104,960	33.32	3,150	81.10	1,294	3,393
February	102,160	28.42	3,595	84.70	1,206	2,875
March	96,000	47.28	2,030	77.50	1,239	2,157
April	101,520	37.91	2,678	81.90	1,240	1,177
May	80,720	34.35	2,350	71.64	1,127	1,515
June	97,760	32.74	2,986	67.80	1,442	406
July	94,240	30.48	3,092	64.23	1,467	560
August	91,520	39.70	2,305	80.82	1,132	433
September	106,480	27.97	3,807	67.14	1,586	468
October	87,760	28.83	3,044	66.03	1,329	684
November	96,960	25.61	3,786	68.46	1,416	1,361
December	102,800	29.53	3,481	86.06	1,195	2,867
Total	1,162,880	396.14		897.38		17,896
Average	96,907	33.01	3,025	74.78	1,306	1,491

7.1.2 Comments:

7.2 Energy Related Processes and Equipment

7.2.1 Indicate equipment and practices utilized at your treatment facility (Check all that apply):

- ☐ Aerobic Digestion
- ☒ Anaerobic Digestion
- ☐ Biological Phosphorus Removal
- ☐ Coarse Bubble Diffusers
- ☒ Dissolved O2 Monitoring and Aeration Control
- ☐ Effluent Pumping
- ☒ Fine Bubble Diffusers
- ☒ Influent Pumping
- ☐ Mechanical Sludge Processing
- ☒ Nitrification
- ☒ SCADA System
- ☐ UV Disinfection
- ☒ Variable Speed Drives
- ☐ Other:

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2021

7.2.2 Comments:

7.3 Future Energy Related Equipment

7.3.1 What energy efficient equipment or practices do you have planned for the future for your treatment facility?

No plans at this time

8. Biogas Generation

8.1 Do you generate/produce biogas at your facility?

☐ No

☒ Yes

If Yes, how is the biogas used (Check all that apply):

☒ Flared Off

☒ Building Heat

☒ Process Heat

☐ Generate Electricity

☐ Other:

9. Energy Efficiency Study

9.1 Has an Energy Study been performed for your treatment facility?

☒ No

☐ Yes

☐ Entire facility

Year:

By Whom:

Describe and Comment:

☐ Part of the facility

Year:

By Whom:

Describe and Comment:

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Last Updated: Reporting For:
5/25/2022 **2021**

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Jackson (Village) Wastewater Treatment Plant

Last Updated: Reporting For:
5/25/2022 2021

Sanitary Sewer Collection Systems

1. Capacity, Management, Operation, and Maintenance (CMOM) Program

1.1 Do you have a CMOM program that is being implemented?

- ☒ Yes
- ☐ No

If No, explain:

1.2 Do you have a CMOM program that contains all the applicable components and items according to Wisc. Adm Code NR 210.23 (4)?

- ☒ Yes
- ☐ No (30 points)
- ☐ N/A

If No or N/A, explain:

1.3 Does your CMOM program contain the following components and items? (check the components and items that apply)

- ☒ Goals [NR 210.23 (4)(a)]

Describe the major goals you had for your collection system last year:

Cleaning and Televising Sewer Lines, Manhole inspections to find any leaking components in the collection system.

Did you accomplish them?

- ☒ Yes
- ☐ No

If No, explain:

- ☒ Organization [NR 210.23 (4) (b)] ☐

Does this chapter of your CMOM include:

- ☒ Organizational structure and positions (eg. organizational chart and position descriptions)
- ☒ Internal and external lines of communication responsibilities
- ☒ Person(s) responsible for reporting overflow events to the department and the public

- ☒ Legal Authority [NR 210.23 (4) (c)]

What is the legally binding document that regulates the use of your sewer system?

Sewer Use Ordinance

If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 2017-05-09

Does your sewer use ordinance or other legally binding document address the following:

- ☒ Private property inflow and infiltration
 - ☒ New sewer and building sewer design, construction, installation, testing and inspection
 - ☒ Rehabilitated sewer and lift station installation, testing and inspection
 - ☒ Sewage flows satellite system and large private users are monitored and controlled, as necessary
 - ☒ Fat, oil and grease control
 - ☒ Enforcement procedures for sewer use non-compliance
 - ☒ Operation and Maintenance [NR 210.23 (4) (d)]
- Does your operation and maintenance program and equipment include the following:
- ☒ Equipment and replacement part inventories
 - ☒ Up-to-date sewer system map

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☒ A management system (computer database and/or file system) for collection system information for O&M activities, investigation and rehabilitation ☒ A description of routine operation and maintenance activities (see question 2 below) ☒ Capacity assessment program ☒ Basement back assessment and correction ☒ Regular O&M training ☒ Design and Performance Provisions [NR 210.23 (4) (e)] ☐ ☐ What standards and procedures are established for the design, construction, and inspection of the sewer collection system, including building sewers and interceptor sewers on private property? ☒ State Plumbing Code, DNR NR 110 Standards and/or local Municipal Code Requirements ☒ Construction, Inspection, and Testing ☐ Others: ☒ Overflow Emergency Response Plan [NR 210.23 (4) (f)] ☐ ☐ Does your emergency response capability include: ☒ Responsible personnel communication procedures ☒ Response order, timing and clean-up ☒ Public notification protocols ☒ Training ☒ Emergency operation protocols and implementation procedures ☒ Annual Self-Auditing of your CMOM Program [NR 210.23 (5)] ☐ ☐ ☐ Special Studies Last Year (check only those that apply): ☐ Infiltration/Inflow (I/I) Analysis ☐ Sewer System Evaluation Survey (SSES) ☐ Sewer Evaluation and Capacity Management Plan (SECAP) ☐ Lift Station Evaluation Report ☐ Others: 	0																														
2. Operation and Maintenance 2.1 Did your sanitary sewer collection system maintenance program include the following maintenance activities? Complete all that apply and indicate the amount maintained. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cleaning</td> <td style="width: 20%; text-align: center; border: 1px solid black;">5.3</td> <td style="width: 50%;">% of system/year</td> </tr> <tr> <td>Root removal</td> <td style="text-align: center; border: 1px solid black;">0</td> <td>% of system/year</td> </tr> <tr> <td>Flow monitoring</td> <td style="text-align: center; border: 1px solid black;">0</td> <td>% of system/year</td> </tr> <tr> <td>Smoke testing</td> <td style="text-align: center; border: 1px solid black;">0</td> <td>% of system/year</td> </tr> <tr> <td>Sewer line televising</td> <td style="text-align: center; border: 1px solid black;">6.2</td> <td>% of system/year</td> </tr> <tr> <td>Manhole inspections</td> <td style="text-align: center; border: 1px solid black;">7.2</td> <td>% of system/year</td> </tr> <tr> <td>Lift station O&M</td> <td style="text-align: center; border: 1px solid black;">2</td> <td># per L.S./year</td> </tr> <tr> <td>Manhole rehabilitation</td> <td style="text-align: center; border: 1px solid black;">1.5</td> <td>% of manholes rehabbed</td> </tr> <tr> <td>Mainline rehabilitation</td> <td style="text-align: center; border: 1px solid black;">0</td> <td>% of sewer lines rehabbed</td> </tr> <tr> <td>Private sewer inspections</td> <td style="text-align: center; border: 1px solid black;">5.6</td> <td>% of system/year</td> </tr> </table>		Cleaning	5.3	% of system/year	Root removal	0	% of system/year	Flow monitoring	0	% of system/year	Smoke testing	0	% of system/year	Sewer line televising	6.2	% of system/year	Manhole inspections	7.2	% of system/year	Lift station O&M	2	# per L.S./year	Manhole rehabilitation	1.5	% of manholes rehabbed	Mainline rehabilitation	0	% of sewer lines rehabbed	Private sewer inspections	5.6	% of system/year
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2021

Private sewer I/I removal % of private services

River or water crossings % of pipe crossings evaluated or maintained

Please include additional comments about your sanitary sewer collection system below:

3. Performance Indicators

3.1 Provide the following collection system and flow information for the past year.

21.33	Total actual amount of precipitation last year in inches
34.3	Annual average precipitation (for your location)
43.5	Miles of sanitary sewer
1	Number of lift stations
0	Number of lift station failures
0	Number of sewer pipe failures
0	Number of basement backup occurrences
0	Number of complaints
1.1	Average daily flow in MGD (if available)
1.6	Peak monthly flow in MGD (if available)
	Peak hourly flow in MGD (if available)

3.2 Performance ratios for the past year:

0.00	Lift station failures (failures/year)
0.00	Sewer pipe failures (pipe failures/sewer mile/yr)
0.00	Sanitary sewer overflows (number/sewer mile/yr)
0.00	Basement backups (number/sewer mile)
0.00	Complaints (number/sewer mile)
1.5	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
0.0	Peaking factor ratio (Peak Hourly:Annual Daily Avg)

4. Overflows

LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OVERFLOWS REPORTED **

Date	Location	Cause	Estimated Volume
None reported			

** If there were any SSOs or TFOs that are not listed above, please contact the DNR and stop work on this section until corrected.

5. Infiltration / Inflow (I/I)

5.1 Was infiltration/inflow (I/I) significant in your community last year?

☐ Yes

☒ No

If Yes, please describe:

5.2 Has infiltration/inflow and resultant high flows affected performance or created problems in your collection system, lift stations, or treatment plant at any time in the past year?

☐ Yes

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5/25/2022 2021

● No If Yes, please describe: 5.3 Explain any infiltration/inflow (I/I) changes this year from previous years: None 5.4 What is being done to address infiltration/inflow in your collection system? As we find Infiltration/inflow, We replace or grout the leaking component.	
--	--

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	A

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Jackson (Village) Wastewater Treatment Plant

Last Updated: Reporting For:
5/25/2022 2021

Grading Summary

WPDES No: 0021806

SECTIONS	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Influent	B	3	3	9
BOD/CBOD	A	4	10	40
TSS	A	4	5	20
Ammonia	A	4	5	20
Phosphorus	A	4	3	12
Biosolids	A	4	5	20
Staffing/PM	A	4	1	4
OpCert	A	4	1	4
Financial	A	4	1	4
Collection	A	4	3	12
TOTALS			37	145
GRADE POINT AVERAGE (GPA) = 3.92				

Notes:

A = Voluntary Range (Response Optional)

B = Voluntary Range (Response Optional)

C = Recommendation Range (Response Required)

D = Action Range (Response Required)

F = Action Range (Response Required)

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2021

Resolution or Owner's Statement

Name of Governing
Body or Owner:

Village of Jackson

Date of Resolution or
Action Taken:

2022-06-14

Resolution Number:

22-09

Date of Submittal:

ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER RELATING TO SPECIFIC CMAR SECTIONS (Optional for grade A or B. Required for grade C, D, or F):

Influent Flow and Loadings: Grade = B

Effluent Quality: BOD: Grade = A

Effluent Quality: TSS: Grade = A

Effluent Quality: Ammonia: Grade = A

Effluent Quality: Phosphorus: Grade = A

Biosolids Quality and Management: Grade = A

Staffing: Grade = A

Operator Certification: Grade = A

Financial Management: Grade = A

Collection Systems: Grade = A

(Regardless of grade, response required for Collection Systems if SSOs were reported)

ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER RELATING TO THE OVERALL GRADE POINT AVERAGE AND ANY GENERAL COMMENTS

(Optional for G.P.A. greater than or equal to 3.00, required for G.P.A. less than 3.00)

G.P.A. = 3.92



Verizon Wireless
1701 Golf Road, Tower2, Suite 400
Rolling Meadows, IL 60008

April 5, 2022

Village of Jackson
Attn: Jen Keller, Village Administrator
N168W19851 Main Street
Jackson, WI 53037

RE: Tower/Land Lease Agreement (the "Lease"), dated March 11, 1997, by and between Village of Jackson ("LESSOR") and Cellco Partnership as successor in interest to Verizon Wireless Personal Communications LP (f/k/a PrimeCo Personal Communications, L.P.) d/b/a Verizon Wireless ("LESSEE"), and as further amended under Amendment to Land Lease Agreement dated June 12, 2008, Second Amendment to Tower/Land Lease Agreement dated January 28, 2013, Third Amendment to Tower/Land Lease Agreement dated July 23, 2015, and Fourth Amendment to Tower/Land Lease Agreement dated November 30, 2021 covering the leased site located at W227 N16551 Cedar Parkway (the "Premises") – Verizon Wireless Site Name / Location Code: Jackson WT / 113385

Dear Ms. Keller:

The purpose of this letter is to obtain Lessor's written consent, pursuant to Paragraph 5(f) of the Lease, for the installation of a new fiber optic utility line across Lessor's property as required by Lessee for the operation of its communications facility.

The locations of the new fiber optic facilities will be installed in accordance with the Terra Consulting Group Fiber Installation Plans dated February 23rd, 2022. Please indicate Lessor's consent to the proposed modifications by signing in the space provided below.

Thank you for your cooperation in connection with this matter. If you have any questions or concerns regarding this request, please feel free to contact me at (773) 919-5112.

Sincerely,

Peter Schau

Peter Schau
As Agent for Verizon Wireless

Village of Jackson

By: _____

Name: Jen Keller

Title: Village Administrator

Date: _____

CONSULTANT TEAM

PROJECT CONSULTANT:

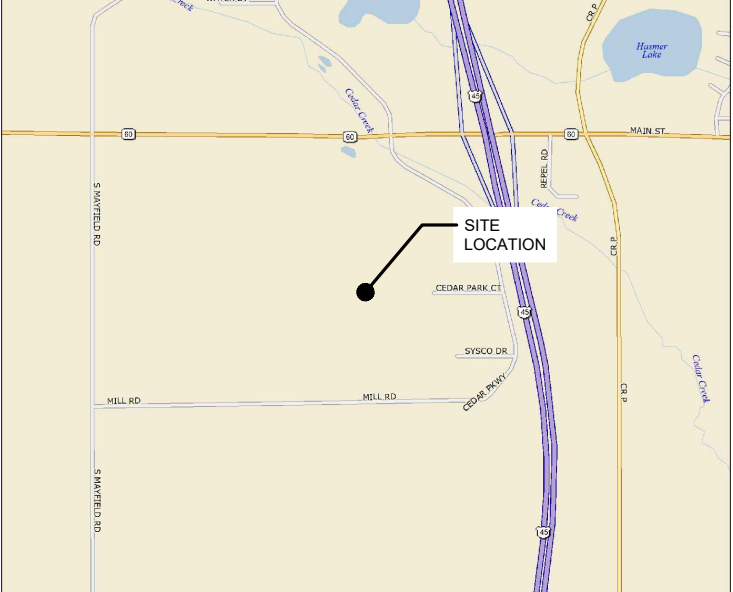
TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
(847) 698-6400

SURVEYOR:

MERIDIAN SURVEYING, LLC
N9637 FRIENDSHIP DR
KAUKAUNA, WI 54130
(920) 993-0881

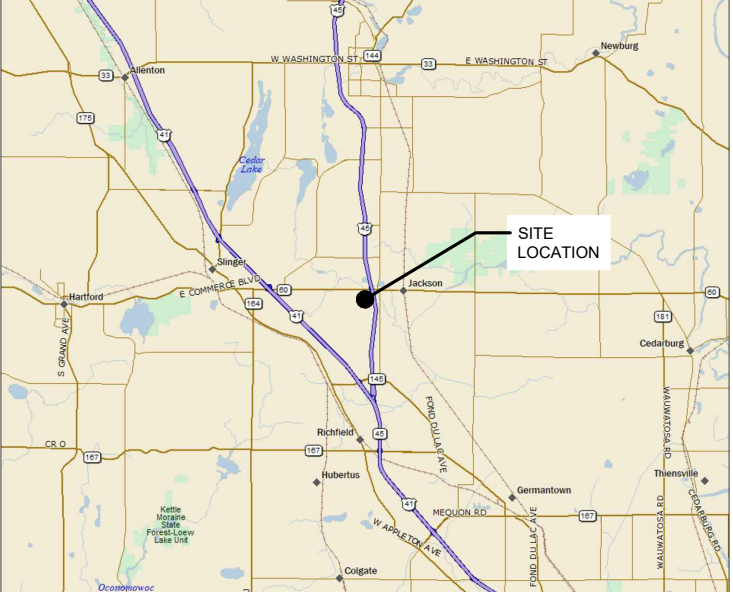
VICINITY MAP

N.T.S.



REGIONAL MAP

N.T.S.



PROJECT TYPE

PROPOSED VERIZON FIBER INSTALLATION AT EXISTING VERIZON EQUIPMENT AREA.

PROJECT INFORMATION

SITE COORDINATES:

LATITUDE: 43° 19' 12.4998" N
LONGITUDE: 88° 11' 27.9996" W

JURISDICTION:

TOWN OF JACKSON

ADDRESS:

W227 N16551 CEDAR PARKWAY
JACKSON, WI 53095

OCCUPANCY:

UNINHABITED

CONSTRUCTION TYPE:

FIBER INSTALLATION

APPLICANT:

VERIZON WIRELESS
1701 GOLF ROAD, TOWER 2, SUITE 400
ROLLING MEADOWS, IL 60008

verizon

1701 GOLF ROAD, TOWER 2, SUITE 400
ROLLING MEADOWS, ILLINOIS 60008
PHONE: (847) 619-5397 FAX: (847) 706-7415

verizon

1701 GOLF ROAD, TOWER 2, SUITE 400
ROLLING MEADOWS, ILLINOIS 60008
PHONE: (847) 619-5397 FAX: (847) 706-7415

LOCATION NUMBER: 113385

SITE NAME: JACKSON WT-B

W227 N16551 CEDAR PARKWAY

JACKSON, WI 53037

SHEET

DRAWING INDEX

REVISION

T-1

LP

C-1

C-1A

C-2

EX-1

EX-2

TITLE SHEET

LOCATION PLAN

ENLARGED SITE PLAN

ENLARGED SITE PLAN

SITE DETAILS

PHOTO EXHIBIT

PHOTO EXHIBIT

-

-

-

-

-

-

-

ATTACHMENTS

22" x 34" IS FULL SCALE.
11" x 17" IS HALF SCALE.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR REVIEW	02/23/22	XSJ
2	REVISED PER EASEMENT	04/06/22	DMS

LOC. # 113385

JACKSON WT-B

W227 N16551
CEDAR PARKWAY
JACKSON, WI 53037

DRAWN BY: XSJ

CHECKED BY: TAZ

DATE: 01/07/22

PROJECT #: 173-390

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

LEGEND

- = 1" IRON PIPE FOUND
- ⊙ = COUNTY MONUMENT FOUND
- ⊠ = ELECTRIC TRANSFORMER
- ⊡ = ELECTRIC METER
- ⊞ = TELEPHONE PEDESTAL
- ⊞ = FIBER OPTIC PEDESTAL
- ⊙ = GAS METER
- ⊙ = GAS VALVE
- ⊙ = LIGHT POLE
- ⊙ = GROUNDING PORT
- ⊙ = METAL POST
- ⊙ = CONDUIT
- ◇ = SIGN
- * = EXISTING PINE TREE
- ⊙ = EXISTING TREE
- x — x — x — = CHAINLINK FENCE LINE
- — — — — = BURIED ELECTRIC
- — — — — = BURIED TELEPHONE
- T/E — T/E — T/E — = BURIED ELEC. & TELE.
- — — — — = BURIED FIBER OPTIC LINE
- + — + — + — = BURIED GAS LINE
- = PROPERTY LINE

MERIDIAN
SURVEYING, LLC

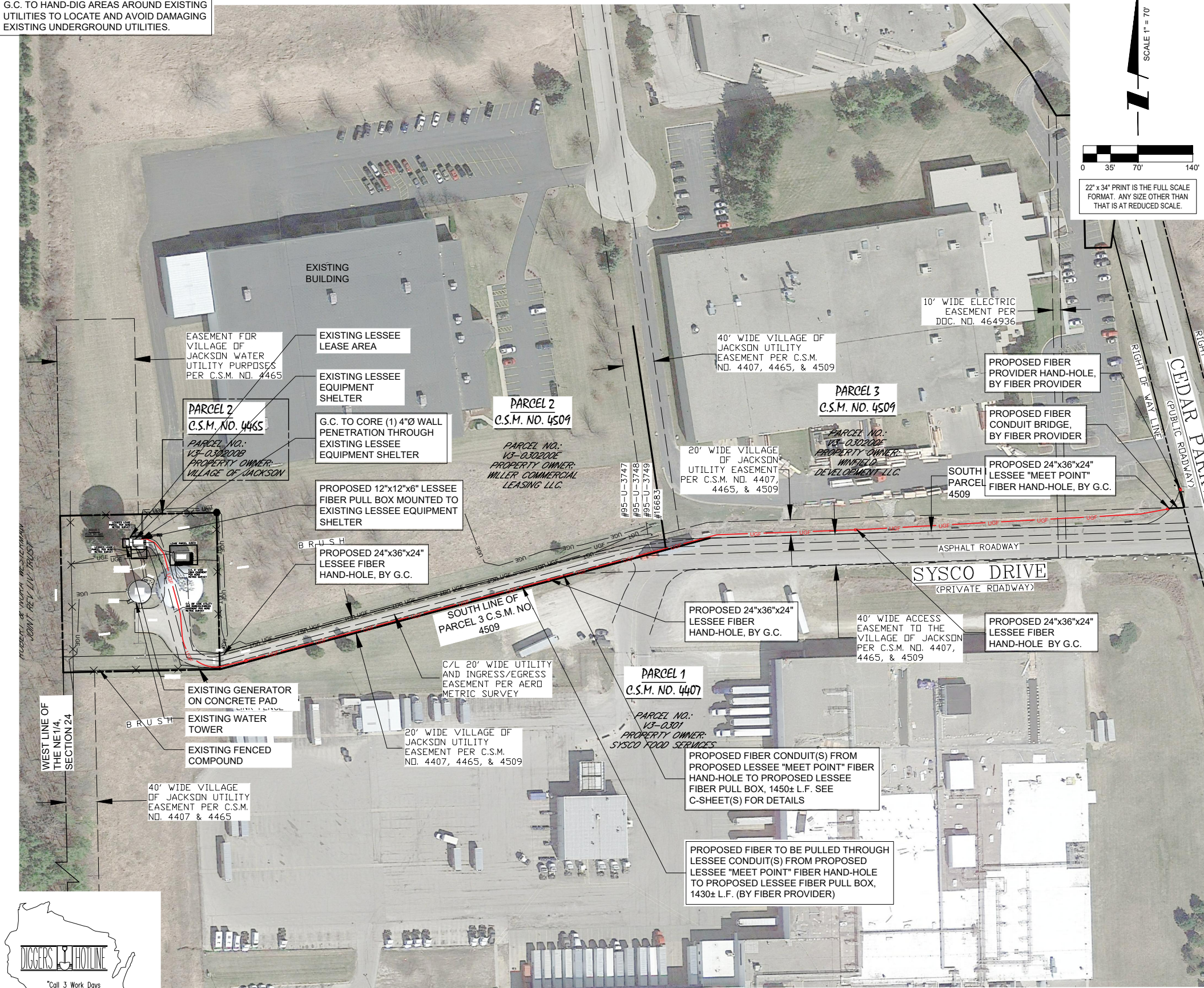
N9637 Friendship Drive Office: 920-993-0881
Kaukauna, WI 54130 Fax: 920-273-6037

BM#1) TOP OF NORTHEAST CORNER OF CONCRETE
ENTRANCE TO BUILDING
ELEVATION: 919.06'

GENERAL SITE NOTES

- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT. CONTRACTOR SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PAVEMENT PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST.
- THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.
- BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCH BASINS SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK.
- G.C. TO HAND-DIG AREA AROUND EXISTING UTILITIES TO LOCATE AND AVOID DAMAGING UNDERGROUND UTILITIES.

NOTE TO G.C.:
G.C. TO HAND-DIG AREAS AROUND EXISTING
UTILITIES TO LOCATE AND AVOID DAMAGING
EXISTING UNDERGROUND UTILITIES.



OTHER UTILITIES NOT INCLUDED IN DIGGERS HOTLINE AND LOCAL UTILITY
DISTRICTS AND COMPANIES SHALL ALSO BE NOTIFIED

1 LOCATION PLAN

NOTE:

FIBER CONDUIT/ PATH WITH MULE LINE/ PULL ROPE TO BE
PROVIDED AND INSTALLED BY VERIZON WIRELESS G.C.

FIBER PROVIDER IS RESPONSIBLE FOR SUPPLYING PULLING
FIBER LINE R.O.W. TO EQUIPMENT

verizon
1701 GOLF ROAD,
TOWER 2, SUITE 400
ROLLING MEADOWS, IL 60008
PHONE: (847) 619-5397
FAX: (847) 706-7415

TERRA
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-5400
FAX: 847-698-6401

REVISIONS				
NO.	DESCRIPTION	DATE	BY	
1	ISSUED FOR REVIEW	02/23/22	XSJ	
2	REVISED PER EASEMENT	04/06/22	DMS	
3				
4				
5				

LOC. # 113385

JACKSON
WT-B

W227 N16551
CEDAR PARKWAY
JACKSON, WI 53037

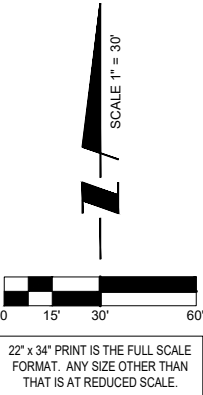
DRAWN BY:	XSJ
CHECKED BY:	TAZ
DATE:	01/07/22
PROJECT #:	173-390

SHEET TITLE
LOCATION PLAN

SHEET NUMBER

LP

NOTE TO G.C.:
G.C. TO HAND-DIG AREAS AROUND
EXISTING UTILITIES TO LOCATE AND AVOID
DAMAGING UNDERGROUND UTILITIES.



PARCEL 3
C.S.M. NO. 4509

PARCEL 1
V3-0302
PROPERTY OF
WINFIELD
DEVELOPMENT LLC

PROPOSED FIBER TO BE PULLED THROUGH
PROPOSED CONDUIT WITH MULE LINE FROM
PROPOSED LESSEE "MEET POINT" FIBER
HAND-HOLE TO PROPOSED LESSEE FIBER
PULL BOX, 1450± L.F. (BY FIBER PROVIDER)

G.C. TO DIRECTIONAL BORE 6' BELOW
GRADE AND INSTALL (1) 4"Ø CONDUIT
WITH (3) 1-1/4"Ø INNER-DUCTS WITH (1) 1/2"
MULE LINE IN EACH INNER-DUCT, FROM
PROPOSED LESSEE FIBER HAND-HOLE TO
PROPOSED LESSEE FIBER HAND-HOLE,
400± L.F. SEE LP SHEET FOR FULL ROUTE.

PROPOSED FIBER
PROVIDER HAND-HOLE,
BY FIBER PROVIDER

PROPOSED FIBER
CONDUIT BRIDGE,
BY FIBER PROVIDER

PROPOSED 24"x36"x24"
LESSEE "MEET POINT"
FIBER HAND-HOLE, BY G.C.

G.C. TO DIRECTIONAL BORE 6' BELOW GRADE
AND INSTALL (1) 4"Ø CONDUIT WITH (3) 1-1/4"Ø
INNER-DUCTS WITH (1) 1/2" MULE LINE IN EACH
INNER-DUCT, FROM PROPOSED LESSEE "MEET POINT"
FIBER HAND-HOLE TO PROPOSED
LESSEE FIBER HAND-HOLE, 400± L.F. SEE LP
SHEET FOR FULL ROUTE.

PROPOSED 24"x36"x24"
LESSEE FIBER
HAND-HOLE BY G.C.

EXISTING 40' WIDE
ACCESS EASEMENT

EXISTING 20' WIDE UTILITY
AND INGRESS/EGRESS
EASEMENT

MERIDIAN

SURVEYING, LLC

N9637 Friendship Drive
Kaukauna, WI 54130

Office: 920-993-0881
Fax: 920-273-6037

BM#1) TOP OF NORTHEAST CORNER OF CONCRETE
ENTRANCE TO BUILDING

ELEVATION: 919.06'



OTHER UTILITIES NOT INCLUDED IN DIGGERS HOTLINE AND LOCAL UTILITY
DISTRICTS AND COMPANIES SHALL ALSO BE NOTIFIED

1 ENLARGED SITE PLAN
SCALE: 1" = 30'

NOTE:
FIBER CONDUIT/ PATH WITH MULE LINE/ PULL ROPE TO BE
PROVIDED AND INSTALLED BY VERIZON WIRELESS G.C.
FIBER PROVIDER IS RESPONSIBLE FOR SUPPLYING PULLING
FIBER LINE R.O.W. TO EQUIPMENT

verizon

1701 GOLF ROAD,
TOWER 2, SUITE 400
ROLLING MEADOWS, IL 60008
PHONE: (847) 619-5397
FAX: (847) 706-7415

TERRA

600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-5400
FAX: 847-698-6401

REVISIONS							
NO.	DESCRIPTION	DATE	BY	NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR REVIEW	02/23/22	XSJ	2	REVISED PER EASEMENT	04/06/22	DMS
3				4			
5				6			
7				8			
9				10			

LOC. # 113385
**JACKSON
WT-B**

W227 N16551
CEDAR PARKWAY
JACKSON, WI 53037

DRAWN BY:	XSJ
CHECKED BY:	TAZ
DATE:	01/07/22
PROJECT #:	173-390

SHEET TITLE
**ENLARGED
SITE PLAN**

SHEET NUMBER

C-1

NOTE TO G.C.:
G.C. TO HAND-DIG AREAS AROUND
EXISTING UTILITIES TO LOCATE AND AVOID
DAMAGING UNDERGROUND UTILITIES.

EXISTING FENCED
COMPOUND

EXISTING LESSEE
LEASE AREA

EXISTING LESSEE
EQUIPMENT SHELTER

EXISTING GENERATOR
ON CONCRETE PAD

EXISTING WATER
TOWER

PARCEL 2
C.S.M. NO. 4465

PARCEL NO.:
V3-030200B
PROPERTY OWNER:
VILLAGE OF JACKSON

PROPOSED 12"x12"x6" LESSEE FIBER
PULL BOX MOUNTED TO EXISTING
LESSEE EQUIPMENT SHELTER

G.C. TO CORE (1) 4"Ø WALL
PENETRATION THROUGH EXISTING
LESSEE EQUIPMENT SHELTER

G.C. TO DIRECTIONAL BORE 6" BELOW
GRADE AND INSTALL (1) 4"Ø CONDUIT WITH (3) 1-1/4"Ø
INNER-DUCTS WITH (1) 1/2" MULE LINE IN EACH
INNER-DUCT, FROM PROPOSED LESSEE FIBER
HAND-HOLE TO PROPOSED LESSEE FIBER PULL
BOX, 250± L.F. SEE LP SHEET FOR FULL ROUTE.

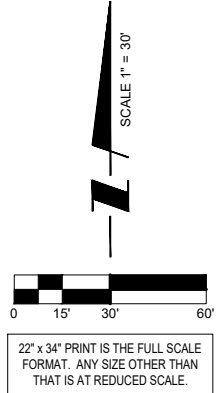
EXISTING 20' WIDE UTILITY
AND INGRESS/EGRESS
EASEMENT

G.C. TO DIRECTIONAL BORE 6" BELOW
GRADE AND INSTALL (1) 4"Ø CONDUIT WITH
(3) 1-1/4"Ø INNER-DUCTS WITH (1) 1/2" MULE
LINE IN EACH INNER-DUCT, FROM PROPOSED
LESSEE FIBER HAND-HOLE TO PROPOSED
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PROPOSED 24"x36"x24"
LESSEE FIBER
HAND-HOLE BY G.C.

PROPOSED 24"x36"x24"
LESSEE FIBER
HAND-HOLE, BY G.C.

PROPOSED FIBER TO BE PULLED THROUGH
PROPOSED CONDUIT WITH MULE LINE FROM
PROPOSED LESSEE "MEET POINT" FIBER
HAND-HOLE TO PROPOSED LESSEE FIBER
PULL BOX, 1450± L.F. (BY FIBER PROVIDER)



PAI
C.S.M.

PAI
V3-
PROPL
WILLER COMMERCIAL
LEASING LLC.

MERIDIAN
SURVEYING, LLC

N9637 Friendship Drive Office: 920-993-0881
Kaukauna, WI 54130 Fax: 920-273-6037

BM#1) TOP OF NORTHEAST CORNER OF CONCRETE
ENTRANCE TO BUILDING

ELEVATION: 919.06'



OTHER UTILITIES NOT INCLUDED IN DIGGERS HOTLINE AND LOCAL UTILITY
DISTRICTS AND COMPANIES SHALL ALSO BE NOTIFIED

1 ENLARGED SITE PLAN
SCALE: 1" = 30'

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verizon
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LOC. # 113385

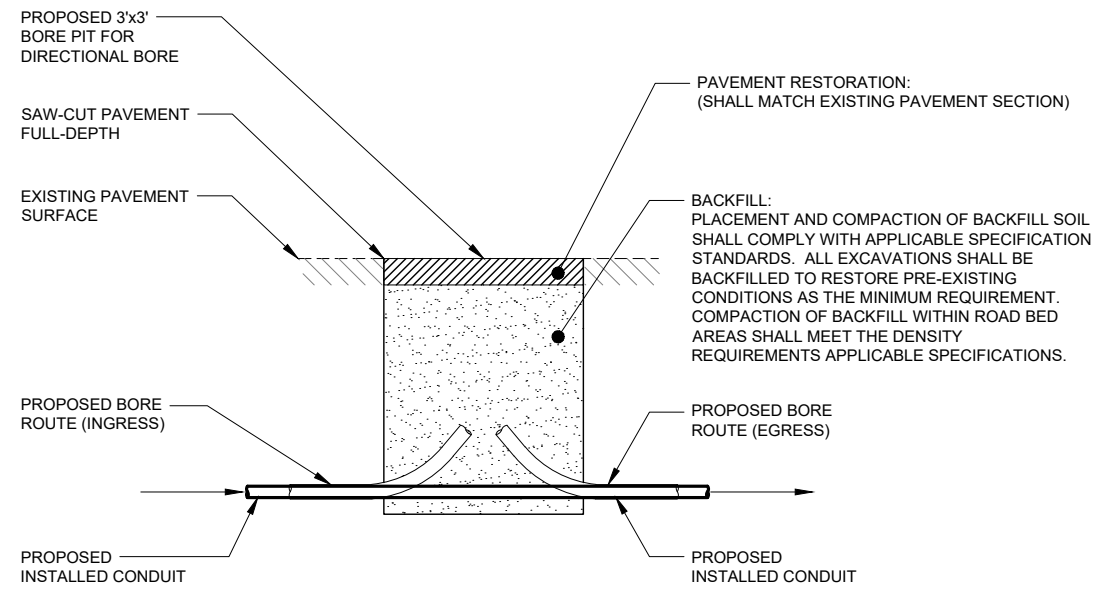
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WT-B

W227 N16551
CEDAR PARKWAY
JACKSON, WI 53037

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PROJECT #:	173-390

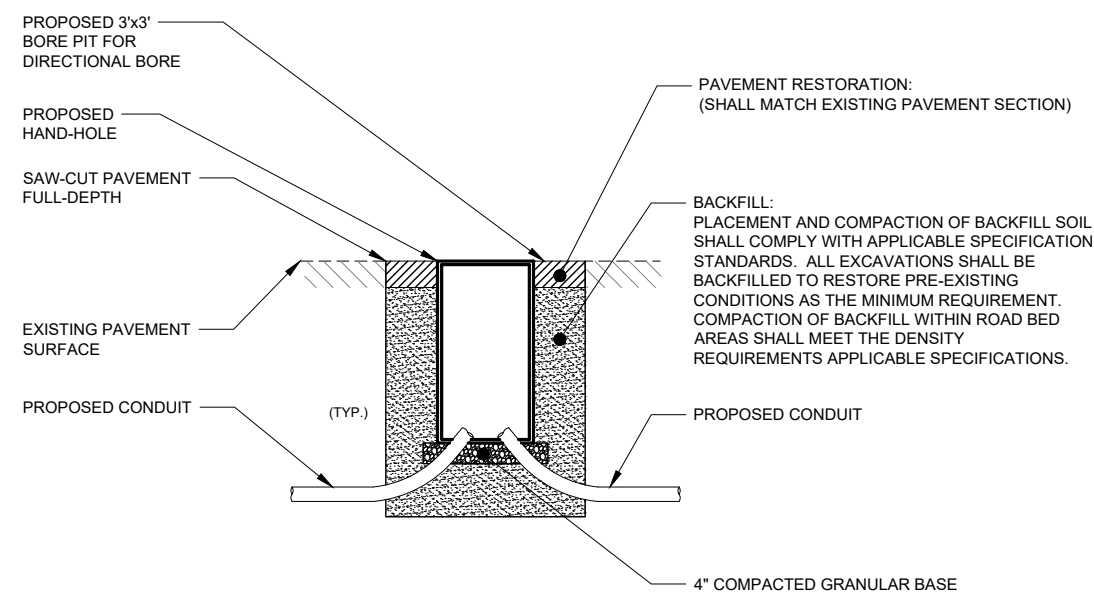
SHEET TITLE
**ENLARGED
SITE PLAN**

SHEET NUMBER
C-1A



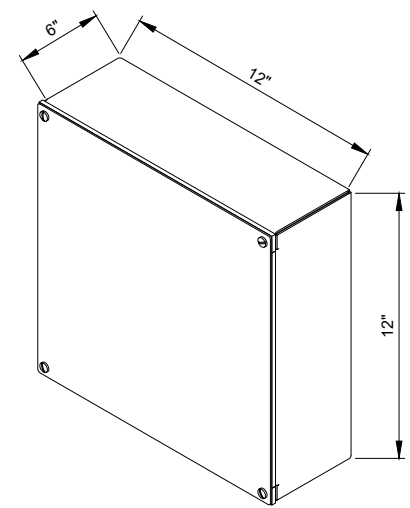
- NOTES:
- EXCAVATION OF TRENCH SHALL MEET ALL O.S.H.A. REQUIREMENTS.
 - ADDITIONAL MATERIALS SHALL BE PROVIDED AND PLACED AS NEEDED TO COMPENSATE FOR SETTLEMENT AND TO SERVE AS TEMPORARY CONSTRUCTION PENDING COMPLETION OF THE FINAL SURFACE RESTORATION.

1 BACKFILL & PAVEMENT DETAIL
SCALE: N.T.S.



- NOTES:
- EXCAVATION OF TRENCH SHALL MEET ALL O.S.H.A. REQUIREMENTS.
 - ADDITIONAL MATERIALS SHALL BE PROVIDED AND PLACED AS NEEDED TO COMPENSATE FOR SETTLEMENT AND TO SERVE AS TEMPORARY CONSTRUCTION PENDING COMPLETION OF THE FINAL SURFACE RESTORATION.

2 BACKFILL & PAVEMENT DETAIL
SCALE: N.T.S.



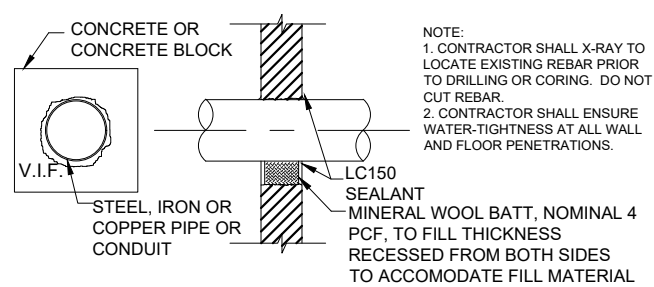
HOFFMAN - TYPE 4X BOX/ENCLOSURE

MANUFACTURER: HOFFMAN
TYPE: SCREW-COVER, TYPE 4
DIMENSIONS: 12"H x 12"W x 6"D

CATALOG #: ASE12X12X6SSNK
BULLETIN #: A90S4
MODEL CODE: 30556
MATERIAL: STAINLESS STEEL

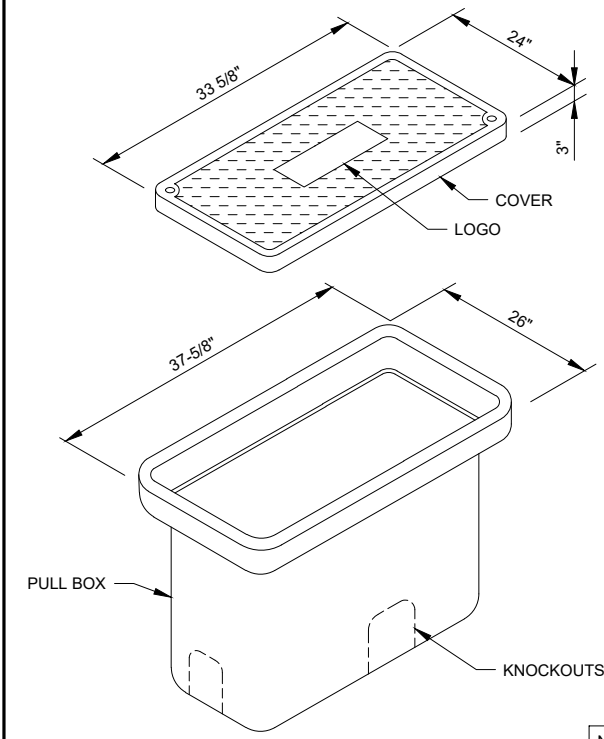
- NOTES:
- COORDINATE EXACT MODEL AND MANUFACTURER WITH FIBER REPRESENTATIVE.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

3 PULL BOX DETAIL
SCALE: N.T.S.



PENETRANT	MAXIMUM TRADE SIZE (IN.)	SEALANT DEPTH (IN.)	MINERAL WOOL (IN.)	ANNULUS (IN.)	
				MINIMUM	MAXIMUM
STEEL OR IRON	24	1/2	3	POINT CONTACT	2
STEEL OR IRON	4	1	NONE REQ'D	POINT CONTACT	1-1/2
COPPER	4	1/2	3	POINT CONTACT	2

4 UL C-AJ-1213 FIRE STOP DETAIL (FOR ALL PENETRATIONS)
SCALE: N.T.S.



- NOTES:
- COORDINATE EXACT MODEL AND MANUFACTURER WITH FIBER REPRESENTATIVE.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

5 HAND-HOLE DETAIL
SCALE: N.T.S.

verizon
1701 GOLF ROAD,
TOWER 2, SUITE 400
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LOC. # 113385

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JACKSON, WI 53037

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SHEET TITLE
SITE
DETAILS

SHEET NUMBER

C-2



1 PROPOSED FIBER PROVIDER HAND-HOLE



2 PROPOSED LESSEE "MEET POINT" FIBER HAND-HOLE



3 PROPOSED LESSEE FIBER HAND-HOLE



4 PROPOSED CONDUIT ROUTE



5 PROPOSED CONDUIT ROUTE



6 EXISTING OTHER FIBER HAND-HOLE



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SHEET TITLE
**PHOTO
EXHIBIT**

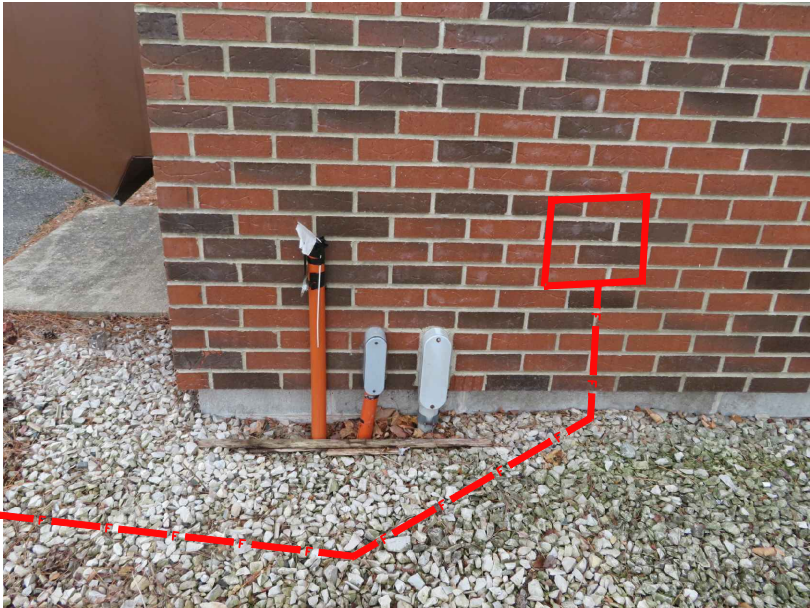
SHEET NUMBER
EX-1



1 PROPOSED CONDUIT ROUTE



2 PROPOSED CONDUIT ROUTE



3 PROPOSED LESSEE FIBER PULL BOX



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SHEET TITLE

PHOTO
EXHIBIT

SHEET NUMBER

EX-2



—VICINITY MAP—

Mayfield

Cedar Creek

Tish Lake

Comfort Inn

Mosser Lake

County Hwy P

60

60

60

45

63

63

45

60

S Mayfield Rd

Mill Rd

Mill Rd

S Hwy

SITE X

BEING A PART OF THE NE1/4,
SECTION 24, T.10N., R.19E., VILLAGE
OF JACKSON, WASHINGTON COUNTY,
WISCONSIN



Taking the lead in Washington County.

May 23, 2022

«First_Name» «Last_Name»
«Company_Name»
«Mailing_Address»
«City», «State» «ZIP_Code»

RE: Village of Jackson – 2022 Main Street (STH 60) Utility Project
From CTH P to Eagle Drive

Dear «First_Name» «Last_Name» «Company_Name»:

This letter is a notice for response of your property described with **Tax Key No.**
«Tax_Key_Number» and located at **«Physical_Address»**, Jackson, WI.

WisDOT has schedule a resurfacing project for Main Street (STH 60) for the year of 2024. Prior to the resurfacing of the road, the Jackson Sewer and Water Utilities will be replacing underground utility.

The Village of Jackson has hired Gremmer & Assoicates, Inc, for the design of the Utility Improvements for Main Street (STH 60) from CTH P to Eagle Drive. The project includes of the following items:

- Rebuilding of existing sanitary sewer manholes
- Repairing Existing Sanitary Sewer Main
- Replacing leaking sanitary sewer laterals
- Replacement of curb stops valve boxes
- Replacement of water main valve boxes
- Install new Streetlights

Gremmer & Associates will have surveying crews collecting data for the plan design. The Jackson Sewer Utility has been televising sanitary sewer laterals along with scheduled water meter changeouts. The current condition of your sanitary lateral is

«Condition_of_Sanitary_Lateral». If you have a sanitary lateral that was not inspected, please call 262-677-0707 to make an appointment. Ask for Jeff Kreutzinger, Water Supervisor for the inspection.

We will have future PIMs (Public Information Meetings) for the project. You will be notified by mail of the future meetings.

If you have any questions of the project, please call 262-677-0707 or email brian.kober@villageofjacksonwi.gov.

Sincerely,

Brian W. Kober

Brian W. Kober, P. E.
Director of Public Works/Village Engineer

WI 94N16660
Eagle Drive
Jackson, WI 53037
Phone: 262-677-0707
Fax: 262-677-8770

Mailing Address:
P.O. Box 637

www.villageofjackson.com

**Concept Cost Estimate Summary - Alternative 2: Roundabout
WIS 60 & Eagle Drive
Village of Jackson, Wisconsin
Washington County
February 2022**

Project Segment Type: (R=Rural, S=Suburban, U=Urban)

Summary Item	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
1	EXCAVATION COMMON	CY	Included in Incidentals		
2	BASE AGGREGATE DENSE 1 1/4-INCH	TON	6580	\$20.00	\$131,600
3	SIDEWALK	SF	19920	\$7.00	\$139,440
4	HMA PAVEMENT	TON	2230	\$80.00	\$178,400
5	CONCRETE CURB AND GUTTER 30-INCH	LF	4510	\$18.00	\$81,200
6	Major Roadway Items Detailed Subtotal (Items 1 to 5)				\$530,600
7	DRAINAGE	LS	% of Item 6	25%	\$132,700
8	EROSION CONTROL AND RESTORATION	LS	% of Item 6	7%	\$37,100
9	TRAFFIC CONTROL AND STAGING	LS	% of Item 6	12%	\$63,700
10	LIGHTING	LS	1	\$32,000.00	\$32,000
11	SIGNING/MARKING	LS	% of Item 6	8%	\$42,400
12	ROADWAY INCIDENTALS	LS	% of Item 6	30%	\$159,200
13	Construction Costs Subtotal (Items 6 to 12)				\$997,700
14	MOBILIZATION	LS	% of Item 14	7%	\$70,000
15	PRELIMINARY ENGINEERING	LS	% of Item 14+15	10%	\$106,800
16	FINAL ENGINEERING				\$160,200
17	CONSTRUCTION ENGINEERING	LS	% of Item 14+15	15%	\$160,200
18	REAL ESTATE - SOUTHWEST QUADRANT	AC	0.042	\$141,500.00	\$5,900
19	REAL ESTATE - SOUTHEAST QUADRANT	AC	0.025	\$250,000.00	\$6,300
TOTAL PROJECT COST (2022 DOLLARS)					\$1,346,900

\$267,000

TWO PARTY DESIGN ENGINEERING SERVICES CONTRACT
SIGNATURE PAGES

For Title Reports and Updates subcontracted to Knight-Barry Title Group, the CONSULTANT's actual cost not to exceed \$1,050.00.

For Phase 2.5 Hazardous Materials Assessment Services subcontracted to Ramboll, the CONSULTANT's actual cost not to exceed \$11,528.00.

For Cultural Resource Investigations and Report subcontracted to the University of Wisconsin-Milwaukee, Cultural Resource Management (UWM-CRM), the CONSULTANT's actual costs not to exceed \$3,105.00.

Compensation for authorized services above not to exceed \$266,613.18

The above services do not include R/W Acquisition services. A separate proposal may be provided upon request and based results of preliminary engineering services under this CONTRACT.

The CONSULTANT does and will comply with the laws and regulations relating to the profession of engineering and will provide the desired engineering SERVICES.

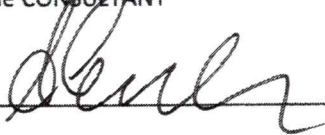
This CONTRACT incorporates and the parties agree to all of the standard provisions of the Two-Party Design Engineering Services Contract and referenced in Procedure 8-15-1 of the State of Wisconsin Department of Transportation Facilities Development Manual. CONSULTANT acknowledges receipt of a copy of these standard provisions.

This CONTRACT incorporates all of the MANUALS defined in the CONTRACT.

The parties also agree to all of the Special Provisions which are annexed and made a part of this CONTRACT, consisting of 22 pages.

Nothing in this CONTRACT accords any third part beneficiary rights whatsoever on any non-party that may be enforced by any non-party to this contract.

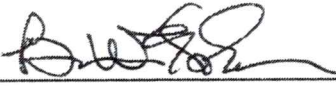
For the CONSULTANT

By: 

Title: Design Project Manager

Date: 5/11/2022

Approved for the MUNICIPALITY

By: 

Title: Director of Public Works / Village Engineer

Date: 5/11/2022

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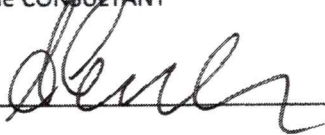
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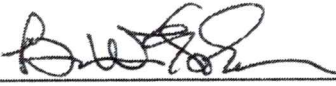
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By: 

Title: Design Project Manager

Date: 5/11/2022

Approved for the MUNICIPALITY

By: 

Title: Director of Public Works / Village Engineer

Date: 5/11/2022

TWO PARTY DESIGN ENGINEERING SERVICES CONTRACT
STANDARD PROVISIONS

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TWO PARTY DESIGN ENGINEERING SERVICES CONTRACT
STANDARD PROVISIONS

I. DEFINITIONS

- A. AUTHORIZATION: written direction from the DEPARTMENT to the CONSULTANT to proceed; it references this CONTRACT, the specific SERVICES to be performed and the DEPARTMENT PROJECT ID to which costs will be charged.
- B. CONSTRUCTION CONTRACT: agreement between the DEPARTMENT and a CONTRACTOR setting forth the obligations of the parties to the CONSTRUCTION CONTRACT, including, but not limited to, performance of the WORK, furnishing of labor and materials and basis of payment.
- C. CONSULTANT: individual, partnership, joint venture, corporation or agency undertaking the performance of the SERVICES designated under the terms of the CONTRACT and acting directly or through a duly authorized representative.
- D. CONSULTANT REPRESENTATIVE: employee designated by the CONSULTANT to act as liaison between the CONSULTANT and the DEPARTMENT
- E. CONTRACT: agreement between the DEPARTMENT and a CONSULTANT setting forth the obligations of the parties to the CONTRACT, including, but not limited to, these standard provisions, performance of the SERVICES, furnishing of labor and materials and basis of payment. The CONTRACT type may be a MASTER CONTRACT, which will include SERVICES to be provided under a WORK ORDER.
- F. CONTRACT AMENDMENT: agreement between the DEPARTMENT and a CONSULTANT setting forth the change in SERVICES from the original contract. The change in compensation, fixed fee and completion date, if any, shall be agreed upon by the DEPARTMENT and the CONSULTANT.
- G. CONTRACTOR: individual, partnership, joint venture, corporation or agency undertaking the performance of the WORK designated under the terms of a CONSTRUCTION CONTRACT and acting directly or through a duly authorized representative.
- H. DEPARTMENT: Wisconsin Department of Transportation.
- I. DEPARTMENT REPRESENTATIVE: employee of the DEPARTMENT in immediate charge of this CONTRACT and designated to act as liaison between the DEPARTMENT and the CONSULTANT
- J. FHWA: Federal Highway Administration.
- K. MANUALS: DEPARTMENT'S Construction and Materials Manual (CMM); Finals Process for Let Project Closeout; Facilities Development Manual (FDM); LRFD Bridge Manual (BM); and Standard Specifications for Highway and Structure Construction (Standard Specifications,) and materials referenced in those manuals.
- L. MASTER CONTRACT: a type of CONTRACT under which WORK ORDERS are issued.
- M. MUNICIPALITY: city, village, town, or county.
- N. MUNICIPALITY REPRESENTATIVE: employee of the MUNICIPALITY in immediate charge of this CONTRACT and designated to act as liaison between the MUNICIPALITY and the CONSULTANT.
- O. PROJECT: specific section of highway proposed for improvement by the DEPARTMENT in this CONTRACT. Each PROJECT or other described activity has a unique project ID.
- P. PROJECT DOCUMENTS: all materials, guides, written instructions, plans, documents, correspondence, forms, computer files, databases, electronic mail messages, work product or other information of any type created by the CONSULTANT for the DEPARTMENT under this CONTRACT.
- Q. SERVICES: engineering or other services, labor, equipment, and materials furnished by the CONSULTANT in accordance with this CONTRACT.
- R. WORK: The furnishing of all labor, materials, equipment, and incidentals and the performing of all tasks needed to complete the project or a specific part of the project as specified in the CONSTRUCTION CONTRACT, together with the fulfillment of all associated obligations and duties required under the CONSTRUCTION CONTRACT.
- S. WORK ORDER: a type of CONTRACT issued under the terms of a MASTER CONTRACT.

TWO PARTY DESIGN ENGINEERING SERVICES CONTRACT
STANDARD PROVISIONS

II. SCOPE OF SERVICES

A. General

1. Active Voice

- a. The DEPARTMENT defines the CONSULTANT and DEPARTMENT responsibilities within the contract documents in one of the following ways:
 - (1) Taken in context, the contract language makes the responsible party clear.
 - (2) Direct commands are written to the CONSULTANT in the active voice-imperative mood.
 - b. If the CONSULTANT thinks the responsibility for an action under the CONTRACT is unclear or given to the wrong party, the CONSULTANT will seek clarification from the DEPARTMENT.
 - c. Sentences directing the CONSULTANT to perform SERVICES are written in the active voice-imperative mood. These CONSULTANT directions are written as commands. For example, the basic requirement to perform the CONTRACT SERVICES would be expressed as, "Furnish all SERVICES to accomplish this CONTRACT," rather than "The CONSULTANT shall furnish all SERVICES to accomplish this CONTRACT". In the imperative mood, the subject "the CONSULTANT" is understood.
 - d. Requirements to be performed by others are written in the active voice. Sentences written in the active voice identify the party responsible for performing the action. For example, "The DEPARTMENT will provide manuals, guides, written instructions and other information and data necessary to enable the CONSULTANT to perform the SERVICES to the same standards required of the DEPARTMENT'S personnel." Certain requirements of the CONSULTANT may also be written in the active voice, rather than the active voice-imperative mood, if the sentence includes requirements for others in addition to the CONSULTANT. For example, a sentence that involves action by both the CONSULTANT and the DEPARTMENT would be expressed, "At the request of the DEPARTMENT, the CONSULTANT shall furnish maps, portions of plans, supplemental reports or other information relating to the SERVICES."
 - e. Sentences that define terms, describe a product or desired result, or describe a condition that may exist are written in neither the active voice nor the imperative mood. These types of sentences that describe a condition use verbs requiring no action. For example, "The DEPARTMENT REPRESENTATIVE is identified in the CONTRACT."
2. Perform all SERVICES consistent with applicable standards and requirements contained in the MANUALS. Revisions to the MANUALS made subsequent to the execution of this CONTRACT will be considered as orders defined in (IV)(B)(1.)
 3. Furnish all SERVICES, materials, equipment, supplies, and incidentals other than those designated in writing to be furnished by the DEPARTMENT and check or test them prior to use.
 4. The DEPARTMENT and FHWA may participate in all conferences and reviews.
 5. Confer with the DEPARTMENT and prepare and present such information and studies pertinent or requested by the DEPARTMENT to enable it to reasonably pass judgment on the features of the SERVICES. The CONSULTANT shall make such changes or revisions to the SERVICES required by the DEPARTMENT.
 6. The DEPARTMENT reserves the right to select the alternative to be used and may request additional alternatives be studied.
 7. At the request of the DEPARTMENT furnish maps, portions of plans, supplemental reports or other information relating to the SERVICES.
 8. This CONTRACT serves as a permit under sec. 86.07(2), Wis. Stats., for the CONSULTANT to perform the SERVICES on property under the jurisdiction of the DEPARTMENT, unless a

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separate permit is required by the DEPARTMENT REPRESENTATIVE. The CONSULTANT is an authorized representative of the DEPARTMENT for purposes of the right of entry under sec. 84.01(10), Wis. Stats., to enter private lands to perform the SERVICES.

9. The SERVICES under this CONTRACT are subject to review and approval by the DEPARTMENT at those appropriate steps defined in detail in the MANUALS.

B. Control and Authority

1. DEPARTMENT

- (1) The DEPARTMENT REPRESENTATIVE is identified in this CONTRACT and will monitor CONSULTANT compliance with the CONTRACT.

C. SERVICES to be Performed by the CONSULTANT

1. Perform field operations in accordance with Occupational Safety and Health Administration (OSHA) regulations and accepted professional practice.
2. Railroad and Utility Coordination
 - a. Arrange for applicable utility and railroad coordination as set forth in the MANUALS.
 - b. Provide necessary information to allow the DEPARTMENT to negotiate utility and railroad agreements.
3. Surveys
 - a. Make surveys to accomplish the SERVICES in accordance with the MANUALS.
 - b. Surveys shall be tied into the coordinate system as specified in the Special Provisions.
4. Soils and Subsurface Investigation
 - a. Prepare a Soils Report(s) in accordance with the MANUALS.
 - b. Recommend additional subsurface SERVICES, if warranted.
5. Public Involvement
 - a. Prepare a Public Involvement Plan according to the MANUALS.
 - b. Maintain a log of public and agency involvement activities.
 - c. Assist the DEPARTMENT in answering all questions received from the general public.
6. Schedule and attend meetings and conferences as required in the Special Provisions.
7. Prepare the Plans, Specifications, and Estimates (P.S. & E.) as specified in the MANUALS.
8. Unless terminated, the CONTRACT is in full force and effect for the purposes of requiring changes or revisions in accepted SERVICES.

D. Agency Coordination

1. General

- a. Consult with applicable affected local, state, and federal agencies and supply them with the necessary information according to the MANUALS.
 - b. Contact with the FHWA shall be only through the DEPARTMENT.
2. Prepare necessary permit applications according to the MANUALS.

III. PROSECUTION AND PROGRESS

A. Start of Services

1. Commence SERVICES upon AUTHORIZATION from the DEPARTMENT.
2. The DEPARTMENT will not be liable for payment for SERVICES performed without AUTHORIZATION.

B. Progress

1. Prepare progress reports documenting the SERVICES performed to date.

C. Completion of Services

1. Notify the DEPARTMENT when the SERVICES have been completed.
2. The DEPARTMENT will notify the CONSULTANT of the formal acceptance of the completed SERVICES.

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D. Delays and Extensions

1. The DEPARTMENT may extend the time for completion, with a CONTRACT AMENDMENT, in the event of an excusable non-compensable delay as defined in the Standard Specifications.
2. Prior to completion of the CONTRACT, request, if desired, a CONTRACT AMENDMENT for an excusable delay.

E. Termination of Contract

1. Termination for Cause – Default

- a. The DEPARTMENT may terminate this CONTRACT, in whole or in part, upon default by CONSULTANT, including:
 - (1) Failing to begin the SERVICES under the CONTRACT within the time specified.
 - (2) Failing to perform the SERVICES with sufficient workers, equipment, or materials to complete the SERVICES within the specified time.
 - (3) Failing to complete the CONTRACT within the CONTRACT time specified, as extended by the DEPARTMENT.
 - (4) Performing the SERVICES unsuitably, or not obeying a DEPARTMENT directive to remove and replace or otherwise correct unacceptable SERVICES.
 - (5) Discontinuing the prosecution of the SERVICES before completion without the DEPARTMENT'S permission.
 - (6) Failing to resume SERVICES that the DEPARTMENT discontinued within a reasonable time after notice to do so.
 - (7) Insolvency or bankruptcy, or committing an act of bankruptcy or insolvency.
 - (8) Allowing a final judgment against the CONSULTANT to stand unsatisfied for a period of 48 hours.
 - (9) Making an assignment for the benefit of creditors.
 - (10) Failing to comply with the provisions of the CONTRACT.
 - (11) Failing to acquire or maintain the required insurance.
 - (12) Failing to perform the SERVICES in an acceptable manner.
 - b. The DEPARTMENT will notify the CONSULTANT in writing of a default condition specifying the default and the action required. If the CONSULTANT, within a period of 10 calendar days of the notice, fails to proceed satisfactorily in compliance therewith, the DEPARTMENT then has full power and authority to take the performance of SERVICES out of the hands of the CONSULTANT; to use all suitable materials and equipment on the project; or to enter into CONTRACT, or use other methods that the DEPARTMENT requires to perform the SERVICES.
 - c. If the DEPARTMENT takes over or reassigns the incomplete SERVICES (III)(E)(a), the DEPARTMENT will deduct all additional costs and damages and the costs and charges of completing the SERVICES under CONTRACT from payments due the CONSULTANT. If that total exceeds the sum that would have been payable under the CONTRACT, the DEPARTMENT will consider the CONSULTANT liable, and the CONSULTANT shall pay the excess sum to the DEPARTMENT.
 - d. The DEPARTMENT will not relieve the CONSULTANT of the liability for the assessment of liquidated damages because of the CONSULTANT'S default.
 - e. The rights and remedies of the DEPARTMENT are in addition to all other rights and remedies provided by law or under the CONTRACT.
2. Termination for Convenience
- a. The DEPARTMENT may terminate the CONTRACT in whole or in part after determining that termination is in the DEPARTMENT'S or the public interest.
 - b. The DEPARTMENT will deliver to the CONSULTANT a termination notice specifying the extent of termination and the effective date.

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- c. Upon receipt of a termination notice, do not proceed with the affected SERVICES unless directed to do so in that notice. Complete all SERVICES specified in the termination notice. The DEPARTMENT reserves the right to declare in default a CONSULTANT who does not carry out the conditions of a termination for convenience.
 - d. If the DEPARTMENT orders termination of the CONTRACT for convenience, the CONSULTANT shall be paid for the SERVICES rendered, an amount bearing the same ratio to the total CONTRACT amount as the amount of SERVICES completed or partially completed and delivered to the DEPARTMENT bears to the total amount of SERVICES provided for herein, as a CONTRACT AMENDMENT.
 - e. If the DEPARTMENT directs, the CONSULTANT shall promptly remove equipment and supplies from the project site or other DEPARTMENT property. If the CONSULTANT does not remove the equipment and supplies as directed, the DEPARTMENT may do so at the CONSULTANT'S expense.
 - f. The DEPARTMENT will not relieve the CONSULTANT of contractual responsibilities for the SERVICES performed and SERVICES completed.
- F. Subletting or Assignment of Contract
- 1. Obtain approval to sublet or assign any part of this CONTRACT.
 - 2. Perform SERVICES amounting to at least one-half of the original CONTRACT amount.
 - 3. Retain full responsibility for the fulfillment of the CONTRACT.

IV. BASIS OF PAYMENT

- A. General
- 1. The CONSULTANT will be paid for the performed and approved SERVICES under this CONTRACT.
 - 2. Reimbursement for costs will be limited to those which are allowable under 48 CFR Part 31 and by DEPARTMENT policy.
 - 3. Submit invoices for the SERVICES performed to date. The final invoice shall be submitted within three months of completion of SERVICES.
 - 4. Submit a separate invoice and a separate final invoice for each individual PROJECT.
 - 5. Payment does not constitute acceptance of unsatisfactory or defective SERVICES.
 - 6. The DEPARTMENT has the equitable right to set off against any sum due and payable to CONSULTANT under this CONTRACT, any amount the DEPARTMENT determines the CONSULTANT owes the DEPARTMENT, whether arising under this CONTRACT or under any other CONTRACT.
 - 7. Maintain and make available all records pertaining to all costs incurred for inspection by the DEPARTMENT, the FHWA, and the Comptroller General of the United States for three years following the final payment.
 - 8. Compensation will not exceed the total CONTRACT amount unless authorized by a CONTRACT AMENDMENT.
 - 9. Compensation will not be allowed for improper CONSULTANT performance.
 - 10. Pay subconsultants within 10 business days of receipt of a payment for SERVICES performed.
- B. SERVICE Orders, Additional SERVICES, or Decreased SERVICES
- 1. The DEPARTMENT may give orders regarding the SERVICES including additional SERVICES or the elimination of required SERVICES until the CONTRACT is terminated.
 - a. If the order will not increase or decrease SERVICES, there is no change to the CONTRACT amount.
 - b. The CONSULTANT must notify the DEPARTMENT if extra compensation is desired for the SERVICES in (IV)(B)(1)(a).

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- c. If the order will increase or decrease SERVICES the DEPARTMENT and the CONSULTANT will negotiate adjustments to the CONTRACT amount and submit a CONTRACT AMENDMENT.
- C. Errors and Omissions
 - 1. Be responsible for the accuracy of the SERVICES, and promptly make necessary revisions to its SERVICES resulting from its negligent acts, errors, or omissions without additional compensation.
 - 2. Give immediate attention to these revisions to prevent or minimize delay to any PROJECT.
 - 3. Be responsible to the DEPARTMENT for any losses to or costs to repair or remedy as a result of negligent acts, errors or omissions.
 - 4. Unless terminated, the CONTRACT is in full force and effect for the purposes of requiring revisions in the SERVICES necessary to correct errors or omissions.
- V. MISCELLANEOUS PROVISIONS
 - A. Professional Practice
 - 1. Perform all SERVICES consistent with generally accepted professional practice.
 - B. Ownership of Documents
 - 1. The DEPARTMENT is owner of all PROJECT DOCUMENTS.
 - 2. Deliver all PROJECT DOCUMENTS within 10 business days of request or completion of CONTRACT.
 - 3. The DEPARTMENT'S reuse of PROJECT DOCUMENTS other than for the intended PROJECT shall be at the sole risk of the DEPARTMENT.
 - C. Legal Relations
 - 1. Comply with and observe applicable federal, state, and local laws, ordinances, and regulations in effect at the time the SERVICES are performed.
 - 2. Indemnify the DEPARTMENT and the FHWA and all of their officers, agents, and employees on account of any damages to persons or property resulting from negligence in performance of the SERVICES, errors, omissions and/or noncompliance with any applicable federal, state or local laws.
 - 3. Be responsible for all damages to property or persons arising out of negligent act, error and/or omission.
 - D. Prevailing Wage Rate
 - 1. Sec. 103.50, Wis. Stats., the Wisconsin prevailing wage rate law, does not apply.
 - E. Nondiscrimination in Employment
 - 1. The CONSULTANT will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this CONTRACT.
 - 2. The CONSULTANT, with regard to the SERVICES performed by it during the CONTRACT, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subconsultants, including procurements of materials and leases of equipment. The CONSULTANT will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
 - 3. In all solicitations, either by competitive bidding, or negotiation made by the CONSULTANT for SERVICES to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subconsultant or supplier will be notified by the CONSULTANT of the CONSULTANT'S obligations under this CONTRACT and

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- the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. The CONSULTANT will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish the information, the CONSULTANT will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
 5. In the event of the CONSULTANT'S noncompliance with the Non- discrimination provisions of this CONTRACT, the Recipient will impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the CONSULTANT under the CONTRACT until the CONSULTANT complies; and/or
 - b. Cancelling, terminating, or suspending the CONTRACT, in whole or in part.
 6. The CONSULTANT will include the provisions of (V)(E) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The CONSULTANT will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the CONSULTANT becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the CONSULTANT may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the CONSULTANT may request the United States to enter into the litigation to protect the interests of the United States.
- F. Federal Requirements for Disadvantaged Business Program
1. Disadvantaged Businesses Enterprises (DBE) as defined in 49 CFR Part 26 and federal law shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with federal funds. Consequently, the DBE requirements 49 CFR Part 26 and federal law apply to this CONTRACT (and any WORK ORDER) only when they are federally funded.
 2. When any portion of this CONTRACT is federally funded and Federal law in effect at the time this CONTRACT is executed authorizes and requires it, the CONSULTANT agrees to ensure that DBE'S have the maximum opportunity to participate in the performance of any subcontracts financed in whole or in part with federal funds provided under this agreement. Take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBE's have the maximum opportunity to compete for and perform subcontracts. The CONSULTANT shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of contracts. Failure to carry out the requirements of this provision shall constitute a breach of contract and may result in termination of this CONTRACT (or any WORK ORDER) by the DEPARTMENT or other such remedy as the DEPARTMENT deems appropriate.
 3. When this CONTRACT is federally funded, identify, by name, the DBE'S whose utilization is intended to satisfy this provision, the items of SERVICES involved, and the dollar amounts of such items of SERVICES.
 4. When this CONTRACT is federally funded, maintain records and document its performance under this item.

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G. Equal Employment Opportunity (All Contracts Exceeding \$10,000)

1. During the performance of this CONTRACT, the CONSULTANT, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:
 - a. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
 - b. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. §4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
 - c. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
 - d. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
 - e. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
 - f. Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
 - g. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
 - h. Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
 - i. The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
 - j. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
 - k. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to-ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
 - l. Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*)
2. Include the provisions of (V)(G) in every subcontract in excess of \$10,000.

H. Implementation of Clean Air Act and Clean Water Act (All Contracts Exceeding \$10,000)

TWO PARTY DESIGN ENGINEERING SERVICES CONTRACT
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1. Stipulate that any facility to be utilized in the performance of this CONTRACT, unless such CONTRACT is exempt under the Clean Air Act and under the Clean Water Act is not listed, on the date of CONTRACT award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities Pursuant to 40 CFR 15.20.
 2. Comply with all the requirements of the Clean Air Act and the Clean Water Act and all regulations and guidelines listed therein.
 3. Notify the DEPARTMENT (or MUNICIPALITY, in the case of a three-party contract) and the U.S. EPA Assistance Administrator for Enforcement of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility to be utilized for this CONTRACT is under consideration to be listed on the EPA List of Violating Facilities.
 4. Include the provisions (V)(H) in every nonexempt subcontract.
- I. Conflict of Interest
1. Warrant that neither it nor any of its affiliates have any financial or personal interest that would conflict in any manner with the performance of the SERVICES, and that neither it nor any of its affiliates will acquire directly or indirectly any such interest.
 2. Warrant that it will not employ for any SERVICES any person who is employed by the DEPARTMENT at the time of execution or during the life of this contract without prior written approval from the DEPARTMENT.
 3. Warrant that it will immediately notify the DEPARTMENT if any actual or potential conflict of interest arises or becomes known. Upon receipt of such notification a DEPARTMENT review and approval is required to continue to perform SERVICES under this CONTRACT.
- J. Certification Regarding Lobbying
1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the CONSULTANT, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the CONSULTANT shall complete and submit standard form-LOLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
 3. The CONSULTANT shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- K. Contingent Fees
1. Warrant that only employee(s) working solely for the CONSULTANT solicited or secured this CONTRACT (or any WORK ORDERS), and that any fees, commissions, percentages, brokerage fees, gifts, or any other considerations, contingent upon or resulting from the award or

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making of this CONTRACT (or any WORK ORDER) will be given only to employee(s) working solely for the CONSULTANT.

2. For breach or violation of this warranty, the DEPARTMENT may terminate this CONTRACT without liability, or deduct from the agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.
- L. Certification Regarding Debarment, Suspension, and Other Responsibility Matters-All Covered Transactions
 1. For purposes of this section, "proposal" means this entire CONTRACT when signed and submitted by CONSULTANT to the DEPARTMENT before execution by the DEPARTMENT.
 - a. Instructions for Certification
 - (1) Signing and submitting this proposal provides the certification set out in section (V)(L)(1)(b) below.
 - (2) The terms "covered transaction", "debarred", "suspended", "ineligible", "lower tier covered transaction", "participant", "person", "primary covered transaction", "principal", "proposal", and "voluntarily excluded", as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549 and Chapter Trans 504 Wis. Admin. Code.
 - (3) Include (V)(L) titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—All Covered Transactions" without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
 - (4) Submit an explanation for the inability to provide the certification set out in (V)(L)(1)(b) below. The DEPARTMENT will determine if the explanation is sufficient to enter into this transaction. Failure to furnish a certification or explanation will exclude participation in this transaction.
 - (5) The certification in this clause is a material representation of fact upon which reliance was placed when the DEPARTMENT determined to enter into this transaction. If it is later determined that the CONSULTANT knowingly rendered an erroneous certification the DEPARTMENT may pursue all available remedies.
 - (6) Provide immediate written notice to the DEPARTMENT if at any time the CONSULTANT learns that its certification was invalid when submitted or has become invalid by reason of changed circumstances.
 - (7) Will not enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction without written notice by the DEPARTMENT. The DEPARTMENT may pursue all available remedies for failure to obtain this written notice.
 - b. The CONSULTANT certifies to the best of its knowledge and belief, that it and its principals:
 - (1) Are not currently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by the DEPARTMENT, under Chapter Trans 504 Wis. Admin. Code or any federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

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- (3) Are not currently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in section (V)(L)(1)(b)(2) above; and
 - (4) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State, or Local) terminated for cause or default.
- M. Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions
1. Certify that all grantees or subcontractors, also known as lower tier participants as that term is used in 49CFR Part 29 have certified in writing that neither they nor their principals are currently debarred, suspended or proposed for debarment, have been declared ineligible or have voluntarily been excluded from participation in this or any other Federal, State or local transaction by any Federal, State or local department agency or official.
- N. Insurance Requirements
1. Maintain the following types and limits of commercial insurance in force until such time as all SERVICES under or incidentals to the CONTRACT have been completed.
(See Insurance Table, VI Attachment A)
 2. Furnish an Insurance Certificate, (or Certificates) showing the CONSULTANT is covered by the required types and amounts of insurance to the DEPARTMENT prior to the performance of any SERVICES under this CONTRACT.
 3. A 60 day notice of cancellation or change in coverage will be required. All coverage shall be placed with insurance companies licensed to do business in the State of Wisconsin with an A.M. Best rating of A - or better. The DEPARTMENT reserves the right to require other coverage and limits as described in the Special Provisions of this CONTRACT.
 4. The insurance requirements shall apply with equal force whether the SERVICES under this CONTRACT is performed by the CONSULTANT, a subcontractor of the CONSULTANT, or by any entity employed directly or indirectly by either party.
 5. Exceptions to the insurance requirements require approval from the DEPARTMENT. The approval must be reflected in the Special Provisions of the CONTRACT.
- O. Choice of Law and Sovereign Immunity
1. The CONTRACT shall be governed, construed, and enforced in accordance with the laws of the State of Wisconsin.
 2. Nothing in this CONTRACT shall be deemed as a waiver of the State's sovereign immunity consistent with Wisconsin law.
 3. Non-Appropriation of Funds. With respect to any payment required to be made by DEPARTMENT under this CONTRACT, the parties acknowledge DEPARTMENT'S authority to make such payment is contingent upon appropriation of funds and required legislative approval sufficient for such purpose by the Legislature. If such funds are not so appropriated, either CONSULTANT or DEPARTMENT may terminate this CONTRACT after providing not less than thirty (30) days notice to the other party.
- P. Choice of Forum
1. Any dispute arising out of or related to this CONTRACT shall be brought solely and exclusively in front of the State and Federal courts of Dane County, Wisconsin.
- Q. Entire Agreement
1. This CONTRACT and its attachments contain the entire agreement of the parties and supersede any and all prior agreements or oral understandings between the parties.
- R. Severability
1. The invalidity or unenforceability of any provisions of this CONTRACT shall not affect the validity or enforceability of any other provision of this CONTRACT, which shall remain in full force and effect.

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VI. Attachment A. Insurance Table

Type of Insurance	Minimum Limits required *
(a) Commercial General Liability Insurance; shall be endorsed to include completed operations and blanket contractual liability coverage.	\$1 Million Combined Single Limits per Occurrence, may be subject to an Annual Aggregate Limit of not less than \$2 Million.
(b) Worker's Compensation and Employer's Liability Insurance	Worker's Compensation: Statutory Limits Employer's Liability: Bodily Injury by Accident - \$100,000 Each Accident Bodily Injury by Disease \$500,000 Each Accident \$100,000 Each Employee
(c) Commercial Automobile Liability Insurance; shall cover all CONSULTANT owned, non-owned and hired vehicles used in carrying out the contract.	\$1 Million - Combined Single Limits per occurrence
(d) Architect [sic] and Engineer [sic] Professional Liability Insurance **	\$1 Million - Each Claim, may be subject to an Annual Aggregate Limit of \$1 Million

* These requirements may be satisfied either through primary insurance coverage or through excess/umbrella insurance policies.

**This insurance requirement applies only to engineering services and is waived for non-engineering services. Engineering services are defined as project management, construction management and inspection, feasibility studies, preliminary engineering, design engineering, surveying mapping and architectural related services.

ID VOJ 1814.001
Main Street Roundabout
STH 60
Village of Jackson
Washington County

VI. SPECIAL PROVISIONS

Substitute MUNICIPALITY for the DEPARTMENT in the Two-Party Design Engineering Standard Provisions.

SCOPE OF SERVICES

A. DESIGN REPORTS

- (1) Request for Exceptions to Design Standards:

A Request for Exceptions to Design Standards are NOT PART OF THIS CONTRACT and are considered extra services, if required.

- (2) Encroachment Report:

Submit an encroachment report electronically documenting private encroachments on public R/W.

- (3) Design Study Report:

The CONSULTANT will prepare a Modernization Design Study Report (DSR) as per 11-4-10 of the MANUAL.

Roadside Hazard Analysis (RHA) is NOT PART OF THIS PROJECT and will be considered extra services, if required.

- (4) Request for Design Justifications:

A separate design justifications report is NOT PART OF THIS CONTRACT and is considered extra services, if required.

- (5) Transportation Management Plan (TMP):

The CONSULTANT will prepare a 50% and 90% Type 2 Transportation Management Plan (TMP) as directed by the DEPARTMENT. The 50% and 90% TMP will be prepared and submitted electronically thru the WisTransPortal System.

The 50% and 90% TMPs will include any required delay analysis, alternative staging costs, staging concepts/plans, the PIOP checklist and the TOP checklist.

- (6) Drainage & Storm Water Summary Report:

Develop a Drainage & Storm Water Summary Report as per the MANUAL.

(7) Pavement Design Report:

Submit a pavement design report (PDR) as per the Manual.

(8) Complete Streets Report (CSD):

a. The CONSULTANT will update the CSD from ID 2310-13-00.

B. ENVIRONMENTAL DOCUMENTATION

Execute a disclosure statement as required by 40 CFR 1506.5(c).

Prepare an independent Categorical Exclusion Checklist (CEC) for the PROJECT as specified in the MANUAL and Chapter TRANS 400, Wisconsin Administrative Code. Furnish the required number to the DEPARTMENT for approval.

Prepare an environmental document that evaluates reasonable alternatives to the PROJECT and consider other reasonable actions or activities that may achieve the same or similar goals of the proposed highway PROJECT, including other or additional transportation alternatives and intermodal opportunities and the alternative of taking no action. Evaluate alternative courses of action based upon a balanced consideration of the environment, public comments, and the need for safe and efficient transportation consistent with local, state, and national environmental goals. Prepare environmental documents that are concise and emphasize significant environmental issues and plausible alternatives. Comply with requirements specified in the MANUAL and TRANS 400, Wisconsin Administrative Code. In the event of a conflict between the MANUAL and TRANS 400, Wisconsin Administrative Code, the administrative rule supersedes.

(1) Environmental Assessments:

Environmental Assessments are NOT PART OF THIS CONTRACT and are considered extra services, if required.

(2) Environmental Impact Statements:

Environmental Impact Statements are NOT PART OF THIS CONTRACT and are considered extra services, if required.

(3) Agricultural Impact Notice:

An Agricultural Impact Notice is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(4) Section 4(f) Evaluation:

Section 4(f) Evaluation is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(5) Section 6(f) Evaluation:

A Section 6(f) Evaluation is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(6) Historical and Archaeological Surveys and Studies:

- (a) The CONSULTANT shall update background and archival research from ID 2310-13-00. CONSULTANT shall update the architecture/history survey of properties that may be directly or indirectly affected by the project in accordance with the Wisconsin Historical Society's Survey Manual.

(7) Noise Analysis:

A Noise Analysis is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(8) Air Quality:

An Air Analysis is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(9) Hazardous Materials/Contamination Assessments:

- (a) Hazardous Materials/Contamination Phase 1 Assessment is NOT PART OF THIS CONTRACT and is considered extra services, if required. The DEPARTMENT will prepare and complete the Phase 1 Assessment.
- (b) Submit a Phase 2.5 assessment as per the MANUAL. CONSULTANT shall prepare necessary Special Provisions for Construction Proposal and Bid purposes as per the MANUAL in addition to the following:
 - 1. Coordination and correspondence with WisDOT and WDNR personnel
 - 2. Coordinate Special Provisions with WisDOT
 - 3. Develop Engineer's Estimate for hazardous materials Contract Bid Items

(10) Preparation of the following Environmental Document Factor Sheets are NOT PART OF THIS CONTRACT and are considered extra services, if needed:

- (a) General Economics Evaluation
- (b) Business Evaluation
- (c) Community or residential evaluation
- (d) Environmental Justice Evaluation
- (e) Archaeological sites Evaluation
- (f) Tribal Coordination/Consultation
- (g) Aesthetics Evaluation
- (h) Wetlands Evaluation
- (i) Rivers, Streams and Floodplains Evaluation

- (j) Lakes and other open water evaluation
- (k) Coastal Zones Evaluation
- (l) Groundwater, wells, and springs evaluation
- (m) Construction Stage sound quality evaluation
- (n) Indirect or Cumulative Effects Evaluation

C. AGENCY COORDINATION

- (1) Section 401 and 402 Certifications:

The DEPARTMENT has completed WDNR coordination and has obtained low impact final WDNR concurrence and water quality certification for the PROJECT. Evaluation of the effects of the PROJECT on water quality, in accordance with the provisions of the Clean Water Act and Chapter TRANS 400, Wisconsin Administrative Code and the MANUAL is NOT PART OF THIS CONTRACT and is considered extra services, if required.

- (2) Section 404 Permits:

Prepare and submit Section 404 Permit to WisDOT and USACE as per the Manual.

- (3) Storm Water Permits:

Preparation/coordination of Storm Water Permits are NOT PART OF THIS CONTRACT and are considered extra services, if required.

- (4) Section 9 and 10 Permits:

Preparation/coordination of Section 9 and 10 Permits are NOT PART OF THIS CONTRACT and are considered extra services, if required.

- (5) Wisconsin Department of Natural Resources (WDNR) Coordination:

The CONSULTANT shall coordinate with WDNR and shall provide plan information at 60% Plan and Final PS&E design stages as per the MANUAL.

- (5) United States Fish and Wildlife Service (USFWS):

Preparation of Informal Section 7 Consultation is part of the contract. Additional meetings and Formal Section 7 Consultation and will be considered extra services, if required.

- (6) Bureau of Aeronautics (BOA) and Federal Aviation Administration (FAA):

Coordination with BOA and FAA as per the MANUAL and utilize the FAA Notice Criteria Tool is NOT PART OF THIS CONTRACT and is considered extra services, if required.

D. RAILROAD/ UTILITY INVOLVEMENTS

- (1) Preparation of notifications for railroads is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (2) Preparation of statements and/or documentation for the DEPARTMENT to coordinate project details with both railroad companies or to present testimony at proceedings before the Office of the Commissioner of Transportation, attendance at OCR proceedings is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (2) Utility Coordination

Perform all utility coordination in accordance with:
 - (a) The MANUAL
 - (b) TRANS 220
 - (c) The WisDOT "Guide to Utility Coordination"
- (3) The CONSULTANT shall develop a list of known utilities on the PROJECT and a list of contact personnel for utility coordination.
- (4) Confer on an ongoing basis with all utility facility owners in the project vicinity to establish mutual understanding on design features of the project affecting utility facilities and shall keep the MUNICIPALITY and DEPARTMENT informed of all such coordination activities.
- (5) Update TUMS with required information.

E. PUBLIC INVOLVEMENT

- (1) Public Involvement Meetings:
 - (a) Conduct or assist the DEPARTMENT in holding one (1) virtual public involvement meeting (PIM) to explain to the public concepts and potential impacts of this PROJECT.
 - (b) Prepare all exhibits and supplementary material and provide the equipment necessary to conduct the PIM.
 - (c) Prepare a summary report after the PIM.
 - (d) Discuss with the MUNICIPALITY and the DEPARTMENT the comments received and recommend the possible disposition of these comments and suggestions after the PIM.
 - (e) Make all the necessary arrangements for scheduling the PIM and provide notices.
 - (f) Provide the MUNICIPALITY and the DEPARTMENT with copies of all public involvement correspondence and file notes.

- (g) Coordinate meeting schedules with the MUNICIPALITY's and the DEPARTMENT'S region representative.
 - (h) Multi-lingual interpretation services are NOT PART OF THIS CONTRACT and are considered extra services, if required.
 - (i) Prepare an initial Public Involvement Plan (PIP) and a 60% PIP for MUNICIPALITY approval.
- (2) Formal Public Hearing:
- Conducting a Formal Public Hearing is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (3) Open Forum Public Hearing:
- Conducting an Open Formal Public Hearing is NOT PART OF THE CONTRACT and will be considered extra services, if required.
- (4) Project Mailings, Newsletters
- Prepare a database for project mailings, newsletters/PIM invite, or any contact lists.
- Preparation and mailing of one (1) design newsletter/PIM invite in single page, double-sided 8 ½" x 11" format (folded) as an invitation to the PIM.

F. MEETINGS

- (1) One (1) meeting shall be held with MUNICIPALITY officials approximately 2-4 weeks prior to the Public Involvement Meeting (PIM).
- (2) Attend one (1) Final Plan Virtual Review (Draft PS&E) Meeting with the Region approximately 45 - 60 days ahead of the P.S. & E. submittal date.
- (3) Attend one (1) virtual pre-construction conference as scheduled by the DEPARTMENT.
- (4) Four (4) meetings shall be held to plan, review, and coordinate the PROJECT with the MUNICIPALITY.
- (5) Utility coordination meeting with utilities having facilities on the PROJECT is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (6) Conduct one (1) 60% Plan Virtual Review meeting with the MUNICIPALITY and the DEPARTMENT. The DEPARTMENT'S Region staff will send the invitation.
- (7) Attend up to two (2) property owner meetings with the MUNICIPALITY. The MUNICIPALITY will send the invitation.

- (8) Conduct two (2) field review meetings.
- (9) Attend a 50% Virtual TMP review meeting with the Region's PM and Traffic personnel.
- (10) Attending railroad review meeting is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (11) Attendance at an OCR Hearing is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (12) A meeting with the Region Technical Services Soils Engineer to coordinate soils and sub-surface investigation work efforts is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (13) A 30% Plan Review meeting with the MUNICIPALITY and the DEPARTMENT is NOT PART OF THIS CONTRACT and is considered extra services, if required.

G. LOCATING

Locating is NOT PART OF THIS CONTRACT and is considered extra services, if required.

H. SURVEYS

- (1) GENERAL
 - (a) The CONSULTANT shall provide supplemental survey of LiDAR survey furnished by the DEPARTMENT under Project ID 2310-13-00 as needed.
 - (b) All work to be performed in and referenced to NAD 83 (2011), NAVD 88 (2012), Geoid Model (12A) in Wisconsin Coordinate Reference System (WISCRS) Washington County Zone, US Survey Feet.
 - (c) The CONSULTANT shall keep track of all interim deliverables and subsequent revisions and provide a final complete set of deliverables at the conclusion of the work order.
 - (d) For all file names below, Road name = STH 60 & Proj ID = TBD (assumed 2310-13-01 until established by State/Municipal Agreement)
 - (e) Metadata-STH 60_ Proj ID TBD = To be determined.docx
 - (f) All raw data collector files and office surveying software files created and used in the CONSULTANTS normal workflow under this contract. Said raw data collector files shall be in their native format as used onboard the data collector and contain raw GPS vectors and terrestrial surveying observation data. This may require simply copying the raw file off the data collector instead of using the onboard "export" routines which often strips these important details from the files (e.g. JOB, VCE, DAT, JXL).
 - (g) All files imported into the Survey Database. (e.g. TXT, CSV, LandXML, DWG)
 - (h) Civil 3D Survey Database "SD-STH 60_TBD_(DAAR)" (includes .sdbx .sdx .sdbx.info & .log files). The Civil 3D Survey Database is the main deliverable that the surface, topography and utility DWG's will be generated from. All edits done to survey data inserted to the associated DWG files shall be saved back to

the Civil 3D Survey Database. The Civil 3D Survey Database should contain the corrected and latest version of the survey data. Change Reporting Logging shall be enabled in the Survey Database Settings to log the changes made after the initial files were imported into the survey database.

- (i) Cntrl-GPS-Cal-Report-STH 60_TBD.pdf GPS Calibration/Localization report showing which points were calibrated to horizontally and vertically with residuals and coordinate system adjustments/translation values.
- (j) Field Notes & Sketches in PDF format
- (k) DWG files shall be in version 2020

(2) LIDAR

- (a) The DEPARTMENT will provide LiDAR information along STH 60 centerline to the CONSULTANT for design and plat purposes. LiDAR survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(3) HORIZONTAL & VERTICAL CONTROL

- (a) The DEPARTMENT will provide available control point information to the CONSULTANT for design purposes.
- (b) Setting 3D coordinates and FENO Markers is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (c) Establishing Primary Control 3D coordinates on any existing vertically stable survey markers or convenient vertically stable manmade features within the project corridor is NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (d) Control point deliverables including Control-Primary-Datasheets NOT PART OF THIS CONTRACT and is considered extra services, if required.
- (e) The CONSULTANT shall establish necessary temporary control for side road alignments not furnished by the DEPARTMENT for design purposes.
- (f) The DEPARTMENT will furnish digital photos of each primary control point as described below.
- (g) Limits/Extents:
 - 1. Intersection of STH 60 and Eagle Drive, 300' in each direction
- (h) Deliverables:
 - 1. The DEPARTMENT will furnish available control point data separated into four categories (as needed) in .DWG, .KMZ, .XML & .TXT (w/metadata header) file formats using the following naming convention:
 - a. "Cntrl-Pri-STH 60_TBD.XXX" which includes existing NGS HMOD points the survey is based on, Feno Markers, Bridge Caps, & other permanent control intended to be shown on project plan sets
 - b. "Cntrl-Second-STH 60_TBD.XXX" which are temporary control points such as mag nails, spikes, iron pipes, rebar etc.
 - c. Cntrl-Pri-Datasheets-STH 60_TBD.pdf (showing project coordinates for all primary control including NGS & HMOD stations used)
 - d. Cntrl-Dig-Level-Report-STH 60_TBD.pdf (if digital level used)
 - e. Cntrl-Optical-Level-Notes-STH 60_TBD.pdf (if optical level used)

- f. Cntrl-Level-Route-STH 60_TBD.dwg & kmz (shows generalized routes of circuits/networks and connectivity of leveled control points and BM's. Individual routes/circuits correlating with field notes or digital data files should be differentiated in some manner by representing them as separate entities or colors or some other means)
- g. Cntrl-Pt-Deriv-Report-STH 60_TBD.pdf Point derivation report for all primary control points surveyed indicating point averaging delta statistics, and source measurement (GPS or Terrestrial) in PDF format
- h. Cntrl-GPS-Cal-Report-STH 60_TBD.pdf. GPS Calibration/Localization report showing which points were calibrated to horizontally and vertically with residuals and coordinate system adjustments/translation values.
- i. Digital photos of each "primary" control point (one close up shot of monument cap and one overview of control point). Files shall utilize names matching subject point numbers or files with embedded geo-reference and method to view the files.
- j. Digital photo showing the typical control point marker post label.

(4) SECTION CORNER SURVEY

- (a) CONSULTANT shall survey the location of an estimated four (4) Public Land Survey System (PLSS) corners to support the determination of existing property lines, existing and proposed right of way and project alignments.
- (b) The CONSULTANT shall use WisDOT point numbering conventions and point description codes.
- (c) The CONSULTANT shall obtain digital photos of each corner surveyed.
- (d) Limits/Extents:
 - a. An estimated four (4) section corners in the project area sufficient for framing anticipated R/W parcels for plat development purposes.
- (e) Deliverables:
 - a. SEC-STH 60_TBD.dwg, .TXT w/metadata header, .KMZ, & .XML formats.
 - b. SEC-Deriv-Report-STH 60_TBD.pdf Point derivation report for all section corners surveyed indicating point averaging delta statistics, and source measurement (GPS or Terrestrial) in PDF format.
 - c. Digital copies of all Dossier sheets obtained
 - d. Digital photos of each corner. (one close up and one overview looking north) Files shall utilize names matching subject point numbers or files with embedded geo-reference and method to view the files.

(5) PROPERTY CORNER SEARCH

- (a) CONSULTANT shall search for and survey the location of any property corners found to support the determination of existing property lines, existing and proposed right of way and project alignments.
- (b) The CONSULTANT is NOT expected to reset or establish any missing corners.
- (c) The CONSULTANT will provide GIS parcel mapping for the project area.
- (d) The CONSULTANT will acquire subdivision plats, CSM's, and plat of surveys within the project area.

- (e) The CONSULTANT shall obtain existing WisDOT right of way plat information.
 - (f) The CONSULTANT shall use WisDOT point description codes.
 - (g) Limits/Extents:
 - 1. Intersection of STH 60 and Eagle Drive, 500' in each direction
 - (i) Deliverables:
 - 1. IP-STH 60_TBD.dwg, .TXT w/metadata header, .KMZ, & .XML formats.
 - 2. Digital copies of all Subdivision Plats, R/W Plats, CSM's, Surveys, GIS maps associated with the project.
 - 3. Any maps marked up with property corners found.
- (6) APPRAISAL STAKING OF RIGHT OF WAY & EASEMENTS
- (a) The CONSULTANT shall stake two (2) existing and proposed right of way and easements for viewing and use by appraisers and property owners.
 - (b) The CONSULTANT shall provide field surveyed locations of encroachments as requested by the DEPARTMENT and any previously unknown encroachments that become known during the field staking.
 - (c) The CONSULTANT shall provide an Encroachment Reporting Form and provide digital pictures of the encroachment.
 - (d) The DEPARTMENT will provide digital data and hard copies of the subject right of way plat or TPP to the CONSULTANT along with coordinates and Civil 3D files to facilitate setting the points in the field.
 - (e) Limits/Extents: Limits/Extents:
 - 1. Two (2) parcels as shown on traditional plat at STH 60/Eagle Drive Intersection
 - (f) Deliverables:
 - 1. Highlighted copy of appraisal plat using the colors shown below:
 - a. **Pink = PRW** (proposed RW)
 - b. **Blue = TLE** (Temporary Limited Easement)
 - c. **Yellow = RW** (Existing RW)
 - d. **Blue/Pink = PLE** (Permanent Limited Easement)
 - 2. Individual LandXML files of PRW, TLE, RW, PLE, and all alignments used for any station/offset reference on plat
 - 3. Individual LandXML file containing Section Corners, Control Points staking is based on.
 - 4. Google KMZ of plat points (PRW, TLE, RW, PLE) with point numbers and description/code displayed in appropriate color (see above)
 - 5. "As-staked" appraisal plat showing dates of appraisal staking (on each sheet) and types of marks placed
 - 6. Civil 3D dwg file showing any encroachments located.
 - 7. Completed Encroachment Reporting Forms in PDF format.
 - 8. Photos of any encroachments
- (7) FINAL MONUMENTATION OF RIGHT OF WAY & EASEMENTS
- (a) The CONSULTANT shall set required right of way monuments/rebar at two (2) permanent parcel locations as directed by the MUNICIPALITY.
 - (b) The CONSULTANT shall coordinate with DEPARTMENT Plat or Survey Coordinator to ensure proper control and datums/adjustments are used.

- (c) The CONSULTANT shall supply all required rebar, rebar caps, R/W posts, R/W signs meeting MUNICIPALITY standards.
- (d) Limits/Extents:
 - 1. Two (2) parcels as shown on the plat.
- (e) Deliverables:
 - 1. Digital copy of Acquisition Exhibits marked up with notes showing points staked, type of monument used, dates of staking and location of R/W. If an existing monument is found, then provide the type of monument (pipe, rebar, chiseled X, etc.), material, size, distance and direction from the proposed location.
 - 2. Individual LandXML files of PRW, RW, PLE, and all alignments used for any station/offset reference on plat
 - 3. Google KMZ of final staking plat points with point numbers and description/code displayed.

(8) ALIGNMENTS (EXISTING)

- (a) The CONSULTANT shall establish existing alignments for the side road segments based on previous plan alignments, pavement splits, reference line monuments, section corners, property corners found and any other pertinent evidence.
- (b) The CONSULTANT shall obtain field evidence beyond the extents of the alignments as needed to support the establishment of accurate alignments.
- (c) The CONSULTANT shall obtain subdivision plats, CSM, plats of survey within the project area.
- (d) The MUNICIPALITY will provide existing WisDOT right of way plat information.
- (e) The CONSULTANT shall prepare a station and offset report for each alignment showing the relationship of the alignment to adjacent evidence considered in establishing the alignment which is sorted by station values.
- (f) The CONSULTANT shall make notes on utilized source documents and in working CAD files which will be delivered to the DEPARTMENT.
- (g) Limits/Extents:
 - 1. Eagle Drive 500' in each direction.

(9) WEAK & OBSCURED AREAS

- (a) The CONSULTANT shall perform supplemental survey of select weak and obscure areas of furnished aerial mapping under ID 2310-13-00 identified as needed during design efforts.
- (b) The supplemental survey shall provide enough detail including any necessary break lines to accurately depict drainage in those areas and facilitate fusing the supplemental survey with the surface developed from the aerial mapping.
- (c) The CONSULTANT shall be responsible for fusing the supplemental survey data with the aerial mapping derived surface to produce a seamless accurate Civil 3D surface file.
- (d) The CONSULTANT shall provide a separate DWG file containing a Civil 3D surface of just the area the CONSULTANT surveyed and created before any data fusing.
- (e) The CONSULTANT shall provide a surface data source drawing with line work depicting the boundaries between areas acquired by different field survey data collection methods (Total Station, GPS, Total Station & GPS, Static LiDAR, Mobile

LiDAR, Aerial LiDAR, and Aerial Photogrammetry, etc.). The individual areas need to be clearly labeled so the user can easily identify the responsible firm name, date of survey, Work Order Number, and technology used to develop the surface information throughout the entire project. If no fusion was done, only areas of work done by the CONSULTANT need to be delineated.

(f) Limits/Extents:

1. Eagle Drive 500' in each direction.

(g) Deliverables:

1. Surf-Ex-STH 60_TBD.dwg (final fused data)
2. Surf-Ex-Basis-DAAR-STH 60_TBD.dwg
3. Surf-Data-Source-STH 60_TBD.dwg

(10) TOPO/DTM (INCLUDING METHODS OF COLLECTION)

- (a) CONSULTANT to perform horizontal Topo/DTM survey to supplement survey data under ID 2310-13-00
- (b) The CONSULTANT shall fuse horizontal joints survey with the aerial mapping.
- (c) The CONSULTANT shall provide a data source drawing with line work depicting the boundaries of joint surveys by field survey data collection method utilized (GPS). The individual areas need to be clearly labeled so the user can easily identify the responsible firm name, date of survey, and technology used (GPS) to develop the survey information. Only areas of work done by the CONSULTANT need to be delineated.
- (d) The CONSULTANT will provide a separate DWG file containing all of the elements that were used to build the surface. The elements included in this DWG file are the basis of the existing surface and should include (but not limited to) all points, figures, break lines, 3D polylines, and point groups that were used to build the surface. Note that figures are preferred over break lines or 3D polylines. Any custom point groups you created to control the importation of data should be added to the "prospector" tab in the DWG. The resultant Civil 3D surface should also be in this DWG file.
- (e) Limits/Extents:
 1. Eagle Drive 500' in each direction.
- (f) Deliverables:
 1. Topo-Ex-STH 60_TBD.dwg

(11) UTILITY SURVEY

- (a) Collect all overhead and underground utilities within the utility survey limits. Utilities include but are not limited to; Gas, Telephone, Communications, Cable TV, Fiber Optic, Electric, Water, Sanitary Sewer, Sanitary Force Mains, Storm Sewer, Storm Sewer Pipe Outfalls, Traffic Signal Facilities, FTMS/ITS facilities.
- (b) All utilities shall be represented by unique connecting line work representing the facilities and utility structures such as manhole, inlets, pull boxes, poles, pedestals, valves, vent pipes, transformers etc. shall be obtained and shown.
- (c) The CONSULTANT shall submit both field locate and prints tickets to Diggers Hotline.
- (d) The CONSULTANT shall however make one (1) additional attempt to contact each utility that did not respond to the prints ticket request to obtain system maps.

- (e) The CONSULTANT shall insert the following language into the "Remarks" section of the Diggers Hotline Field Locate tickets submitted.
- (f) AN AGENT OF WISDOT WILL TAKE PHOTOS OF REQUESTED AREA AFTER START DATE. IF FACILITIES ARE NOT MARKED AS REQUIRED IN SS 182.0175. WISDOT MAY PURSUE IMPOSING PENALTIES AS ALLOWED IN SS 182.0175(3).
- (g) The CONSULTANT shall insert the following language into the "Remarks" section of the Diggers Hotline Prints tickets submitted.
- (h) THE CALLER AS AGENT FOR WIDOT WILL REPORT LACK OF RESPONSE TO WIDOT IF MAPPING IS NOT PROVIDED AS REQUIRED IN SS 182.0175. WIDOT MAY PURSUE IMPOSING PENALTIES AS ALLOWED IN SS 182.0175(3).
- (i) If any utilities are not marked and surveyed in the field, those utilities shall be shown in a separate Uti-APPROX-STH 60_TBD.dwg as depicted in the utility system maps provided by the utilities.
- (j) The CONSULTANT shall list all utilities that did not supply system maps in a note in the Uti-APPROX.dwg.
- (k) Said Uti-APPROX dwg shall be suitable for overlaying with other project base mapping and field located utility dwgs to represent the approximate location of the utilities not marked or surveyed but shown on the maps provided by the utilities.
- (l) The CONSULTANT shall take digital photos and/or video of the entire area described in the Utility Survey Limits/Extents shortly after the Ticket Start Date & Time (Clear Date).
- (m) The intent is to be able to document the utilities marked and not marked within the requested limits shortly after the clear date on the ticket. So photograph or video areas with no marks too, especially area known to contain utilities that are not marked.
- (n) Photos and video files shall be clearly named or organized to reference each individual Ticket # or logical sub areas.
- (o) Photos and video shall also show on the image/video the date and time the image/video was captured.
- (p) The images/videos shall be taken/labeled/narrated or indexed such that the viewer will be able to determine the location and direction of the photographs and video.
- (q) All digital photos and videos shall be delivered on a USB 3.X external hard drive that will become the permanent property of the DEPARTMENT.
- (r) The CONSULTANT shall complete a WisDOT Diggers Hotline Ticket Assessment form for this work order. This form will assist in assessing the quality of the response received from the utility company and their locators.
- (s) The DEPARTMENT will provide the blank WisDOT Diggers Hotline Ticket Assessment template spreadsheet to be used.
- (t) Storm & Sanitary Sewer "Measure Downs" are NOT PART OF THIS CONTRACT and are considered extra work, if required.
- (u) Limits/Extents:
 - 1. Eagle Drive 500' in each direction and 10' beyond existing R/W
- (v) Deliverables:
 - 1. Uti-STH 60_TBD.dwg
 - 2. Uti-APPROX-STH 60_TBD.dwg
 - 3. Digital copies of utility system maps
 - 4. Digital copies of Diggers Hotline tickets.

5. Digital photos (.jpg) and/or video (.wmv) of the entire area described in the Utility Survey Limits/Extents with associated indexing system.
6. WisDOT Diggers Hotline Ticket Assessment Form spreadsheet.

(12) STORM SEWER SURVEY

Storm sewer survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(13) SANITARY SEWER SURVEY

Sanitary sewer survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(14) MISCELLANEOUS FACILITIES-WELLS-SEPTIC SURVEY

Miscellaneous facilities survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(15) REHABILITATION STRUCTURE SURVEY

Rehabilitation structure survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(16) STREAM CROSSING STRUCTURE SURVEY

Stream crossing structure survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

(17) AERIAL MAPPING TARGET SURVEY

Aerial mapping target survey is NOT PART OF THIS CONTRACT and is considered extra services, if required.

I. SOILS AND SUBSURFACE INVESTIGATIONS

Soils and subsurface investigations are part of the CONTRACT and shall comply with the MANUAL.

J. ROAD PLANS

Section II C (7) in the Standard Provision of the CONTRACT is amended to include the following plans:

- (1) Title Sheet
- (2) General Notes & Contacts
- (3) Project Overview - Single Sheet Schematic Drawing
- (4) Typical Sections

- (5) Construction Details
 - a) Including (10 scale) detailed designs for an estimated eight (8) curb ramps
- (6) Removal Plan
- (7) Erosion Control
- (8) Existing/Permanent Signing
- (9) Pavement Marking Plan
- (10) Traffic Control/Stage Construction
 - a) Including pedestrian detour(s) and temporary ramp accommodations
- (11) Alignment Plan
- (12) Miscellaneous Quantities
- (13) Traditional Plat (2 parcels)
- (14) Plan & Profile
- (15) Computer Earthwork Data
- (16) Cross-sections
- (17) Wetland Mitigation Plan – not included and considered extra services, if needed.
- (18) Waste Disposal Plan – not included and considered extra services, if needed.
- (19) Landscaping Plan – not included and considered extra services, if needed.
- (20) Storm Sewer Plan – not included and considered extra services, if needed.

K. STRUCTURE PLANS

- (1) Prepare Structure Survey Reports in accordance with the MANUAL. Completed preliminary plans shall show the structure plan, elevation, and typical cross section, and all pertinent data shall appear on the first sheet(s) of the completed structure plans. The DEPARTMENT will review preliminary structure plans and Structure Survey Reports showing requested revisions, if any.
- (2) Plans for Structures shall be fully dimensioned besides showing controlling elevations. The plans shall be prepared with such precision and detail to allow for layout in the field with customary degree of accuracy and to allow for the production of an accurate estimate of quantities for all pertinent items of work to be performed in the PROJECT.
- (3) Plans for Structures shall include schedules for bar steel reinforcement (if required). Such schedules shall provide all of the necessary detail required for the fabrication of the reinforcement without the necessity of making separate shop drawings for that purpose.
- (4) When the plans for a structure have been completed, the CONSULTANT shall furnish the DEPARTMENT with electronic files of such plans for review and examination.
- (5) Submit electronic copies for review and examination of all specifications for items of work in the Structure Plans which are not covered by the STANDARD SPECIFICATIONS and such amendments to, or revisions of the STANDARD SPECIFICATIONS as may be required to properly cover the work contemplated by the plans.
- (6) Prepare or check the shop drawings for the fabrication of structural steel.

- (7) Plans will be subject to review and examination by the DEPARTMENT. Such review and examination may be made on the site of the PROJECT.
- (8) Along with the plans for structures submit one copy or reproduction of the design computations for the DEPARTMENT'S review and permanent file.
- (9) When the plans for structures are to be prepared by others, the DEPARTMENT and the CONSULTANT(S) shall provide each other with the necessary pertinent information to affect the proper correlation between the Road Plans and the Structure Plans.
- (10) Furnish such other pertinent information and data with respect to the plans and design as the DEPARTMENT may request.
- (11) Structure Survey Reports, Preliminary Plans and Final Plans shall be completed for MSE Retaining Wall.

L. PLANS, SPECIFICATIONS, & ESTIMATES (P.S. & E.)

- (1) The CONSULTANT shall provide Highway Project Data in a digital format to the DEPARTMENT in accordance with the standards outlined in the FDM. All electronic project data must be delivered to the DEPARTMENT via e-mail or ftp transfer after Central Office completes a final PROJECT review prior to construction letting. All electronic project data must be accompanied by a meta-data document (format of meta-data provided by the DEPARTMENT) which describes all data which is delivered.
- (2) Upon receipt of the electronic data files, a DEPARTMENT representative will process the data within 6 weeks and return to the CONSULTANT a notification confirming that the data was received and verified to be in the correct formats. If the data received is not correct, the CONSULTANT must rectify the problem and resubmit the data to the DEPARTMENT within 2 weeks of being notified of the problem. This confirmation notification does not certify that the CONSULTANT submitted electronic data matches the information that is shown on the paper plan, nor does it verify that the design is valid and follows design standards set the Facilities Development Manual. The confirmation notification in no way releases the CONSULTANT from responsibilities related to the constructability and validity of the design.
- (3) The CONSULTANT shall provide field control information, including all data used to establish survey control in the field. At minimum, the data shall include all control points and section corner points. Control points must have a feature code of CP and section corner points must have a feature code of SEC. In addition, other field control data may be required, this being at the discretion of the project manager. Other field control data must also be assigned a standard WisDOT feature code. The format of the file containing field control information shall be in accordance with the standards outlined in the FDM.
- (4) The CONSULTANT shall provide reference line information, including all mainline and side road reference lines and the project control necessary to establish such reference lines. All proposed alignments must be assigned a feature code of PRL and all existing

alignments must be assigned a feature code of CL. In addition, for each alignment a report of the alignment/reference line details (bearings, curve data, etc.) shall be provided. The format of this report is provided in the FDM. The format of the file containing reference line information shall be in accordance with the standards outlined in the FDM.

- (5) The CONSULTANT shall provide data necessary for the preparation of plats and acquisition of rights of way and property, including all existing and proposed right-of-way chains and points to be staked. The format of the file containing right-of-way monumentation information shall be in accordance with the standards outlined in the FDM.
- (6) The CONSULTANT is not required to provide mainline profile information, which includes profiles of any reference lines, as mainline profile development is considered extra services, if needed.
- (7) The CONSULTANT shall provide design profile information of modified driveway profiles and modified ditch profiles. The format of the file containing profile information shall be in accordance with the standards outlined in the FDM. driveway profiles and any necessary ditch profiles,
- (8) The CONSULTANT shall provide existing cross section data for the project. At a minimum, the existing ground surface, the finished ground surface outside the subgrade shoulder points and the finished ground surface between the subgrade shoulder points must be provided with the information for each surface being placed in its own file. Names of the surfaces in all cross section files must follow those standards set in the WisDOT standard feature table. The format of the file containing existing cross section data shall be in accordance with the standards outlined in the FDM.
- (9) The CONSULTANT is not required to provide information on the locations of the superelevation transition points along alignments.
- (10) The CONSULTANT shall provide existing topographic data which is classified as utility information. WisDOT standard feature codes and point connectivity methods must be used in the data files submitted. The format of the topographic data shall be in accordance with the standards outlined in the MANUAL.
- (11) The CONSULTANT shall provide existing topographic data which is classified as other than utility information. WisDOT standard feature codes and point connectivity methods must be used in the data files submitted. The format of the topographic data shall be in accordance with the standards outlined in the FDM.
- (12) The CONSULTANT shall provide other Survey Information, as deemed necessary by the WisDOT Project Manager. The format of the miscellaneous survey information shall be in accordance with the standards outlined in the FDM.

- (13) The CONSULTANT shall provide graphical data files for the complete plan set. All graphical files shall be in accordance with the data exchange and CADD standards outlined in the FDM.

M. PLATS

- (1) Prepare right-of-way plats for the PROJECT in accordance with the MANUALS and WisDOT Guide to Utility Coordination. Transportation project plats (TPP) shall also be prepared in accordance with Wisconsin Statute 84.095.
- (a) Prepare each plat sheet showing coordinates on all United States Public Land Survey System (USPLSS) section corners, quarter section corners, meander corners, monumented sixteenth corners, private claim corners and on all main line and side road survey line/reference line PI's.
 - (b) Provide all coordinate information in Wisconsin Coordinate Reference System Coordinates (WISCRS) NAD 1983
 - (c) Prepare all plat sheets in accordance with FDM 15-5 Plan Preparations - Methods using WISDOT-provided Civil 3D file templates and related CAD components.
 - (d) Provide the DEPARTMENT an electronic (*choose: CSV or LandXML*) file with unique point ID's of all right-of-way points, permanent easement points, alignment PI's and USPLSS corners on the project.
 - (e) Provide the DEPARTMENT with an electronic report describing all elements within all alignments and an electronic XML file, for each alignment.
 - (f) Show all newly monumented, reestablished right-of-way and permanent easement points with the size and type noted (e.x. 3/4" I.P.) in accordance with the MANUALS.
 - (g) Show all recovered monuments with the size and type noted in accordance with the MANUALS.
 - (h) Show on the plat sheets existing access control or access covenants from previous DEPARTMENT projects, local projects, certified survey maps (CSM), subdivisions and title reports.
 - (i) Show on the TPP and plat sheets existing property lines along with CSM's, subdivisions, assessor plats, condominium plats and plats of survey and other surveys of record.

- (j) Assign a note or table to each TPP and plat sheet stating the historical basis for dimensioning the existing highway right-of-way; include intersecting roads.
- (k) Show the bearing and distance from a USPLSS corner along the section line to the adjacent quarter corner or section corner whenever the mainline reference line and the right-of-way lines cross a section line or quarter line. Note on the plat the monument type and coordinates of the section corners.
- (l) Provide the DEPARTMENT with an electronic Coordinate Geometry (COGO) report of the exterior boundaries of the right-of-way as depicted on each TPP, right of way envelope or description, which specifies closure and precision of the traverse.
- (m) Submit a final full size, 22" x 34" portable document format (PDF), unless otherwise specified by the county or DEPARTMENT, in accordance with the MANUALS upon final approval of the DEPARTMENT.
- (n) Submit the plat PROJECT DOCUMENTS in accordance with the MANUALS upon receiving final approval from the DEPARTMENT. Submit Civil 3D dwg files in accordance with the data exchange and CADD standards outlined in the MANUAL.

(2) Title Searches/Updates

Obtain title searches, title updates, or commitments necessary to determine property lines and current ownerships for the PROJECT. It is estimated that two (2) title searches and two (2) title updates are required. Contract with a title company to prepare the title searches, title updates, or commitments in accordance with the DEPARTMENT'S approved list of title companies. Provide a copy of the title searches, title updates, or commitments to the DEPARTMENT, upon request.

(3) Acquisition Descriptions

a) Traditional Plat:

Provide descriptions for all individual parcels of land and interests to be acquired for the PROJECT. Provide individual legal description(s) for each parcel and interest(s), or an envelope description that does not cover more than one page of the plat. Write descriptions in a metes and bounds format, or in the case of platted property by suitable reference to the platted data. Commence or begin unplatted property descriptions at a monumented USPLSS corner. The legal descriptions shall contain a basis of reference and shall describe the exterior boundaries of, and the interest being acquired.

- (4) Prepare the descriptions and relocation order, when applicable, using Microsoft Word or software compatible with the DEPARTMENT. Contact the DEPARTMENT'S real estate unit for current formatting instructions. The DEPARTMENT will be responsible for the recording of all descriptions and filing the relocation order with the applicable county.
- (5) Provide relocation order, when applicable, preliminary plat and descriptions, excluding the recording information, in electronic format for DEPARTMENT review.
- (6) Plat Revisions
 - a) Traditional Plat:

Be responsible for all revisions to the plat sheets and descriptions until the real estate certification is completed. Changes on the right-of-way plat that occur following the initial relocation order (excluding hardship or protective purchase) are anticipated and are part of this CONTRACT.
- (7) Submit the traditional plat sheet electronically to the DEPARTMENT for approval. The DEPARTMENT will be responsible for the recording of all transportation project plats or filing the traditional plat with the applicable county.
- (8) Supply the DEPARTMENT with a PDF file of the plan/profile and cross sections for the DEPARTMENT'S use in real estate acquisition at the time required in the project schedule.

N. ACQUISITION EXHIBITS

- (1) Acquisition Exhibits are NOT PART OF THIS CONTRACT and are considered extra services, if required.

O. HIGHWAY SYSTEM CHANGES

Highway System Changes are NOT PART OF THIS CONTRACT and are considered extra services, if required.

P. TRAFFIC

- (1) The CONSULTANT shall provide Plans, specifications, and estimates for the reconstruction of STH 60 intersection with Eagle Drive to a modern roundabout as per the MANUAL.
- (2) All work will be performed according to Wisconsin Department of Transportation standards. All materials will be prepared to be inserted into the bid package to be prepared by the CONSULTANT.
- (3) Design of intersection lighting is included in this scope of services.

- (4) Design of any traffic signal and/or interconnect system, or any traffic signal timing or operational analysis is NOT PART OF THIS PROJECT and is considered extra services, if required.

Q. SERVICES PROVIDED BY THE MUNICIPALITY

The MUNICIPALITY will provide to the CONSULTANT the following for the PROJECT:

- (1) As-built plans for the project roadway
- (2) Culvert condition/inspection report (if available)
- (3) Available plats and CSMs

R. DESIGN PC SPECIFICATIONS (for design staff working on an engineer's estimate)

Contracts with projects that have PS&E dates of February 1, 2019, and beyond, go to the AASHTOWare Project Knowledge Base web site <https://awpkb.dot.wi.gov/Content/Default.htm> for information about supported web browsers, how to obtain system access and how to use AASHTOWare Project Preconstruction and AASHTOWare Project Estimator to create an engineer's estimate.

(January 10, 2019)

S. PROSECUTION AND PROGRESS

- (1) Monitor the progress of the PROJECT as stipulated in the contract agreement. The tracking process shall include providing the DEPARTMENT with an updated version of the project network on a monthly basis to show the progress of the project. The report can be delivered in electronic format consistent with current WisDOT standards.
- (2) The CONSULTANT proposes to sublet these services:
 - (a) Roundabout engineering services to MSA Professional Services
 - (b) Updated Section 106 Report services to University of Wisconsin – Milwaukee, Cultural Resource Management (CRM).
 - (c) Title Reports and updates by Knight Barry Title Group
 - (d) Lighting engineering services to Powrtek Engineering, Inc.
 - (e) Soils investigations and Soils Report to Himalayan Consultants, LLC
 - (f) Phase 2.5 Hazardous Materials Assessment services to Ramboll
- (3) The following items of work will be completed and submitted to the MUNICIPALITY and DEPARTMENT'S Region Office by the indicated dates if CONSULTANT has received the Notice to Proceed by May 23, 2022.

Report Title	Date
30% Roundabout Plan	June 27, 2022
LOM & PIM	July 2022
TMP (50%) sent	August 15, 2022
60% Plan sent	August 15, 2022
Complete Streets Report sent	August 15, 2022
Section 106 Report sent	August 15, 2022
Draft Environmental Document (CEC) sent	August 15, 2022
Slope Intercepts & Preliminary Plat sent	August 15, 2022
Preliminary Retaining Wall Plan sent	August 15, 2022
CEC approved	September 2, 2022
Design Study Report sent	September 2, 2022
Design Study Report approved	September 16, 2022
Final Plat sent	September 16, 2022
Encroachment Report sent	September 16, 2022
Final Plat approved	September 25, 2022
1078s sent	October 7, 2022
TMP (90%) sent	December 2022
Final Retaining Wall Plan sent	February 1, 2023
Draft PS&E (90%) sent	February 1, 2023
R/W Acquisition Complete	April 4, 2023
Final PS&E (eSubmit)	May 1, 2023
LET	9/12/2023
Preconstruction Conference	February 2024

PROJECT TOTAL

Activity Code	Classification	"X" As per Scoping	Design Project Manager		Design Engineer - High		Design Engineer-Mid		Design Engineer - Entry		Survey - High		Survey - Mid		Survey - Entry		Structures Engineer - High		Structures Engineer - Low		Traffic Engineer - Mid		Administration/Clerical		Total Labor	Total \$
	Avg. Hourly Wage																									
	Task		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars		
	Project Management																									
	Scope, Schedule and Change Management																									
887	Manage Project Scope and Schedule		13	\$2,714.40	6	\$948.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	19	\$3,662.40
887.1	Create project schedule/Updates	X	1																							
887.2	Update and Track project progress/percent complete		2																							
887.3	Region phone calls, coordination & correspondence/emails	X	4																							
887.5	Prepare/attend 60% Plan review meeting (virtual)	X	2		2																					
887.6	Prepare/attend 90% Plan review meeting (virtual)	X	4		4																					
773	Manage Consultant Contract		10	\$2,088.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	10	\$1,103.50	20	\$3,191.50
773.1	Prepare consultant invoice and supporting documents	X	4																				10			
773.2	Review Subconsultant Invoices	X	4																							
	Communication and Stakeholder Management																									
743	Manage Project Stakeholders		14	\$2,923.20	4	\$632.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	17	\$1,875.95	35	\$ 5,431.15
743.1	Respond to inquiries (public, government, media)	X	2																							
743.2	Develop public involvement plan	X	0.5																				2			
743.3	Prepare and maintain public involvement log/comment database	X	0.5																				2			
743.4	Notify property owners/Letters/Mailing	X	0.5																				2			
743.5	Pre-meeting (PIM PAC TAC)																									
743.5.1	Develop and maintain contact mailing list (email/address)	X																					1			
743.5.2	Plan pre-meeting and meeting arrangements	X	1																							
743.5.5	Prepare/Review/Revise meeting materials (Exhibits, PP presentation) PIM & LOM (1 meeting each)	X	1																				4			
743.5.6	Prepare & Attend PIM & LOM (1 meeting each)	X	4																				4			
743.5.7	Prepare/Review PIM/LOM summaries	X	0.5																				2			
743.6	General Project Meeting																									
743.6.1	Prepare for, attend, and summarize project update meetings (4)	X	4		4																					
893	Manage Project Communications	X	1.5	\$313.20	0	\$0.00	0	\$0.00	16	\$1,432.80	0															

Summary of Staff Hours and Direct Labor Costs

PROJECT TOTAL

Project ID: VOJ 1814.001 Main Street RAB

Activity Code	Classification	"X" As per Scoping	Design Project Manager		Design Engineer - High		Design Engineer-Mid		Design Engineer - Entry		Survey - High		Survey - Mid		Survey - Entry		Structures Engineer - High		Structures Engineer - Low		Traffic Engineer - Mid		Administration/Clinical		Total Labor	Total \$
	Avg. Hourly Wage		\$208.80		\$158.00		\$111.09		\$89.55		\$128.94		\$116.04		\$68.77		\$174.67		\$90.26		\$132.98		\$110.35			
	Task		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars		
723.4	Existing surface and topographic survey	X											20		20											
723.6	Coordinate diggers hotline	X											2													
723.11	Review 1077 utility facility maps	X			2								1													
723.12	Field survey existing utilities	X											4		4											
723.14	Process survey data and create existing surface	X			4								4													
723.15	Field notes	X											1													
723.18	Create deliverables in Civil 3D	X			4								2													
723.19	Reduce field notes	X											1													
726	Survey Existing and Proposed Right-of-Way		0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	13	\$1,508.52	12	\$825.24	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	25	\$2,333.76
726.8	Review plans and as-builts	X											1													
726.10	Field locate section corners, block corners, iron pins	X											4		4											
726.12	Survey section corners	X											4		4											
726.13	Appraisal staking	X											4		4											
897	Place Monumentation		0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	4	\$464.16	4	\$275.08	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	8	\$739.24
897.1	Set right of way pins	X											4		4											
745	Develop Plat		0	\$0.00	2	\$316.00	40	\$4,443.60	0	\$0.00	12	\$1,547.28	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	54	\$6,306.88
745.0	Develop Traditional Plat	X			2							8														
745.19	Acquisition Exhibits (Permanent & Temporary R/W Interests) - 50 parcels						40																			
745.19.7	Legal Descriptions/Title Report Review	X									4															
	Environmental and Cultural Impact	X																								
762	Analyze Socio-Economic and Physical Environment Impacts		0	\$0.00	0	\$0.00	1	\$111.09	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$111.09
762.4	Review community and residential issues																									
762.4.1	Evaluate right of way impacts	X					1																			
763	Analyze Archaeological and Historical Impact and Tribal Consultation		0	\$0.00	10	\$1,580.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	2	\$220.70	12	\$1,800.70
763.0	Review Archaeological and Historical Impact and Tribal Consultation	X																				2				
765	Analyze Hazardous Materials Site Impact		0	\$0.00	5	\$790.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	5	\$790.00
765.0	Analyze Hazardous Materials Site Impact	X			4																					
765.2.2	Perform Phase 2.5 investigation, develop materials handling plan and special provisions																									
765.2.2.1	Coordinate phase 2.5 Report & Specials	X			1																					
766	Analyze Natural Environment Impact		1	\$208.80	1	\$158.00	6	\$666.54	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	8	\$1,033.34
766.1	Evaluate impact on wetlands																									
766.1.1	Determine presence and delineate existing wetlands	X			1																					
766.1.2	Review wetland impacts & Process 404 Permit	X	1		0																					
766.7	Evaluate impacts to Threatened and Endangered Species																									
766.7.1	Determine if any species are present in project area (IPaC/official species list for federally listed species, NHI review for state listed species)	X					2																			
766.7.4	Agency Consultation																									
766.7.4.1	Federally Listed Species (Section 7 Consultation): United States Fish and Wildlife Service (USFWS)	X					2																			
766.7.4.2	State Listed Species: Wisconsin Department of Natural Resources (WDNR)	X					2																			
	Environmental Documentation and Agency Coordination		1	\$208.80	0	\$0.00	14	\$1,555.26	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	15	\$1,764.06
769.0	Environmental Documentation and Agency Coordination	X																								
769.1	Initial Agency and Tribal Coordination																									
769.1.1	WDNR	X					2																			
769.1.2	USFWS	X					4																			
769.4	Categorical Exclusion Checklist	X	1				8																			
	Structures																									
656	Design Structure		0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	54	\$9,432.18	140	\$12,636.40	0	\$0.00	0	\$0.00	194	\$22,068.58
656.0	Design Structure	X																								
656.1	Preliminary design																									
656.1.1	Retaining Wall																									
656.1.1.1	R-66-XX																									
656.1.1.1.1	Conduct preliminary site review	X																8		8						
656.1.1.1.2	Prepare Structure Survey Report																	2		8						
656.1.1.1.3	Preliminary structure design	X																12		40						
656.1.1.1.4	Preliminary Plan Preparation	X																8		20						
656.1.1.1.5	QA/QC	X																2								
656.2	Final design																									
656.2.1	Retaining Wall																									
656.2.1.1	R-66-XX																									
656.2.1.1.1	Final structure design	X																12		40						
656.2.1.1.2	Plan preparation	X																8		20						
656.2.1.1.4	Quantities	X																1		4						
656.2.1.1.6	QA/QC	X																1								
	Traffic Operations																									
313	Analyze Traffic Data/ Forecast		0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	4	\$531.92	0	\$0.00	4	\$531.92
313.2	Review/Document crash data-analyze crash trends	X																			4					
788	Develop Traffic Control and Staging		2	\$417.60	4	\$632.00	0	\$0.00	48	\$4,298.40	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	18	\$2,393.64	0	\$0.00	72	\$7,741.64
788.0	Develop Traffic Control and Staging	X																								
788.1	Develop/																									

Summary of Staff Hours and Direct Labor Costs

PROJECT TOTAL

Project ID: VOJ 1814.001 Main Street RAB

Activity Code	Classification	"X" As per Scoping	Design Project Manager		Design Engineer - High		Design Engineer-Mid		Design Engineer - Entry		Survey - High		Survey - Mid		Survey - Entry		Structures Engineer - High		Structures Engineer - Low		Traffic Engineer - Mid		Administration/Clerical		Total Labor	Total \$
	Avg. Hourly Wage		\$208.80		\$158.00		\$111.09		\$89.55		\$128.94		\$116.04		\$68.77		\$174.67		\$90.26		\$132.98		\$110.35			
	Task		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars		
746.20	Post PS&E activities	X			2																					
	Construction Management																									
	Post-PS&E through Letting																									
790	Manage Post-PS&E Through Let		0	\$0.00	6	\$948.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	6	\$948.00
790.1	Prepare addendum development form and addendum form	X			2																					
790.2	Respond to contractor inquiries prior to let	X			2																					
790.3	Respond to BPD requests (engineer's estimate justification, etc.)	X			2																					
	Construction Contract Administration																									
885	Enforce Labor Provisions		3	\$626.40	3	\$474.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	6	\$1,100.40
885.2	Precon preparation and attendance	X	3		3																					
TOTAL:			54	\$9,197.20	100.5	\$15,879.00	197.5	\$21,940.28	256	\$22,924.80	12	\$1,547.28	59	\$6,846.36	44	\$3,025.88	54	\$9,432.18	140	\$12,636.40	34	\$4,621.32	39	\$3,216.15	990.00	\$114,332.35

Direct Costs by Item

Project ID:

VOJ 1814.001 Main Street RAB

Item	Unit Amount	Unit Type	Rate	Total Expenses
Mileage	400	Miles	\$ 0.585	\$234.00
Mailhaus Newsletter Mailing/Postage Service	1	Each	\$ 800.000	\$800.00
	0			\$0.00
TOTAL				\$1,034.00

Consultant Contract Total Fee Computation

Project ID	VOJ 1814.001 Main Street RAB				Total for Contract
Number of Staff Hours	990.00				990
Total Labor	\$114,332.35				\$114,332.35
Direct Costs	\$1,034.00				\$1,034.00
Total Costs	\$115,366.35				\$115,366.35
MSA	\$118,120.00				\$118,120.00
Powrtek	\$7,445.44				\$7,445.44
Himalayan Consultants	\$9,998.39				\$9,998.39
Knight Barry	\$1,050.00				\$1,050.00
Ramboll	\$11,528.00				\$11,528.00
UWM-CRM	\$3,105.00				\$3,105.00
Subcontract Subtotal	\$151,246.83	\$0.00	\$0.00	\$0.00	\$151,246.83
TOTAL COST	\$266,613.18				\$266,613.18



MSA Office Address
1702 Pankratz Street
Madison, WI 53704

P: (608) 242-7779
TF: (800) 446-0679
F: (608) 242-5664

May 5, 2022

Mr. Stan Lukasz, P.E.
DAAR Engineering, Inc.
518 W Cherry St
Milwaukee, WI 53212

Re: STH 60 & Eagle Drive Roundabout Design
Village of Jackson
Washington County

Dear Stan:

Thank you for the opportunity to be a member of the Design Team for the Subject Project. As a subconsultant to DAAR Engineering, Inc., MSA proposes to perform the work as described in the attached "MSA Scope of Services" document for an Actual Cost Not to Exceed amount of \$118,120.00. Please refer to the attached cost spreadsheet for additional breakdown.

Sincerely,

MSA Professional Services, Inc.

A handwritten signature in black ink, appearing to read "Ben Wilkinson", is written over a light blue rectangular background.

Ben Wilkinson, P.E.
Project Manager/Team Leader

SCOPE OF SERVICES

STH 60 & Eagle Drive Roundabout Design
Village of Jackson
Washington County

MSA PROFESSIONAL SERVICES, INC. (MSA)

The CONTRACT Scope of Services for the above referenced project will be based on the following:

1. GENERAL

As subconsultant to DAAR Engineering, Inc., MSA will perform the following services for the above-referenced project:

- Road design for the proposed single lane roundabout at STH 60 and Eagle Drive intersection
- Assistance in some reports, meetings, utility coordination, and PS&E documents, generally in relation to MSA areas of work described above.

The project limits for MSA road design work are along STH 60 are approximately 700 feet west of, to 600 feet east of the intersection center. Also along Eagle Drive from approximately 200 feet south of, to 400 feet north of the intersection center. These limits are as depicted in an SRF ICE report exhibit report dated February 10, 2022.

Plans will be developed using WisDOT drafting and plan standards and using WisDOT bid items. Assume DOT will review the work as part of the larger DAAR design project, WisDOT ID 2310-13-00/70.

2. REPORTS

- a. Prepare a Hydraulic Sizing Memo for the twin culvert pipes under Eagle Drive along the north side of STH 60, and the single culvert pipe under Eagle Drive along the south side of STH 60. The assumed work will involve either extending the pipes in-kind, or total replacement, if required for RAB geometry. Assumes no other storm sewer design or reporting needed – surface drains only.
- b. Prepare and sign the Roundabout Critical Parameters worksheet for inclusion in the DSR.

3. ENVIRONMENTAL DOCUMENTATION

- a. No work included.

4. AGENCY/UTILITY/RAILROAD COORDINATION

- a. Assist with Utility Coordination:
 - i. Provide cross-sections with existing utility locations within the roundabout area.
 - ii. Provide list of potential conflicts in retaining wall and culvert areas designed by MSA.
- b. Army Corp of Engineers (ACOE): Prepare Section 404 documentation and submit to ACOE.
- c. All other utility coordination will be by DAAR Engineering, Inc.

5. PUBLIC INVOLVEMENT

- a. None included. Public involvement by DAAR Engineering, Inc.

6. MEETINGS

- a. Includes one MSA representative to participate in up to four Progress Meeting Conference Calls.
- b. Includes one MSA representative at up to two Plan Review Meetings (via phone conference).
- c. Attendance at the Preconstruction Conference is not included.

7. SOILS AND SUBSURFACE INVESTIGATIONS

- a. No subsurface exploration included.

8. SURVEY

- a. No Survey included.

9. PRELIMINARY ROAD DESIGN (Roundabout area, limits described above under "GENERAL")

- a. Research Existing Files.
- b. File Creation.
 - i. Existing Utility Alignments/Profiles
 - ii. DTM Importing
- c. Design
 - i. Plan layout of RAB
 - ii. Alignments
 - iii. Profiles
 - iv. Typical Sections
 - v. Preliminary Cross Sections
 - vi. Intersection Geometrics
 - vii. Lighting Coordination (Lighting Design and plans by others)
 - viii. Truck Movements (including review of OSOW permits and accommodations)
 - ix. Roundabout 60% Plan
- d. Preliminary Drafting
 - i. Typical Sections
 - ii. Construction Details (for 60% plan).
 - iii. Erosion Control Plan (for 60% plan)
 - iv. Paving Details (for 60% plan). Assumes asphalt pavement.
 - v. Curb Ramp Details
 - vi. Plan Profiles
 - vii. Traffic Control and Staging – not included; by DAAR Engineering, Inc. Included at 60% plan development is review assistance relating to the roundabout and structures area staging.
- e. Preliminary Estimates: provide Excel file with major bid items and qtys to DAAR Engineering, Inc.
 - i. 60% Estimate
- f. QA/QC

10. FINAL ROAD DESIGN (Roundabout area described above under "GENERAL")

- a. Design
 - i. Final Geometrics
 - ii. Final Cross Sections
 - iii. Quantity Calculations
- b. Final Plans
 - i. Typical Sections

- ii. Construction Details
 - iii. Erosion Control Plan
 - iv. Paving Details
 - v. Roundabout Details
 - vi. Curb Ramp Details
 - vii. Plan Profile
 - viii. Alignment Sheet
 - ix. Earthwork Sheet
 - x. Excel file with Quantity Tables for DAAR Engineering, Inc. to incorporate into Miscellaneous Quantities sheets
 - xi. Traffic Control - not included; by DAAR Engineering, Inc. Included at 90% plan development is review assistance relating to the roundabout and structures area staging.
- c. QA/QC

11. DRAINAGE DESIGN

- a. MSA will perform a hydrologic and hydraulic analysis of flows tributary to the culvert crossings passing eastward under Eagle Drive in the north and south roadside ditches of STH 60.
 - i. Hydrologic Study. MSA will prepare a HydroCAD computer model for purposes of estimating peak flows at each culvert and at selected locations upstream and downstream from each culvert as determined by MSA's project engineer. The watershed tributary to the northern culvert appears to be approximately 224 acres in size, is nearly completely fully developed and contains at least three stormwater detention ponds. The watershed tributary to the southern culvert appears to be much smaller serving only the area in close proximity to the culvert itself.
 - ii. Hydraulic Study. MSA will construct an HEC-RAS model of the north side creek for purposes of determining the size of culvert necessary to pass 25-yr peak flows without overtopping the road. MSA will utilize the findings of the HydroCAD model of the southern culvert to determine the necessary size to pass 25-yr peak flows without overtopping the road.
- b. Assumptions:
 - i. Survey will be by others. Survey will include the creek on the north side of STH 60 beginning at Cedar Creek and extending upstream past Eagle Drive to Georgetown Drive (approximately 3,400 feet). Survey will include collection of flow-line shots approximately every 250 feet and one 'wet' cross-section approximately every 500 feet, with at least one wet section between each existing culvert cross-section. Survey will include three culverts.
 - ii. Storm sewer alignment maps for the Village will be made available to MSA in GIS format.
 - iii. Available construction plans and applicable stormwater management plans for detention ponds within the study area will be provided to MSA.

12. PLANS, SPECS AND PS&E DOCUMENTS (Roundabout area described above under "GENERAL", and structure items)

- a. Provide Special Provisions (for Roundabout and Retaining Wall special items)
- b. Provide Time Chart data (for the Roundabout and Retaining Wall)
- c. Provide final bid items and quantities for Engineers Estimate
- d. Digital Data Exchange with DAAR Engineering, Inc. Data exchange directly with the client, if any, would be by DAAR Engineering, Inc.
- e. It is assumed questions during bidding and construction will go thru DAAR

Engineering, Inc. MSA will assist with answering questions on roundabout and retaining wall.

13. STRUCTURE DESIGN

- a. To be completed by DAAR Engineering, Inc.

14. RIGHT OF WAY ACQUISITION

- a. Not included – Scope to be further identified after preliminary design is complete

15. Services assumed provided by others:

- a. Field survey, including additional field info as may be required, including hydraulic-related surveys for the cross-drain design.
- b. Street Lighting, signing, pavement marking. Assumes no overhead sign structures.
- c. Retaining wall design.
- d. Renderings or animations assumed not required; not included.

16. SCHEDULE, assumes a May 23, 2022 start

- | | |
|-------------------------------------|--------------------|
| a. 30% Preliminary Roundabout Plan: | June 27, 2022 |
| b. 60% Roundabout Plan: | August 15, 2022 |
| c. Preliminary Retaining Wall Plan: | August 15, 2022 |
| d. Final Plat approved (DAAR): | September 16, 2022 |
| e. Final Retaining Wall Plan: | February 1, 2023 |
| f. Draft PSE: | February 1, 2023 |
| g. R/E Acquisition Complete: | April 4, 2023 |
| h. Final PSE: | May 1, 2023 |
| i. Design Contract Complete: | July 31, 2023 |
| j. Let: | September 2023 |
| k. Construction: | 2024 |



STH 60 & Eagle Drive Roundabout Design
Village of Jackson

Summary of Staff Hours and Labor Costs

Classification	Project Manager/Roundabout Designer		Senior Project Engineer 2		Senior Project Engineer 1		Project Engineer 2		Project Engineer 1			
Hourly Wage	\$200.00		\$160.00		\$140.00		\$120.00		\$100.00		Total Cost	
Task	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
1. Project Management & Coordination												
Project Administration/Management	12	\$2,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	12	\$2,400.00
Subtotal	12	\$2,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	12	\$2,400.00
4. Agency/Utility Coordination												
Assist with Utility Coordination	0	\$0.00	0	\$0.00	8	\$1,120.00	0	\$0.00	0	\$0.00	8	\$1,120.00
ACOE - Section 404 Permit	0	\$0.00	2	\$320.00	8	\$1,120.00	0	\$0.00	0	\$0.00	10	\$1,440.00
Subtotal	0	\$0.00	2	\$320.00	16	\$2,240.00	0	\$0.00	0	\$0.00	18	\$2,560.00
6. Meetings												
Progress Meetings (4 via web meeting)	8	\$1,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	8	\$1,600.00
DOT Plan Review Meetings (2 via web meeting)	4	\$800.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	4	\$800.00
Subtotal	12	\$2,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	12	\$2,400.00
9. Preliminary Road Design												
Horizontal Design	4	\$800.00	8	\$1,280.00	24	\$3,360.00	40	\$4,800.00	0	\$0.00	76	\$10,240.00
Vertical Design	4	\$800.00	8	\$1,280.00	32	\$4,480.00	80	\$9,600.00	0	\$0.00	124	\$16,160.00
Plan Details	2	\$400.00	2	\$320.00	8	\$1,120.00	40	\$4,800.00	40	\$4,000.00	92	\$10,640.00
Plan and Profile/Cross Sections	2	\$400.00	2	\$320.00	4	\$560.00	40	\$4,800.00	0	\$0.00	48	\$6,080.00
Quantities and Estimates	2	\$400.00	2	\$320.00	4	\$560.00	8	\$960.00	40	\$4,000.00	56	\$6,240.00
Curb Ramp Design	2	\$400.00	2	\$320.00	4	\$560.00	32	\$3,840.00	0	\$0.00	40	\$5,120.00
Subtotal	16	\$3,200.00	24	\$3,840.00	76	\$10,640.00	240	\$28,800.00	80	\$8,000.00	436	\$54,480.00
10. Final Road Design												
Horizontal Design	2	\$400.00	4	\$640.00	8	\$1,120.00	0	\$0.00	0	\$0.00	14	\$2,160.00
Vertical Design	2	\$400.00	4	\$640.00	8	\$1,120.00	40	\$4,800.00	0	\$0.00	54	\$6,960.00
Plan Details	2	\$400.00	2	\$320.00	8	\$1,120.00	24	\$2,880.00	80	\$8,000.00	116	\$12,720.00
Plan and Profile/Cross Sections	2	\$400.00	0	\$0.00	8	\$1,120.00	40	\$4,800.00	0	\$0.00	50	\$6,320.00
Quantities and Estimates	2	\$400.00	2	\$320.00	8	\$1,120.00	16	\$1,920.00	40	\$4,000.00	68	\$7,760.00
Subtotal	10	\$2,000.00	12	\$1,920.00	40	\$5,600.00	120	\$14,400.00	120	\$12,000.00	302	\$35,920.00
11. Drainage Design												
Modeling, Design, and Reporting	2	\$400.00	6	\$960.00	50	\$7,000.00	48	\$5,760.00	4	\$400.00	110	\$14,520.00
Subtotal	2	\$400.00	6	\$960.00	50	\$7,000.00	48	\$5,760.00	4	\$400.00	110	\$14,520.00
12. PS&E												
Special Provisions	2	\$400.00	8	\$1,280.00	0	\$0.00	0	\$0.00	0	\$0.00	10	\$1,680.00
Time Chart	2	\$400.00	0	\$0.00	8	\$1,120.00	0	\$0.00	0	\$0.00	10	\$1,520.00
Final Quantities and Estimate	2	\$400.00	0	\$0.00	8	\$1,120.00	0	\$0.00	0	\$0.00	10	\$1,520.00
Digital Data	0	\$0.00	0	\$0.00	8	\$1,120.00	0	\$0.00	0	\$0.00	8	\$1,120.00
Subtotal	6	\$1,200.00	8	\$1,280.00	24	\$3,360.00	0	\$0.00	0	\$0.00	38	\$5,840.00
SUBTOTAL:	52	\$11,600.00	52	\$8,320.00	206	\$28,840.00	408	\$48,960.00	204	\$20,400.00	922	\$118,120.00
EXPENSES:												\$0.00
TOTAL:												\$118,120.00



565 Milwaukee Avenue, Suite 3B
Burlington, WI 53105
www.powrtek.com
262-827-9575

April 20, 2022

Mr. Stan Lukasz, P.E.
Project Manager
DAAR Engineering, Inc.
518 W. Cherry Street
Milwaukee, WI 53212

RE: ID 2130-13-00/70
STH 60 & Eagle Dr Roundabout
Village of Jackson
Washington County

Stan:

We appreciate the opportunity to provide you with a fee proposal for this project and look forward to working with you. We have included our fee proposal and scope of services.

SUMMARY OF PROJECT

The project includes lighting design for new roundabout in accordance with WisDOT standards.

ELECTRICAL FEE:

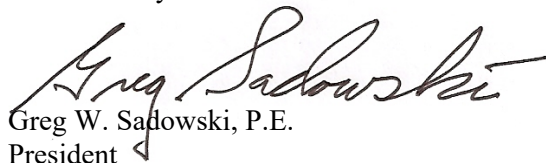
- The contract total will be \$7,445.44.
- The fee includes all labor and expenses - See attachment for details on this specific hourly rate proposal.
- Completion Date: 12/31/2023

SCOPE OF SERVICES

- Design coordination.
- Lighting design for roundabout.
- Lighting controls/service layout, wiring diagrams, details – WisDOT SDDs anticipated.
- Voltage drop calculations.
- Lighting calculations.
- Drafting.
- Submittal for review of 60%, draft PS&E and final PS&E plans.
- Miscellaneous quantities.
- Cost estimate.
- Print and electronic file furnished to Powrtek.
- Specifications in DOT format.

If you have any questions or need any additional information, please don't hesitate to let me know.

Submitted By:



Greg W. Sadowski, P.E.
President

Powrtek Engineering, Inc.

Specific Rate Contract Total Fee Computation

ID 2130-13-00/70
STH 60 & Eagle Dr
Roundabout
Village of Jackson
Washington County

Project ID	ID 2130-13-00/70				Total for Contract
Number of Staff Hours	53				53
Labor-Related Costs	\$7,445.44				\$7,445.44
Direct Costs	\$0.00				\$0.00
Subtotal	\$7,445.44	\$0.00	\$0.00	\$0.00	\$7,445.44
Subcontract 1					\$0.00
Subcontract 2					\$0.00
Subcontract 3					\$0.00
Subcontract Subtotal	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL COST	\$7,445.44	\$0.00	\$0.00	\$0.00	\$7,445.44

Fixed Fee calculated based on an Direct Labor multiplier of: 2.5

Company Wide Indirect Rate: 116%

Fixed Fee: 7.25%

POWRTEK ENGINEERING, INC.

ID 2130-13-00/70
 STH 60 & Eagle Dr
 Roundabout
 Village of Jackson
 Washington County

**DESIGN ENGINEERING
 SUMMARY OF STAFF HOURS AND DIRECT LABOR COSTS**

TASK	ACT. CODE	Greg Sadowski Engineer				Total Direct Labor	
		Hourly Wage	\$140.48	\$0.00			
		Hours	Dollars	Hours	Dollars	Hours	Dollars
DRAWING SETUP/PLOTTING		2	\$280.96	0	\$0.00	2	\$280.96
CALCULATIONS - LIGHTING		8	\$1,123.84	0	\$0.00	8	\$1,123.84
CALCULATIONS - VOLTAGE DROP		2	\$280.96	0	\$0.00	2	\$280.96
ELECTRICAL PLANS		16	\$2,247.68	0	\$0.00	16	\$2,247.68
SPECIFICATIONS		8	\$1,123.84	0	\$0.00	8	\$1,123.84
DETAILS - FIELD WIRING DIAGRAM, ETC.		8	\$1,123.84	0	\$0.00	8	\$1,123.84
MISC QUANTITIES		6	\$842.88	0	\$0.00	6	\$842.88
COST ESTIMATE		1	\$140.48	0	\$0.00	1	\$140.48
DESIGN COORDINATION		2	\$280.96	0	\$0.00	2	\$280.96
		0	\$0.00	0	\$0.00	0	\$0.00
LIGHTING DESIGN TOTAL	785	53	\$7,445.44	0	\$0.00	53	\$7,445.44
TOTALS		53	\$7,445.44	0	\$0.00	53	\$7,445.44

POWRTEK ENGINEERING, INC.

ID 2130-13-00/70
STH 60 & Eagle Dr
Roundabout
Village of Jackson
Washington County

FEE COMPUTATION SUMMARY BY ENGINEERING TASK

TASK	ACTIVITY CODE	Direct Labor Costs	Direct Costs	TOTAL
LIGHTING DESIGN	785	\$7,445.44	\$0.00	\$7,445.44
TOTALS		\$7,445.44	\$0.00	\$7,445.44

POWRTEK ENGINEERING, INC.

ID 2130-13-00/70
STH 60 & Eagle Dr
Roundabout
Village of Jackson
Washington County

DIRECT COSTS BY ITEM

ITEM	UNIT AMOUNT	UNIT TYPE	RATE	TOTAL EXPENSES
TRAVEL (EMPLOYEE VEHICLE)	0	MILE	\$0.560	\$0.00
PLOTTING	0	SHEET	\$1.000	\$0.00
PRINTING	0	SHEET	\$0.10	\$0.00
TOTAL EXPENSES				\$0.00

POWRTEK ENGINEERING, INC.

Specific Rate Contract Direct Labor Rates

ID 2130-13-00/70
STH 60 & Eagle Dr
Roundabout
Village of Jackson
Washington County

Employee Name	Classification	Current Rate	% Pay Increase	New Pay Rate	Date of Increase	% Work at Current Rate	% Work at Increased Rate	Weighted Average Hourly Rate	Indirect Rate 116%	Fixed Fee 7.25%	Labor-Related Rate	Negotiated Labor-Related Rate
Greg Sadowski	Engineer	\$60.00	0.00%	\$60.00		100.00%	0.00%	\$60.00	\$69.60	\$10.88	\$140.48	\$140.48
		\$0.00	0.00%	\$0.00		100.00%	0.00%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Fixed Fee calculated based on an Direct Labor multiplier of: 2.5

Contract

Completion Date: 12/31/2023



April 22, 2022

Tony Baciak, Jr., P.E.
DAAR Engineering
40 Jewelers Park Drive, Suite 120
Neenah, WI 54956

RE: **Project ID 2130-13-00**
STH 60 and Eagle Drive Intersection
Washington County

Dear Mr. Baciak:

As requested, Himalayan Consultants, LLC (Himalayan) is submitting this proposal for conducting a geotechnical investigation (geotechnical drilling, sampling and engineering analysis) in connection with the improvement project referenced above.

The purpose of this investigation is to characterize the soil and groundwater conditions, conduct field and laboratory testing, perform geotechnical analyses and provide recommendations in support of the pavement design and design for extension of the existing modular block retaining wall.

1.0 PROJECT BACKGROUND

It is our understanding that the existing STH 60 and Eagle Drive intersection will be improved and the existing modular block retaining wall located at the northwest corner of the intersection will be extended. Based on the information provided by DAAR Engineering (DAAR), the wall is approximately 135 feet long and has a maximum design height of 5± feet.

2.0 SCOPE OF WORK

Himalayan will perform all investigative activities in accordance with the existing Wisconsin Department of Transportation (WisDOT) practices, applicable ASTM and AASHTO procedures, Wisconsin Department of Natural Resources (WDNR) rules and regulations, and commonly accepted engineering practices. Himalayan's scope of work includes the following:

- Prepare a layout of the proposed borings. Prior to drilling activities, Himalayan will provide DAAR a rough field stakeout of boring locations. Upon completion of the drilling activities,

Himalayan will provide stationing and surface elevations of boring locations in reference to the project corridor based on design files provided by DAAR.

- Contact and coordinate with the Digger's Hotline to obtain the utility clearance (coordination for utility locate) at the boring locations and surrounding areas prior to commencement of drilling.
- Administer a drilling subcontract to advance 2 pavement cores, 2 pavement borings and two retaining wall borings as follows (the existing pavement is assumed to consist of approximately 4-inch thick asphaltic concrete over 6-inch base course):
 - **Pavement Cores:** Two cores of the existing asphaltic concrete pavement from the northeast and northwest corner of the intersection.
 - **Roadway Borings:** Two borings on the northeast and northwest corner of the intersection at core locations. Borings will be advanced to depths of 10 feet below ground surface (bgs).
 - **Retaining Wall Borings:** Two borings spaced at approximately 50 to 100 feet apart on the northwest corner of the intersection. Borings will be advanced to depths of 15 feet bgs.

Total: Four Roadway and Structural Borings.

- Traffic Control: To be provided per the WisDOT requirements and requirements specified in the Manual on Uniform Traffic Control Devices (MUTCD) to ensure safe working conditions. Flagging crew is anticipated.
- Drilling and sampling for the borings will be conducted in accordance with the Standard Penetration Test Procedure (AASHTO T-206). Sampling and testing of soils will be conducted at every 2.5- foot interval from ground surface to boring terminating depths.
- The field and laboratory tests conducted on soil samples will include tests for the following:

Field tests

- Blow counts on all samples, and unconfined compressive strengths using a calibrated pocket penetrometer on cohesive soil samples only.

Lab tests

- Moisture content determination [ASTM D2216-05] on all samples (estimated about 20 samples).
- Classify soil using drillers' observations using minimal laboratory testing. A geotechnical engineer/geologist will visually/manually classify the soils to determine the soil type in accordance with the AASHTO and/or Unified Soil Classification System (USCS) [ASTM D2488-93].
- Measure and record groundwater depths during and/or after completion of drilling.

- Abandon /backfill boreholes as per the April 20, 1992 guidelines titled "Wisconsin Department of Transportation Geotechnical Section -Drilled Borehole and Monitoring Well Abandonment Procedures".
- Conduct a survey of as-drilled locations using a GPS device to obtain northing and easting coordinates and ground elevations at boring locations.
- Conduct external stability (sliding, overturning, bearing capacity and settlement) and global stability (rotational) analyses on the proposed extension of retaining wall. One external stability and one global stability analysis will be performed for the wall based on soil information obtained from borings advanced near the highest section of the wall.
- Prepare a geotechnical investigation report that will include the information/design recommendations concerning:
 - Surface, subsurface and groundwater conditions
 - Pavement design parameters based on WisDOT pavement design guidance WisPave as follows:
 - Design Group Index (DGI)
 - Frost Index (FI)
 - Soil Support Value (SSV)
 - Modulus of Subgrade Reaction (k, psi/in)
 - Subgrade Resilient Modulus ($M_{R, \text{psi}}$)
 - Soil design parameters for short term (undrained) and long term (drained) conditions for the extension of retaining wall
 - External and global stability analyses on the extension of retaining wall
 - Construction considerations.
- Boring logs will be completed for each boring and submitted with the Memorandum as attachments.
- Intertek/PSI will be the drilling subcontractor.

3.0 ASSUMPTIONS

- DAAR to provide the project design (CAD) files if available.
- Drilling and sampling to be accomplished utilizing a conventional truck mounted drilling rig (estimated field drilling operations = 1 day). If borings have to be advanced to deeper depths than estimated for this proposal, Himalayan will contact DAAR to seek approval for additional drilling at such location(s). It is Himalayan's understanding that the extra costs incurred due to

any potential additional drilling and sampling would be addressed through a change order at a later date.

- No rock coring is anticipated as part of the geotechnical investigation.
- The proposal is based on the scope of work outlined above under normal working conditions encountered at the job site and does not take into consideration delays caused by inaccessibility/space constraints, changes in site conditions, inclement weather, sub-freezing temperatures, or other unforeseen circumstances.

4.0 ESTIMATED COSTS

The estimated cost for the scope of work (**Actual Costs plus Fixed Fee not to exceed**) outlined above is **\$9,998.39**. The breakdown of the direct labor and non-labor costs is provided in the attached worksheets.

- | | |
|--|------------|
| • Himalayan (Geotechnical Engineering) | \$6,523.39 |
| • PSI/Intertek (Subconsultant - Drilling Services) | \$3,465.00 |

Total Contract Amount:	\$9,998.39
-------------------------------	-------------------

5.0 PROJECT SCHEDULE

Himalayan will initiate the investigative activities immediately after your authorization to proceed and complete the geotechnical investigation and report in accordance with the project schedule.

The contract completion date for the project is December 31, 2023.

Himalayan greatly appreciates the opportunity to submit this cost proposal and looks forward to working with you in this and the upcoming projects through their completion. If you have any questions regarding this proposal, please call me at (262) 502-0066.

Sincerely,

HIMALAYAN CONSULTANTS, LLC



Gopal K. Adhikary, P.E.
Senior Geotechnical Engineer

Contract Direct Labor Detail

(a) Employee Name	(b) Classification	(c) Current Rate	(e) New Pay Rate	(f) Date of Increase	(g) % Work at Current Rate	(i) Weighted Average Hourly Rate
Gopal Adhikary	Senior Geotechnical Engineer	\$70.00	\$70.00	1/1/2023	100.00%	\$70.00
Thomas Dueppen	Project Manager	\$33.00	\$33.00	1/1/2023	100.00%	\$33.00
Shardul Sharma	Geotechnical Engineer	\$33.00	\$33.00	1/1/2023	100.00%	\$33.00
Will Lowe	Engineering Technician	\$22.00	\$22.00	1/1/2023	100.00%	\$22.00
Samira Adhikary	Accountant	\$35.00	\$35.00	1/1/2023	100.00%	\$35.00

Contract Completion Date: 12/31/2023

Summary of Staff Hours and Direct Labor Costs

Project Total

Classification		Senior Geotechnical Engineer		Project Manager		Geotechnical Engineer		Engineering Technician		Accountant			
Avg. Hourly Wage		\$70.00		\$33.00		\$33.00		\$22.00		\$35.00		Total Direct Labor	
Task	Masterworks Code	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
Contract Administration	208	1	\$70.00	0	\$0.00	0	\$0.00	0	\$0.00	2	\$70.00	3	\$140.00
Project Management		1	\$70.00	2	\$66.00	1	\$33.00	0	\$0.00	0	\$0.00	4	\$169.00
Geotechnical Investigation and Report		8	\$560.00	2	\$66.00	31	\$1,023.00	11	\$242.00	0	\$0.00	52	\$1,891.00
TOTAL:	TOTAL:	10	\$700.00	4	\$132.00	32	\$1,056.00	11	\$242.00	2	\$70.00	59	\$2,200.00

Fee Computation Summary by Engineering Task

Project Total

Task	Masterworks Code	Direct Labor Costs	Indirect Costs	Direct Expenses	Fixed Fee	Total
Contract Administration	208	\$140.00	\$248.50	\$0.00	\$25.38	\$413.88
Project Management		\$169.00	\$299.98	\$0.00	\$30.63	\$499.61
Geoptechnical Investigation and Report		\$1,891.00	\$3,356.53	\$3,494.63	\$342.74	\$9,084.90
TOTAL:		\$2,200.00	\$3,905.01	\$3,494.63	\$398.75	\$9,998.39

Home Office Indirect Cost Rate: 177.50%

Fixed Fee 7.25%

Fixed Fee Indirect Cost Rate: 150.00%

Direct Costs by Item

Item	Unit Amount	Unit Type	Rate	Total Expenses
Miscellaneous Supplies (Paint, wooden stakes, etc.)	1	Site	\$15.00	\$15.00
Obtain 2 cores of the exiting pavement and advance 4 borings to 10-15 feet per ASTM 1586 including traffic control, mobilization and demobilization	1	Site	\$3,465.00	\$3,465.00
Mileage - Employee Vehicle	25	Mile	\$0.585	\$14.63
TOTAL				\$3,494.63

Contract Total Fee Computation

Project ID	2430-07-00	Total for Contract
Number of Staff Hours	59	59
Direct Labor Costs	\$2,200.00	\$2,200.00
Indirect Costs	\$3,905.01	\$3,905.01
Direct Expenses	\$3,494.63	\$3,494.63
Fixed Fee	\$398.75	\$398.75
Subtotal	\$9,998.39	\$9,998.39
Subconsultant 1 - Intettek/PSI	\$0.00	\$0.00
Subconsultant 2	\$0.00	\$0.00
Subtotal	\$0.00	\$0.00
TOTAL COST	\$9,998.39	\$9,998.39

Home Office Indirect Cost Rate: 177.50%

Fixed Fee Indirect Cost Rate: 150.00%

Fixed Fee 7.25%

April 22, 2022

DAAR Engineering, Inc.
Attn: Tony Baciak, Jr., P.E.
40 Jewelers Park Drive, Suite 120
Neenah, WI 54956

Re: Washington County – Project ID 2130-13-00/70 STH 60 - Sub Proposal

Dear Tony,

The Knight Barry Title Group is pleased to provide the following services and rate quote for the above-referenced project.

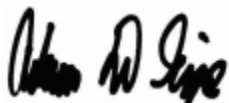
We will provide a DOT-approved Report, which will set forth the record ownership, legal description, mortgage lien and judgment holders, tax status and any easements/restrictions we find recorded since January 1, 1911, affecting the premises. We will also provide a copy of the easements, encumbrances, last deed, maps and tax statements. Please know that searching the railroad records at the State of Wisconsin Office of the Commissioner of Railroads will NOT be included as a part of the searches that will be conducted.

The fee for each report (one report per parcel) will be \$500.00 (total of \$1,000.00 for two reports), and we will bill \$25.00 per written update (total of \$50.00 for one update per report), updates will be completed upon request. Total costs not to exceed \$1,050.00. Copy costs are included with the cost of the report. We will need four weeks to complete our work. The project completion date is December 31, 2023.

Knight Barry Title Inc.'s Federal Tax ID Number is 39-1338746.

Please contact me with any questions. Thank you for the opportunity to be of service.

Very truly yours,
Knight Barry Title, Inc.



Adam D. Sipe
Chief Title Officer

Work Order for DAAR Engineering, Inc.

WisDOT Project ID:	2310-13-00
Site:	STH 60 Ph 2/2.5
City / County:	Village of Jackson / Washington
Highway and Termini (when applicable):	Eagle Drive Roundabout
Total Estimated Cost:	\$11,528

Timetable for completion:

Project Element	Due by date
Complete Phase 2/2.5 Field Work	6/3/22
Draft Phase 2/2.5 Report & HazMat Special Provisions to DAAR	7/8/22
Receive WDNR Concurrence with HazMat Special Provisions	9/2/22

Scope of Services:

Complete Phase 2/2.5 subsurface investigation for the above-referenced project. Prepare Phase 2/2.5 Report and, if necessary, Hazmat Special Provisions.

Assumptions:

- Distance from Ramboll (Milwaukee Office) to site (round-trip, per MapQuest): 64 miles
- Number of planned soil probe borings to 10' bgs: 3
- Number of contingency soil probe borings to 10' bgs: 4
- Soil samples per boring: 3
- Number of planned geoprobe temporary wells: 1
- Groundwater samples per temporary well: 1
- Estimated time on-site for soil logging and sampling: 1 personnel for 1 days
- Collected samples will be analyzed for the parameters listed below at standard turnaround (5-10 business days based on laboratory availability).
- Village of Jackson and WisDOT will not require permits or charge permitting fees for this project; no permit fees are included herein.

Task	Contract Manager	Project Supervisor	Scientist	CAD/GIS	Administrative
	\$60.33	\$45.52	\$35.95	\$32.87	\$27.47
Update Site Health and Safety Plan			1		
Obtain/Review Background Info & Prep for Field Work	2	2	3	2	
Field Work / Sample Prep / Decon		3	12		
Investigative Waste Management Coordination		1			
Report / Specials Preparation	2	12	4	4	2
Coordinate WDNR Review/Concurrence w/ Special Provisions	1				
Project Management	3	2			
	8	20	20	6	2
	\$483	\$910	\$719	\$197	\$55

Total Consultant Labor Costs: \$2,364
Overhead: 163% \$3,854
Profit: 9% \$560

Direct Expenses	Quantity	Unit	Unit Price	Total
Truck	1	day	\$132	\$132
PID	1	day	\$75	\$75
Miscellaneous Field Supplies	1	each	\$100	\$100
GPS Unit	1	day	\$125	\$125
Lunch	1	lunch	\$10	\$10

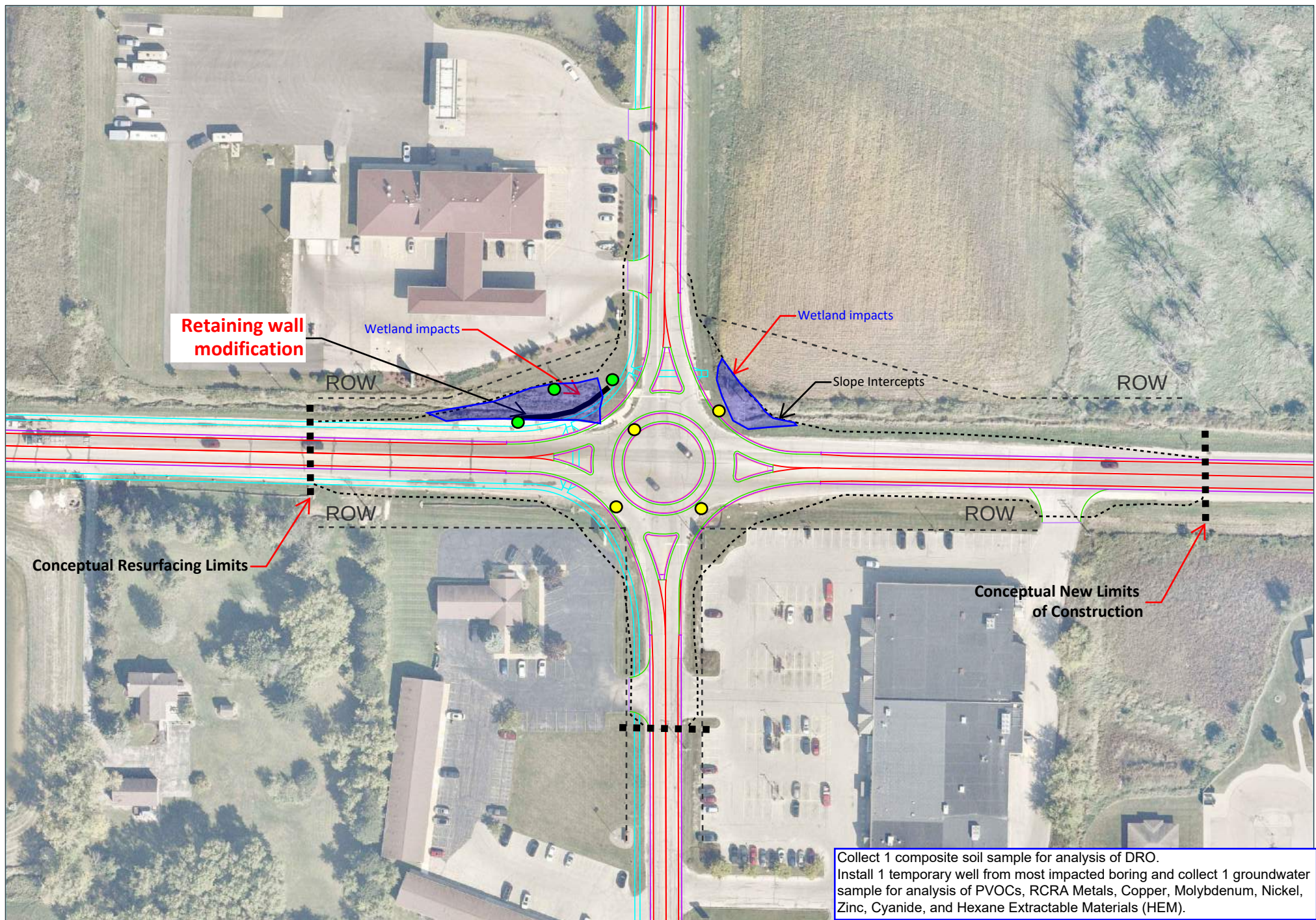
Total Expenses: \$442

Subcontractor	Subcontract Services	Cost basis / Unit Price	Rate	Cost
On-Site Environmental Services, Inc.	Soil Probing & Bore Hole Abandonments	1	\$1,480.00	\$1,480.00
Q3	Traffic Control	1	\$1,380.85	\$1,380.85
TestAmerica	Soil Sample Analytical Testing Standard Turn-Around Time			
	Soil :PVOCs	21	\$55	\$1,155
	Soil Composite: DRO	1	\$30	\$30
	Groundwater: PVOCs	1	\$55	\$55
	Groundwater: RCRA Metals, plus Copper, Molybdenum, Nickel, and Zinc	1	\$75	\$75
	Groundwater: Cyanide	1	\$25	\$25
	Groundwater: Hexane Extractable Materials (HEM)	1	\$50	\$50
	Soil: Sample Disposal	23	\$2.5	\$58

Total Subcontractor Costs: \$4,308
Estimated Total Project Costs: \$11,528

Signature of Ramboll
Date 4/22/2022

Signature of DAAR
Date



WIS 60 & Eagle Drive Roundabout Design Eagle Drive ICE Analysis Village of Jackson, WI

- Planned 10' boring. Collect 3 discrete soil samples for analysis of PVOCs.
- Contingency 10' boring. If advanced, collect 3 discrete soil samples for analysis of PVOCs.

Figure 3

April 20, 2022

Stan Lukasz, P.E.
Project Manager
DAAR Engineering
325 E. Chicago St.
Suite 400
Milwaukee, WI 53202
Direct: 414-935-4360
Office: 414-225-9817

Sabin Hall, Rm 290
PO Box 413
Milwaukee, WI
53201-0413
414-229-3078
www.uwm.edu
www.uwm.edu/archaeology-laboratory/

RE: Amendment 2
Section 106
Archaeological and Architectural/Historical Investigations
Project ID 2310-13-00
STH 60 USH 45 to Eagle Drive
Washington County, Wisconsin
UWM-CRM 2020-0034

Dear Mr. Lukasz,

The Cultural Resource Management program (Archaeological Research Laboratory Center) at the University of Wisconsin-Milwaukee (UWM) is pleased to offer a scope of work and estimated cost to conduct additional cultural resource investigations for the above referenced project.

Changes have been made to the proposed project, consisting of the addition of a roundabout at the intersection of STH 60 and Eagle Drive. This addition requires an update to the architecture history investigations, as well as the addition of archaeological investigations.

Scope of Services

Archaeological Investigations

The archaeological study will consist of archives and literature research and field investigations. The archival research will identify all previously reported archaeological sites both within the area of potential effect (i.e. all areas of proposed ground disturbing activities) and within a one mile radius of the area of potential effect (APE). The archival research will also document locales within the APE that have already been subjected to archaeological survey. Field investigations will consist of intensive Phase I archaeological survey of the APE using visual inspection and/or shovel probe testing for those areas not subjected to prior archaeological survey.

Preliminary research indicates there is one previously recorded archaeological site, WT-0348 Field Site 11.070-03, coincident with the additional project area.

Architecture History Investigations

Additional scope for architecture history will consist of a review of the previous investigations, and an updated memo pertaining to the revised area of potential effect.

Reporting

The results of the cultural resources investigations will be documented using standard WisDOT reporting forms for archaeological and architectural/historical studies:

- Archaeological Survey Field Report Form (ASFR) (DT1978)
- Archaeological Literature and Records Review Form (DT1459)
- Architecture History Update Memo
- DT1635 Section 106 Form (relevant portions)

The Section 106 report package will be submitted to DAAR and the WisDOT Cultural Resources Team (CRT) for review and comment. Once accepted by WisDOT CRT, the package will be submitted to SHPO for concurrence.

Costs

The cost for the work is a lump sum of \$3,105.00.

Please note that the cost assumes that no significant archaeological materials will be encountered during the work and does not include evaluation studies for archaeological sites.

The official institution name used in contracts, grants, and other official agreements is: The Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin-Milwaukee. If awarded, we respectfully request the ability to negotiate the terms and conditions from the sponsor. Please note that as an agency of the State of Wisconsin and an academic institution the following conditions are required:

1. We are self-insured under secs. 895.46, 893.82 and 20.505(2)(k) of the Wisconsin Statutes.
2. We are not permitted, by law, to indemnify or defend any sponsor.
3. We require the right to publish or use information, data, writings, or materials resulting from research for educational and research purposes.

If you would like a copy of our standard research agreement to review our language in more detail, please feel free to visit [UWM Standard Terms and Conditions](#).

If there are questions or concerns regarding the scope of work, or to further discuss the project, please do not hesitate to contact me at (414) 251-8566 or at jlpicard@uwm.edu.

Sincerely,



Jennifer L. Picard
Principal Investigator

DocuSigned by:

EAF78419E79F4DE...

Anne Kissack
Contracts Specialist, Office of Sponsored Programs

Attachment 1: Cost Estimate

University of Wisconsin-Milwaukee
Cultural Resource Management

BUDGET ESTIMATE 2020-0034
AMENDMENT 2
Project ID 2310-13-00
STH 60 USH 45 to Eagle Drive
Washington County, Wisconsin
Archaeology and Architecture/History Investigations
April 2022

DIRECT COSTS**A: SALARIES & WAGES**

TASK	PERSONNEL											
	Senior				LTE				Students			
	Title	\$/hr	Hrs	Total\$	Title	\$/hr	Hrs	Total\$	Title	\$/hr	Hrs	Total\$
Coordination & Administration	Princip. Investigator - II	38.86	8	310.88								
Architecture History Survey, AHSF	Historian	26.29	8	210.32								
Archaeological Investigations & Report	Sr. Proj Mgr	28.79	20	575.80	Supvsr 1	19	8	152.00				
	Project Manager	26.29	0	0.00								
	GIS Analyst	25.73	8	205.84								

SUBTOTAL LABOR\$ 1302.84 152.00 0.00

TOTAL LABOR\$ 1454.84

B: FRINGE BENEFITS

36% of Senior Personnel 469.02
10.0% of LTE Personnel 15.20
0.9% of Student Personnel 0.00

TOTAL FRINGE BENEFITS 484.22

C: SUPPLIES & EXPENSES

Supplies 0.00
Meals 0 person day @\$51/day 0.00
Lodging 0 person day @\$82/day 0.00
Vehicle Rental & Gasoline 1 \$65/day 65.00
Repository Fee 25.35

TOTAL SUPPLIES 90.35

D: TOTAL DIRECT COSTS (A + B + C) 2029.41

E: INDIRECT COSTS (D X .53) 1075.59

TOTAL PROJECT COSTS (D + E) \$3,105.00

Public Works Report

May 31, 2022

Treatment Plant - Designed Capacity – 1.67 million gallons per day
 Peak Flow Capacity – 6.0 million gallons per day

Year 2020

January	Avg. Flow 1.280 MGD	Min. Flow 1.055 MGD	Max. 1.720 MGD
February	Avg. Flow 1.221 MGD	Min. Flow 1.000 MGD	Max. 1.630 MGD
March	Avg. Flow 1.581 MGD	Min. Flow 1.010 MGD	Max. 2.290 MGD
April	Avg. Flow 1.283 MGD	Min. Flow 940,000 g.p.d.	Max. 2.210 MGD
May	Avg. Flow 1.607 MGD	Min. Flow 1.010 MGD	Max. 4.090 MGD
June	Avg. Flow 1.178 MGD	Min. Flow 980,000 g.p.d.	Max. 1.510 MGD
July	Avg. Flow 1.269 MGD	Min. Flow 800,000 g.p.d.	Max. 2.370 MGD
August	Avg. Flow 1.042 MGD	Min. Flow 760,000 g.p.d.	Max. 1.510 MGD
September	Avg. Flow 1.148 MGD	Min. Flow 810,000 g.p.d.	Max. 1.850 MGD
October	Avg. Flow 1.172 MGD	Min. Flow 870,000 g.p.d.	Max. 2.210 MGD
November	Avg. Flow 1.122 MGD	Min. Flow 860,000 g.p.d.	Max. 1.770 MGD
December	Avg. Flow 1.164 MGD	Min. Flow 940,000 g.p.d.	Max. 1.480 MGD

Year 2021

January	Avg. Flow 1.075 MGD	Min. Flow 880,000 g.p.d.	Max. 1.460 MGD
February	Avg. Flow 1.015 MGD	Min. Flow 830,000 g.p.d.	Max. 1.590 MGD
March	Avg. Flow 1.525 MGD	Min. Flow 1.160 MGD	Max. 1.970 MGD
April	Avg. Flow 1.264 MGD	Min. Flow 1.020 MGD	Max. 1.950 MGD
May	Avg. Flow 1.108 MGD	Min. Flow 880,000 g.p.d.	Max. 1.450 MGD
June	Avg. Flow 1.091 MGD	Min. Flow 810,000 g.p.d.	Max. 1.670 MGD
July	Avg. Flow 983,226 g.p.d.	Min. Flow 780,000 g.p.d.	Max. 1.410 MGD
August	Avg. Flow 1.281 MGD	Min. Flow 800,000 g.p.d.	Max. 2.530 MGD
September	Avg. Flow 932,333 g.p.d.	Min. Flow 710,000 g.p.d.	Max. 1.170 MGD
October	Avg. Flow 930,000 g.p.d.	Min. Flow 770,000 g.p.d.	Max. 1.140 MGD
November	Avg. Flow 853,667 g.p.d.	Min. Flow 720,000 g.p.d.	Max. 970,000 g.p.d.
December	Avg. Flow 952,581 g.p.d.	Min. Flow 720,000 g.p.d.	Max. 1.330 MGD

Year 2022

January	Avg. Flow 839,968 g.p.d.	Min. Flow 720,000 g.p.d.	Max. 960,000 g.p.d.
February	Avg. Flow 848,571 g.p.d.	Min. Flow 710,000 g.p.d.	Max. 1.080 MGD
March	Avg. Flow 1.499 MGD	Min. Flow 890,000 g.p.d.	Max. 3.910 MGD
April	Avg. Flow 2.245 MGD	Min. Flow 1.200 MGD	Max. 4.100 MGD

Years Summary of Water Consumption

2006 Total Pumpage 207,719,000 gallons	2007 Total Pumpage 217,224,000 gallons
2008 Total Pumpage 229,613,000 gallons	2009 Total Pumpage 231,160,000 gallons
2010 Total Pumpage 239,326,000 gallons	2011 Total Pumpage 240,268,000 gallons
2012 Total Pumpage 253,492,000 gallons	2013 Total Pumpage 228,371,000 gallons
2014 Total Pumpage 230,973,000 gallons	2015 Total Pumpage 222,621,000 gallons
2016 Total Pumpage 254,531,000 gallons	2017 Total Pumpage 251,387,000 gallons
2018 Total Pumpage 241,322,000 gallons	2019 Total Pumpage 253,427,000 gallons
2020 Total Pumpage 259,413,000 gallons	2021 Total Pumpage 242,216,000 gallons

Year 2020

Jan.	Avg.	662,650 g.p.d.	Highest Day 769,000 gals.	Total	20,542,000 gallons
Feb	Avg.	682,280 g.p.d.	Highest Day 886,000 gals.	Total	19,786,000 gallons
March	Avg.	702,030 g.p.d.	Highest Day 837,000 gals.	Total	21,763,000 gallons
April	Avg.	731,070 g.p.d.	Highest Day 1.153 MGD	Total	21,932,000 gallons
May	Avg.	691,030 g.p.d.	Highest Day 915,000 gals.	Total	21,422,000 gallons
June	Avg.	806,030 g.p.d.	Highest Day 1.057 MGD	Total	24,181,000 gallons
July	Avg.	841,970 g.p.d.	Highest Day 1.431 MGD	Total	26,101,000 gallons
August	Avg.	878,710 g.p.d.	Highest Day 1.437 MGD	Total	27,240,000 gallons
Sept	Avg.	696,370 g.p.d.	Highest Day 1.058 MGD	Total	20,891,000 gallons
October	Avg.	677,160 g.p.d.	Highest Day 963,000 gals.	Total	20,992,000 gallons
Nov	Avg.	567,100 g.p.d.	Highest Day 850,000 gals.	Total	17,013,000 gallons
Dec	Avg.	566,130 g.p.d.	Highest Day 815,000 gals.	Total	17,550,000 gallons

Year 2021

Jan.	Avg.	565,650 g.p.d.	Highest Day 789,000 gals.	Total	17,535,000 gallons
Feb	Avg.	517,650 g.p.d.	Highest Day 913,000 gals.	Total	16,047,000 gallons
March	Avg.	583,770 g.p.d.	Highest Day 1.303 MGD	Total	18,097,000 gallons
April	Avg.	642,770 g.p.d.	Highest Day 1.190 MGD	Total	19,283,000 gallons
May	Avg.	659,610 g.p.d.	Highest Day 1.103 MGD	Total	20,448,000 gallons
June	Avg.	825,730 g.p.d.	Highest Day 1.311 MGD	Total	24,772,000 gallons
July	Avg.	750,190 g.p.d.	Highest Day 1.529 MGD	Total	23,256,000 gallons
August	Avg.	768,940 g.p.d.	Highest Day 1.920 MGD	Total	23,837,000 gallons
Sept	Avg.	633,060 g.p.d.	Highest Day 1.775 MGD	Total	19,625,000 gallons
Oct	Avg.	753,030 g.p.d.	Highest Day 1.992 MGD	Total	23,344,000 gallons
Nov	Avg.	619,870 g.p.d.	Highest Day 1.059 MGD	Total	18,596,000 gallons
Dec	Avg.	560,520 g.p.d.	Highest Day 1.167 MGD	Total	17,376,000 gallons

Year 2022

Jan.	Avg.	553,580 g.p.d.	Highest Day 707,000 gals.	Total	17,161,000 gallons
Feb.	Avg.	575,360 g.p.d.	Highest Day 683,000 gals.	Total	16,110,000 gallons
March	Avg.	578,290 g.p.d.	Highest Day 861,000 gals.	Total	17,927,000 gallons
April	Avg.	606,400 g.p.d.	Highest Day 1.084 MGD	Total	18,192,000 gallons

Pump Capacity Well #1- 400 g.p.m. Well #3 -900 g.p.m. Well #4 - 1200 g.p.m. Well #5 – 1,100 g.p.m. Well #6 – 800 g.p.m.

WWTP – Holding & Septage Receiving

2005	\$ 87,562.01	2006	\$101,115.11	2007	\$152,201.07	2008	\$210,441.47
2009	\$183,815.34	2010	\$197,653.66	2011	\$220,576.28	2012	\$236,224.70
2013	\$235,336.46	2014	\$203,938.32	2015	\$210,644.47	2016	\$220,473.17
2017	\$232,358.23	2018	\$245,767.74	2019	\$219,822.80	2020	\$204,656.11
2021	\$209,083.10						

2020	Holdings (gals)	Grease (gals)	G Decant (gals)	Septage (gals)	S Decant (gals)	Total Billings
January	1,426,900				71,000	\$11,872.50
February	1,310,500			2,250	88,500	\$12,786.50
March	1,471,600	900		5,000	173,650	\$16,429.05
April	1,263,950			29,000	326,170	\$19,570.85
May	1,168,670			4,450	308,250	\$17,255.86
June	1,253,900			9,900	196,550	\$15,390.45
July	1,459,700			16,450	212,650	\$17,734.10
August	1,148,750			4,250	168,530	\$13,594.50
September	1,276,950			22,700	299,450	\$18,723.35
October	1,372,200	2,200		39,750	456,000	\$24,386.35
November	1,231,850			33,650	301,700	\$18,911.55
December	1,489,450			16,950	160,200	\$16,683.35

2021	Holdings (gals)	Grease (gals)	G Decant (gals)	Septage (gals)	S Decant (gals)	Total Billings
January	1,284,600			6,650	77,250	\$12,507.30
February	1,386,475			3,000	44,450	\$12,338.05
March	1,633,050			27,600	206,050	\$19,457.65
April	1,425,850			38,000	268,500	\$19,829.30
May	1,297,900			34,550	232,100	\$17,740.45
June	1,392,350			52,800	258,500	\$19,977.30
July	1,338,500			31,600	245,050	\$18,256.25
August	1,499,450			31,200	196,250	\$18,305.85
September	1,389,200			23,900	213,400	\$17,524.10
October	1,275,550			16,250	297,260	\$18,367.15
November	1,249,400			22,400	224,200	\$16,608.20
December	1,448,000			32,000	205,900	\$18,171.50

2022	Holdings (gals)	Grease (gals)	G Decant (gals)	Septage (gals)	S Decant (gals)	Total Billings
January	1,311,750	2,700			40,650	\$11,780.25
February	1,321,050	8,000			48,350	\$12,577.15
March	2,076,350	2,000		40,750	303,750	\$26,238.30
April	1,791,650	5,400	1,500	101,700	326,050	\$27,660.95

CTH P and STH 60 Intersection Project and old Park-n-Lot Property

This is a place holder for the item. We will look to contact WisDOT for a meeting this Spring of 2022.

Morning Meadows Subdivision

Streetlights are being planned by the Village for installation in Phase 1 and 2. Phase 3 plans have been approved by the DNR. Looking to schedule the pre-construction meeting.

Little Lambs Subdivision (Glen Brooke Drive)

Plans have been finalized and waiting for approval from the DNR to schedule the pre-construction meeting.

Jackson Municipal Complex

Punch list is getting smaller and getting closer to close out the contract for the building in July of 2022. This is the last report on the item.

Willow Ridge Drive Reconstruction Project

A contractor, sub-contractor, and inspector meeting of the project was conducted on May 26, 2022, to create a schedule to complete the punch list items.

Spruce Street/Ridgeway Drive Extension Project

We are working on a streetlight layout for the two streets. We have poles, and fixtures, but now the meter pedestals are back ordered for 12 to 40 weeks.

Coffee Connection Trail Project

Signage, painting of crosswalks, and landscaping has been accomplished. The remaining items are proper drainage of the path and manhole path elevation causing a plowing issue. All will be address by thermo-bonding the asphalt.

Eagle Drive & STH 60 Intersection Improvement

The Village has approved an engineering contract with DAAR Engineering for the design of a roundabout for the intersection. The project will be bid and construction with the 2024 WisDOT Resurfacing Project.

Midwest Fiber Installation

All Village owned buildings are connected with fiber. Next, being completed is a new server, and one phone system.

Stormwater Ponds Management Inspection Program

The Village has started the program by having a kickoff meeting with CDM Smith consulting. Letters will be sent to pond owners in the Spring of 2022 with a completion date sometime if the Fall of 2022.

Main Street (STH 60) Sewer and Water Replacement

The Jackson Sewer and Water Utilities are working on collecting data for the utility replacement in Main Street (STH 60) for this year of 2022 ahead of the resurfacing project by WisDOT in 2024. The Jackson Sewer and Water Utilities is working with Gremmer and Associates on the design. A letter was sent to all property owners along Main Street for status on the condition of the sanitary lateral.

CTH P (Sherman Road to STH 60) Utility Project

Gremmer & Associates is the engineering firm hired to complete the design prior to the 2024 CTH P Reconstruction Project. The design will be created this year with construction to be done in 2023. No change.

Respectfully submitted, Brian W. Kober, P.E.