Project Manual

Project Name:

Newton Park
Synthetic Turf Athletic Field

Project Number: 14034.00

Project Location:

Newton Park

707 Fairview Avenue
Glen Ellyn, IL 60137

Owner:

Glen Ellyn Park District

185 Spring Ave.
Glen Ellyn, IL 60137

Issued for Bids February 11, 2015

Engineer:
Eriksson Engineering Associates, Ltd.
145 Commerce Drive, Suite A
Grayslake, IL 60030
T: 847-223-4804 F: 847-223-4864

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SECTION 000030 - INVITATION TO BID

Project:

Synthetic Turf Athletic Fields – Spring 2015

Newton Park
707 Fairview Avenue
Glen Ellyn, IL 60137

Owner:

Glen Ellyn Park District
185 Spring Avenue
Glen Ellyn, Illinois 60137

Engineer:

Eriksson Engineering Associates, Ltd.
145 Commerce Drive, Suite A
Grayslake, IL 60030

General Project Description:

The scope of work includes providing all labor, materials, machinery, tools, equipment, and other means of construction necessary for completion of the work indicated in the Bid Documents including, but not necessarily limited to, the following: demolition, earthwork, under-drainage, storm sewers, above ground detention basin, curbs, fencing, water lines, scoreboard relocation, pavement and stone section in preparation for synthetic turf installation.

Proposal Due Date:

Proposals will be received in duplicate (**two originals**) by the Owner at the place, on or before the date and time stated below.

Place:

Spring Avenue Recreation Center
Mr. Dan Hopkins, Superintendent of Parks & Planning
185 Spring Avenue
Glen Ellyn, Illinois 60137

Date: **Monday, March 2, 2015**

Time: **10:00 a.m. Central Time**

After that time, the sealed bids will then be publicly opened and read.

Any proposals received after the time and date stated above will be returned to the Bidder unopened. All proposals received in accordance with the requirements above will be publically opened and read at the place, date and time stated above.

Bid Envelopes:

All proposals must contain the following information on the outside of the sealed envelope:

Project Name
Bidder's Company Name
Place, date and time of bid opening

Bid Security:

Bid security in the form of a **certified check, cashier's check, or bid bond** made payable to the Glen Ellyn Park District in an amount equal to **ten percent (10%)** of the base bid is required of all parties submitting a proposal. **Company or personal checks are not permitted.**

Bid Documents:

Bidders can obtain a complete set of electronic documents for no charge after 12:00 noon on February 11, 2015 via the following link: http://gepark.org/boa_transparency.html. Bidders can also obtain **one (1)** hard copy set of bid documents consisting of one (1) full-size set of drawings, and one (1) bound Project Manual by contacting the following individual **via email**:

Mr. Kevin Camino, P.E.
Eriksson Engineering Associates, Ltd.
145 Commerce Drive, Suite A
Grayslake, IL 60030
Email: kcamino@eea-ltd.com

A **non-refundable** bid documents deposit of **$100.00** made **payable to Eriksson Engineering Associates, Ltd.** is required for the set of documents.

Pre-Bid Meeting:

A **pre-bid meeting** will be held at the location and on the date indicated below. All interested bidders are encouraged to attend. The bid documents will be reviewed, bidders' questions will be answered and contract requirements will be reviewed.

Place:

Spring Avenue Recreation Center
185 Spring Avenue
Glen Ellyn, Illinois 60137

Date: **Monday, February 23, 2015**

Time: **9:00 a.m. Central Time**

Field Verification:

Field verification of the existing conditions and the required scope of work are required prior to submission of a bid. The site can be visited during normal work hours or by contacting the following individual:

Mr. Dan Hopkins
Superintendent of Parks & Planning

Spring Avenue Recreation Center
185 Spring Avenue
Glen Ellyn, Illinois 60137
Telephone: (630) 942-7265
Fax: (630) 858-2479
Email: dhopkins@gepark.org

Owner's Rights:

The Owner reserves the right to accept or reject any and all bids and to waive informalities to any bid when such is deemed by the Owner to be in the Owner's best interest.

This invitation is issued in the name of the Glen Ellyn Park District.

END OF SECTION 000030

SECTION 000035 – BID NOTICE

PART 1 – GENERAL

1.1 The following was published on Thursday, February 12, 2015 in the Daily Herald:

The Glen Ellyn Park District is accepting bids from contractors for work at Newton Park in Glen Ellyn, Illinois.

The scope of work includes providing all labor, materials, machinery, tools, equipment, and other means of construction necessary for completion of the work indicated in the Bid Documents including, but not necessarily limited to, the following: demolition, earthwork, under-drainage, storm sewers, above ground detention basin, curbs, fencing, water lines, scoreboard relocation, pavement and stone section in preparation for synthetic turf installation.

The work site is Newton Park, 707 Fairview Avenue, Glen Ellyn, IL 60137. On-site construction is scheduled to commence in April of 2015.

A complete set of electronic Bid Documents may be **obtained for no charge after 12:00 noon on Wednesday, February 11, 2015** from the Glen Ellyn Park District website via the following link: http://gepark.org/boa_transparency.html. If hard copies of the documents are desired, send a written request by email to Kevin Camino kcamino@eea-ltd.com. A non-refundable bid deposit of $100.00 is required for each complete hard copy set of Bid Documents.

A **pre-bid meeting will be held at 9:00 a.m. on Monday, February 23, 2015**, at the Spring Avenue Recreation Center, 185 Spring Avenue, Glen Ellyn, Illinois. The pre-bid meeting is not mandatory; however, it is strongly encouraged that contractors be in attendance at the meeting.

Sealed bids must be received by Mr. Dan Hopkins at the Spring Avenue Recreation Center, 185 Spring Avenue, Glen Ellyn, Illinois **on or before 10:00 a.m. on Monday, March 2, 2015**, at which time they will be publicly opened and read in the Park District Board Room.

Each bid must be accompanied by a bid security in the amount of ten percent (10%) of the Base Bid. The successful Bidder will be required to furnish construction performance and payment bonds in the full amount of the Contract Sum.

Contractor shall not pay less than the prevailing rates of wages to all laborers, workmen, and mechanics performing work under this contract, and shall comply with the requirements of the Illinois Wages of Employees on Public Works Act (820 ILCS 130/1-12). The Contractor must be required to submit electronic copies of their certified payrolls to the Engineer with each application for payment.

The Glen Ellyn Park District Board reserves the right to accept or reject any or all bids, reject nonconforming bids, reject conditional bids, waive irregularities in the bidding procedures, or to accept any bid that, in its sole opinion, best serves the interests of the Park District.

PART 2 – PRODUCTS (Not applicable)
PART 3 – EXECUTION (Not applicable)

AIA® Document A701™ – 1997

Instructions to Bidders

for the following PROJECT:
(Name and location or address)
Newton Park Synthetic Turf Athletic Field
Glen Ellyn

THE OWNER:
(Name, legal status and address)
Glen Ellyn Park District
185 Spring Avenue
Glen Ellyn, IL 60137

THE ARCHITECT:
(Name, legal status and address)
Eriksson Engineering Associates, Ltd.
145 Commerce Drive
Grayslake, IL 60030

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

TABLE OF ARTICLES

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 COPIES

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the non-refundable deposit sum, if any, stated therein. ~~The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.~~

§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

§ 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

§ 3.3 SUBSTITUTIONS

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 ADDENDA

§ 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than ~~four~~ two days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 PREPARATION OF BIDS

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

§ 4.2 BID SECURITY

§ 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

§ 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

§ 4.3 SUBMISSION OF BIDS

§ 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

§ 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

§ 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

§ 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

§ 6.2 OWNER'S FINANCIAL CAPABILITY

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- **.1** a designation of the Work to be performed with the Bidder's own forces;
- **.2** names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
- **.3** names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 BOND REQUIREMENTS

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.

§ 7.2 TIME OF DELIVERY AND FORM OF BONDS

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Kevin Camino, P.E., hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 13:21:40 on 02/10/2015 under Order No. 2727455522_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A701™ – 1997, Instructions to Bidders, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

_____

(Signed)

_____

(Title)

_____

(Dated)

SECTION 000200 - SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. GENERAL

1. The following requirements add to or modify the "Instructions to Bidders," AIA Document A701, Fifth Edition, 1997. Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, the unaltered portions of the Instructions to Bidders will remain in effect.

B. BID BOND

1. Bids must be accompanied by a Bid Bond or Certified Check as surety in the amount of 10% of the base bid and should be made payable to Glen Ellyn Park District. All Bid Bonds except that of the successful bidder will be returned immediately after award of contract. Company or personal checks are not permitted.

C. PERFORMANCE BOND AND MATERIALS AND LABOR PAYMENT BOND

1. The successful bidder shall furnish a one hundred percent (100%) Performance Bond and Materials and Labor Payment Bond issued by a surety authorized by the Illinois Department of Insurance to sell surety bonds and such bonds shall be for the Contract Sum amount (base bid and accepted alternate bids) at which time the Bid Bond will be returned.

D. INSURANCE

1. In accordance with the General and Supplemental Conditions, the successful bidder shall expressly bind himself/herself to defend and save the Owner and Engineer, harmless from all suits or actions of every name and description and the successful bidder shall carry insurance, in company or companies acceptable to the Owner, for Worker's Compensation and Comprehensive General Liability. Refer to Section 000700 General Conditions and the Supplemental Conditions thereto for additional requirements.
2. Each bidder shall submit prior to award of a contract, a certification of insurance which meets the above specifications.

E. CLEANING

1. The Contractor shall, daily, at the completion of the work, at each site and/or location,

remove and dispose of all rubbish, surplus materials, equipment, etc., and shall leave the site and/or locations absolutely clean and in good order to the satisfaction of the Owner and Engineer.

F. SAFETY

1. The Contractor is solely responsible for all construction safety and for the safe passage of all pedestrian traffic, building occupants, occupants of neighboring buildings, students, staff, Engineers, or site or building visitors for the duration of the job. Any precautionary measures, necessary warning signs, etc., required to assist the Contractor in the performance of the work shall be at the Contractor's expense and provided for his/her quoted price.

G. EXAMINATION OF SITE AND DOCUMENTS

1. Before submitting a bid, each bidder must visit the site and shall be responsible for knowledge of the conditions affecting the Work. The act of submitting a bid is to be considered full acknowledgment that the bidder has inspected the site, as well as the Contract Documents, and is completely familiar with the exposed and concealed existing conditions and requirements of all of them.
2. If after inspecting the entire project area, a bidder believes they still do not have a complete understanding of the existing conditions they could encounter during the project, the Owner will allow the bidder to cut, upon written request, access openings in existing construction to allow the bidder to fully ascertain the required scope of Work. If the Contractor does not request such access openings, the Contractor waivers all rights to change orders due to concealed or existing conditions.
3. No change orders for additional cost will be allowed for a Contractor's discovery of existing conditions, that in the Engineer’s and Owner's opinion, the Contractor should have made themselves aware of through a thorough pre-bid site investigation and, if necessary, selective exploratory demolition and cutting.

H. PERSONNEL

1. If any person employed on the work site be, in the opinion of Glen Ellyn Park District, intemperate, disorderly, incompetent, willfully negligent or dishonest in the performance of his/her duties, he or she shall be directed to cease work and vacate the job site immediately.
2. In the event the Contractor comes on the premises, he/she shall be responsible for conducting all activities on said premises in accordance with the provisions of the Occupational Safety and Health Act of 1970 and the standards and regulations issued thereunder. The Contractor shall agree to indemnify and hold harmless the Glen Ellyn Park District, the Engineer and all the Engineer’s consulting engineers for all claims and damages resulting from Contractor's failure to conduct his/her activities on the Owner's premises in accordance with said Act and the related standards.

I. PREVAILING WAGE ACT

1. Contractor is responsible for complying with all requirements of the Illinois Prevailing Wage Act ("Act"), 820 ILCS Section 130/0/01, et seq. to the extent that it applies.

2. The Contractor must pay the general prevailing rate of wages in the locality for each craft or type of worker or mechanic needed to execute the contract or perform such work, also the general prevailing rate for legal holiday and overtime work, as ascertained by the public body or by the Department of Labor shall be paid for each craft or type of worker needed to execute the contract or to perform such work, and it shall be mandatory upon the bidder and upon any subcontractor under him, to pay not less than the specified rates to all laborers, workers and mechanics employed by them in the execution of the contract or such work. Refer to Section 000400 - Prevailing Wage Rate Schedule for additional information and requirements.
3. The Contractor must insert a provision or stipulation regarding the payment of prevailing wage rate into the subcontract and Contractor's bond.
4. The Contractor must post the relevant prevailing wage rates at a location at the Project Site that is easily accessible by the workers.
5. The Contractor and all subcontractors must create, and keep for at least three (3) years, records of all laborers, mechanics, and other workers employed by them on the Project. Refer to 820 ILCS 130/5/(a)(1) and 820 ILCS 130/5/(1), (b).
6. The Contractor must submit an electronic Adobe PDF copy of their Certified Payroll to the Owner every month for the duration of the Project including the signed statement or a certified statement in lieu thereof certifying that the Act does not apply. Submit the Certified Payroll with the Contractor's Application for Payment. The Applications for Payment will not be reviewed until the Engineer receives the Certified Payroll. Refer to 820 ILCS 130/5(a)(2).
7. Refer to the Illinois Department of Labor's website for additional information and requirements at www.state.il.us/agency/idol/laws/Law130.htm.

J. WORK SCHEDULE AND COMPLETION

1. Unless otherwise stated, Work shall be commenced by the Contractor immediately upon receipt of a written authorization to proceed. Before Work is started, however, the Contractor shall notify the Superintendent of Parks and Planning of the Glen Ellyn Park District of the methods and procedures he/she intends to use and no Work shall be started until these methods are to the satisfaction of the superintendent of Parks and Planning. Work shall be completed within the time stipulated in the Contract Documents.
2. Union work stoppages, union strikes, or the failure of a Contractor's workers or subcontractors to cross a union picket lines or informational picket lines will not relieve the Contractor of their contractual obligations to complete the Work in accordance with the Construction Schedule.

K. PROTECTION OF WORK

1. The Contractor shall adequately protect the Work, adjacent property, construction and finishes, and the public, and shall be responsible for any damage or injury due to his/her neglect.
2. The Contractor shall be entirely responsible for all apparatus, equipment and appurtenances furnished by him/her in connection with the work and special care shall be taken to protect all parts thereof in such a manner as may be necessary or as directed.

L. DEFAULT

1. In case of default by the Contractor, the Owner may procure the articles or services from other sources and hold the Contractor responsible for any cost occasioned thereby.

M. CANCELLATION OF CONTRACT

1. In case of bankruptcy of the Contractor or failure of the Contractor to pay suppliers or workers or a work stoppage or a failure by the Contractor to provide sufficient workers for the job or sufficient material for the job, the Owner may terminate, with seven days written notice, the Contract and take over the completion of the project, applying the unpaid balance of money for the Contract to the completion of the Work and any extra expenses incidental thereto.

N. PROGRESS PAYMENTS

1. Payments shall be made as specified in Section 012900 - Payment Procedures and on the following basis:

    a. First Payment - for cost of materials delivered to job site, less 10% retainage.
    b. Subsequent Payments - upon documentation of progress, less 10% retainage.
    c. Substantial Completion - Upon substantial completion of the work - the Contractor may apply for reduction to 5% retainage. Additional amounts may be withheld by the Engineer for extensive punch list items or incomplete work. Refer to Division 01 for additional information and requirements.
    d. Final Completion - 5% retainage upon satisfactory completion of the punch list and all final completion requirements. Refer to Division 01 for additional information.

O. LIEN WAIVERS

1. Supporting partial Waivers of Lien for each subcontractor, supplier, and prime contractor must accompany each request for progress payment. Waivers must spell out the exact description of Work performed for which Waiver is issued.
2. For final payment it is necessary to submit final waivers in the full amount of the contracts for all subcontractors, suppliers and prime contractors.
3. Waivers must be accompanied by a sworn statement listing subcontractors and suppliers, the amounts of their contracts and the amounts requested.
4. No payment shall become due until after the Contractor, if required, delivers to the Owner a complete release of all liens arising out of this contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he/she has knowledge or information the releases and receipts shall include all the labor and material for which a lien could be filed. If any lien remains unsatisfied after all payments are made, the Contractor shall refund the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs, Engineering fees, and attorneys' fees.

P. PRE-BID MEETING & FIELD VERIFICATION

1. All prospective contractors are encouraged to attend a pre-bid meeting and conduct on-site field verification of all existing conditions. Prospective subcontractors and suppliers are urged to attend and verify existing conditions.

Q. REJECTION OF BIDS: AWARD OF CONTRACT

1. The Owner will award the Contract to the lowest responsive and responsible bidder if the Owner deems it to be in its best interests. The bidder to whom the award is made will be notified at the earliest possible date. The Owner reserves the right to determine the lowest bidder on the basis of the "base bid" and any combination of alternates, or no alternates, that it deems best. The Owner reserves the right to reject any and all bids, and to waive any irregularities in bids received whenever such rejection or waiver is in the interest of the Owner. The Owner also reserves the right to reject the bid of any bidder who has previously failed to perform properly or complete on time Contracts of similar nature; who is not in a position to perform the contract; or who has habitually and without just cause neglected the payment of bills or otherwise disregarded any obligation to subcontractors, material suppliers, or employees. In determining the lowest qualified bidder, the following elements, in addition to those above mentioned, will be considered: Whether the bidder involved (a) maintains a permanent place of business; (b) has adequate plant equipment to do the Work properly and expeditiously; (c) has a suitable financial status to meet obligations incidental to the Work; (d) has appropriate technical experience; (e) has failed to attend the pre-bid meeting; and (f) has failed to submit a properly completed Contractor's Qualification Statement. See QUALIFICATIONS OF BIDDER.

R. QUALIFICATIONS OF BIDDER

1. Each bidder shall submit by February 25, 2015, a current AIA Document A305, Contractor's Qualification Statement. Failure of a bidder to submit a fully completed Contractor's Qualification Statement may be considered, at the Owner's option, grounds for rejecting their bid.
2. The Owner may make such further investigations of bidders as he/she deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Owner all such data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted, or investigation of such bidder, fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 000200

SECTION 000300 - BID FORM

Bid Due: **Monday, March 2, 2015, 10:00 a.m., Central Time**

Bid To: **Glen Ellyn Park District**
Mr. Dan Hopkins, Superintendent of Parks & Planning
Spring Avenue Recreation Center
185 Spring Avenue
Glen Ellyn, IL 60137

Bid From: _____

_____

_____

_____

Bid For: **Synthetic Turf Athletic Field**

Newton Park
707 Fairview Avenue
Glen Ellyn, Illinois 60137

Project No.: **14034.00**

The Undersigned Acknowledges Receipt of:

Contract Documents for the work indicated above, including the Project Manual, all Drawings and all addenda listed below:

Addenda: No. _____, dated _____ (Complete, if applicable)

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

The Contract Documents are defined as follows:

The Project Manual and all Drawings including the Drawing Index, Invitation to Bid, Bid Notice, Instruction to Bidders, Supplemental Instructions to Bidders, Bid Form, Prevailing Wage Rate Schedule, Geotechnical Exploration Report, Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General and Supplementary), Drawings, Schedules, Specifications, and Addenda issued prior to execution of the Contract.

Having examined the site of the work, and having familiarized himself or herself with local conditions and existing site conditions affecting the cost of the work and with all requirements of the Contractor Documents, hereby agrees to perform all work and furnish all labor, material and equipment specifically required of him or her by the Contract Documents and such additional work as may be included as related requirements in other Divisions or Sections of the specifications, and referenced standards.

The Undersigned Agrees:

1. To furnish and/or install the described material and/or services for stated lump sum price and unit prices.
2. To hold this base bid and alternate bids open until sixty (60) calendar days after the bid opening date.
3. To accept the provisions of the Contract Documents including the Bid Form, Invitation to Bid, Bid Notice, Instructions to Bidders, Supplementary Instructions to Bidders, General Conditions, Supplementary Conditions, Specifications, Drawings, Addenda, and the disposition of bid deposit.

To enter into and execute a Contract with the Owner, if awarded on the basis of this bid and in connection therewith to:

1. Furnish performance and labor and material payment bonds for 100 percent (100%) of the Contract Sum including any accepted alternate bids.
2. Furnish insurance coverage as required by the bidding documents and as defined in the Supplemental Instructions to Bidders, General Conditions and Supplementary Conditions.
3. Accomplish the work in accordance with the Contract and Contract Documents.
4. Complete all required work by the Completion Dates herein specified.
5. To comply with all requirements of the Illinois Prevailing Wage Act ("Act"), 820 ILCS Section 130/0/01, et seq.
6. To submit electronically, in Adobe PDF format, a Certified Payroll to Engineer every month for the duration of the Project including the signed statement in accordance with 820 ILCS 130/5(a)(2).
7. To assume the subcontract of the any assigned subcontractors.
8. **The Applications for Payment will not be reviewed by the Engineer until the Engineer receives the Adobe PDF copies of the Contractor's Certified Payroll.**

Construction Schedule and Completion Dates:

The Owner will not be responsible for any additional costs due to the Contractor or Subcontractors performing work on evenings, weekends, or holidays in order to complete the work of the Contract Documents on or before the following required Substantial Completion dates or Final Completion dates.

Project Schedule Requirements:

Start of On-Site Construction: The undersigned agrees to commence on-site construction activities no later than **Friday, April 17, 2015.**

Substantial Completion Date: The undersigned agrees to complete all base bid and alternate bid work in the Contract Documents as required to achieve Substantial Completion, as defined by the General and Supplemental Conditions of the Contract Documents, on or before **Friday, June 26, 2015.**

Final Completion Date: All incomplete, incorrect or defective work identified in the Engineer's Punch List must be completed by the Contractor on or before **Friday, July 10, 2015.**

The Engineer's Punch List will be prepared and delivered to the Contractor a maximum of seven (7) days after the Contractor achieves Substantial Completion.

Note: The Contractor must include all necessary costs in the base bid amount to complete the work of this Contract during the specified contract dates including all additional labor, 2nd and 3rd shift work, overtime work and weekend work and additional material or subcontractor costs.

Continued Site Usage/Noise Generating Activities:

The site will continue to be used during the construction period. The Contractor is prohibited from performing activities that prove disruptive (in the Owner's or Engineer's opinions) to users and staff in other occupied areas of the park. The Contractor must work closely with the Owner to minimize disruption of ongoing site operations and occupancy.

The Contractor must provide temporary construction and barriers to reduce the noise to acceptable levels and to maintain a safe project site. The Contractor must comply with all Village construction hour restrictions including the following:

Glen Ellyn Permitted Construction Hours:

Monday through Saturday 7:00 AM - 7:00 PM
Sunday 8:00 AM - 5:00 PM
National Holidays 12:00 PM - 5:00 PM

Bid Deposit:

The undersigned furnishes herewith, as required in the Instructions to Bidders, a **bid deposit in the amount of 10%** of the amount bid. **Personal or company checks are not permitted.**

Bidder to check form of deposit furnished below:

_____ Cashier's Check
_____ Certified Check made payable to the Owner
_____ Bid Bond naming the Owner as Obligee

It is understood and agreed that should the undersigned fail to enter into a contract with the Owner or furnish acceptable contract security within the time and in the manner described herein or in the Supplemental Instructions to Bidders or Supplementary Conditions, the bid deposit shall be retained by the Owner as liquidated damages and not as forfeiture. As it is impossible to determine precisely an exact amount of damages the Owner will sustain, it is agreed that the bid deposit is a fair and equitable estimate of such damages.

Base Bid:

For providing all work, including any respective allowances and assigned subcontract amounts, as required for the completion of the construction of the base bid scope of work as shown on the Drawings and described in the Specifications. **The base bid does NOT include the Contractor's proposed alternates and substitutions.**

Base Bid Lump Sum of:

_____ Dollars
(Written Text Amount)

($_____).
(Written Numerical Amount)

Base Bid Schedule of Values

Complete the following Schedule of Values totaling the amount of the base bid indicated above. Break costs down into line items following the format indicated. Show overhead and profit as separate line items. Failure to complete the Base Bid Schedule of Values will result in disqualification of the Contractor's bid.

BASE BID SCHEDULE OF VALUES

Section No.	Section Title / Description of Work	Cost
000700	Overhead and Profit	_____
000700	Bonds	_____
000700	Insurance	_____
000700	General Conditions	_____
000700	Coordination with Turf Contractor	_____
012100	Allowance (Unsuitable soils)	$75,000.00
311000	Demolition	_____
312000	Earthwork	_____
321313	Concrete	_____
329200	Landscape Restoration - Sod	_____
334100	Storm Sewers/Underdrainage	_____

Base Bid Lump Sum (Must match base bid amount) _____

Alternate Bids/Alternates:

Each of the following amounts for alternate bid construction includes the entire cost of such construction, except as otherwise noted. Acceptance of any or all of the alternates for inclusion in the contract is the sole prerogative of the Owner. All costs due to the alternates are included in the amount to be added or deducted from the base bid, so that no additional costs will be borne by the Owner due to acceptance of alternates. Each alternate bid amount entered below is for all work required for completion of the specific alternate bid as shown on the Drawings and as described in the Specifications.

Each bidder must complete all required alternate bids. Failure to provide bids for all requested alternate bids may serve as grounds to reject the overall bid.

Alternate Bid A - Water line and quick connects

As part of this **additive alternate bid**, the undersigned agrees to provide all water lines, quick connects, valves and associated appurtenances as identified on the Drawings and/or described in the Specifications as part of this alternate bid. Refer to the drawings and specifications for additional information and requirements.

Add the Alternate Bid Sum of: $_____

Alternate Bid B -Fencing:

As part of this **additive alternate bid**, the undersigned agrees to add all fencing, gates and additional concrete scope as identified on the Drawings and/or described in the Specifications as part of this alternate bid. Refer to the Drawings and Specifications for additional information and requirements.

Add the Alternate Bid Sum of: $_____

Alternate Bid C-Scoreboard relocation:

As part of this **additive alternate bid**, the undersigned agrees to relocate the existing scoreboard, providing all necessary columns, footings, electrical and communication lines identified on the Drawings and/or described in the Specifications as part of this alternate bid. Refer to the Drawings and Specifications for additional information and requirements.

Add the Alternate Bid Sum of: $_____

Unit Prices:

Each of the following amounts, for unit price construction, are for adding or deducting the construction and must include the entire cost of such construction, including all overhead, profit, insurance, general conditions, shipping, handling, labor, materials, field surveying, preparation, fabrication, demolition, , accessories as required for a complete and proper installation, unless specifically noted otherwise.

Each bidder must complete all required unit price bids. Failure to provide bids for all requested unit prices may serve as grounds to reject the overall bid. The following unit prices would be used only for this project.

Unit Price No. 1: Undercut – Remove, Haul Off-Site & Dispose of Unsatisfactory Material

$_____ perCY.

Unit Price No. 2: CA-7 Aggregate – Furnish and Install Compacted CA-7 Agg. Base Material

$_____ perCY.

Unit Price No. 3: CA-1 Aggregate – Furnish and Install CA-1 Agg. Base Material

$_____ perCY.

Unit Price No. 4: Disposal of Non-Special Waste Containing Soils to Landfill

$_____ per CY

Contractor Proposed Alternates and Substitution:

The following is a list of bidder or Contractor proposed alternates or product substitutions. The bidder understands that acceptance or rejection of any alternate or product substitution is the option of the Owner. Contractor proposed alternates or substitutes may be used by the Owner as part of the contract award consideration process.

If additional space is required, attach a separate list and indicate such attachment by checking this space: _____.

Work Specified	**Contractor Proposed Alternate**	**Change in Base Bid**
_____	_____	_____
_____	_____	_____
_____	_____	_____

Bid Acceptance:

If written notice of the acceptance of this bid is mailed, sent via email, faxed or delivered to the undersigned within the time noted herein, after the date of opening of bids or at any time thereafter before this bid is withdrawn, the undersigned agrees that he or she will execute a construction contract (AIA Document A101, 2007 edition) in accordance with the bids as accepted. He or she will obtain performance and payment bonds with such surety or sureties as the Owner may approve cost of which shall be included in the base bid.

The Owner reserves the right to award the contract in its best interest, to reject any or all bids, to waive any informality in bidding and to hold all bids for the bid guarantee period. The Owner reserves the right to award separate contracts for any of the items of work bid herein.

Representations and Certifications:

The bidder makes the following representations and certifications as part of his or her bid on the project herein identified in the Bid Form. In the case of a joint venture bid, each party represents and certifies as to his or her own organization.

SURETY. I have notified a Surety Company that I am submitting a bid for work to be performed on the project. The Surety Company has agreed to issue a performance and labor and material payment bond for my work if my bid is accepted and the contract awarded to me.

AVAILABILITY. The number and amount of contracts and awards pending which I am and/or will be obligated to perform, now and during the course of the project, will not interfere with or hinder the timely prosecution of my work.

INDEPENDENT PRICE DETERMINATION. The contract sum in this bid has been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.

PREVAILING WAGE. The contractor and each subcontractor shall pay not less than the general prevailing rate of hourly wages for work of a similar character in the locality in which the work is performed and not less than general prevailing rate of hourly wages for legal holidays and overtime work in the performance of work under this contract, as established by the Illinois Department of Labor, pursuant to an act of the General Assembly of the State of Illinois approved June 26, 1941 as amended according to the Illinois Revised Statutes, Chapter 48, Section 39s-1, et seq.

Pursuant to Illinois Revised Statutes, Chapter 48, Section 39s-5, the contractor and each subcontractor shall keep an accurate record showing the names and occupation of all laborers, workers and mechanics employed by them, and also showing the actual hourly wages paid to each such individual, which record shall be open at all reasonable hours to inspection by the Owner, its officers and agents, and to agents of the Illinois Department of Labor.

The contractor and each subcontractor hereby agree, jointly and severally, to defend, indemnify and hold harmless the Owner, the Engineer, and the Engineer's consultants from any and all claims, demands, liens or suits of any kind or nature whatsoever (including suits for injunctive relief) by the Illinois Department of Labor under the Illinois Prevailing Wage Act, Illinois Revised Statutes, Chapter 48, Section 39s-1, et seq., or by any laborer, worker or mechanic employed by the contractor or the subcontractor who alleges that he has been paid for his services in a sum less than prevailing wage rates required by Illinois law. The Owner agrees to notify the contractor or subcontractor of the pendency of any such claim, demand, lien or suit. The Contractor agrees to submit a Certified Payroll to the Owner every month for the duration of the Project including the signed statement in accordance with 820 ILCS 130/5(a)(2).

BID-RIGGING/BID ROTATING. The undersigned is not barred from bidding on this project as a result of a violation of either Section 33E-3 (Bid-rigging) or Section 38E-4 (Bid rotating) under Article 33E of Chapter 38 of the Illinois Revised Statutes.

Signatures:

The undersigned respectfully submitted this _____ day,

in the month of _____, 2015.

Type of Firm (Bidder to indicate)

_____ Individual

_____ Partnership

_____ Corporation

_____ Joint Venture

_____
(Firm Name)

_____
(Address)

(AFFIX CORPORATE SEAL)

_____
(Telephone Number)

_____
(Authorized Bidder's Signature)

_____
(Title)

Subscribed and sworn to me this _____ day of _____, 2015.

_____
Notary Signature:

(AFFIX NOTARY SEAL)

_____
(Printed Name)

END OF SECTION 000300

CONTRACTOR COMPLIANCE AND CERTIFICATIONS ATTACHMENT

Note: The following certifications form an integral part of the Agreement between the Owner and Contractor. Breach by Contractor of any of the certifications may result in immediate termination of the Contractor's services by Owner.

THE UNDERSIGNED CONTRACTOR HEREBY ACKNOWLEDGES, CERTIFIES, AFFIRMS AND AGREES AS FOLLOWS:

A. Contractor has carefully read and understands the contents, purpose and legal effect of this document as stated above and hereafter in this document. The certifications contained herein are true, complete and correct in all respects.

B. Contractor shall abide by and comply with, and in contracts which it has with all persons providing any of the services or Work on this Project on its behalf shall require compliance with, all applicable Federal, State and local laws and rules and regulations including without limitation those relating to 1) fair employment practices, affirmative action and prohibiting discrimination in employment; 2) workers' compensation; 3) workplace safety; 4) wages and claims of laborers, mechanics and other workers, agents, or servants in any manner employed in connection with contracts involving public funds or the development or construction of public works, buildings or facilities; and 5) steel products procurement.

C. All contracts for this Project are subject to the provisions of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 *et seq.*), providing for the payment of the prevailing rate of wage to all laborers, workmen and mechanics engaged in the Work. Contractor shall pay prevailing rates of wages in accordance with the wage determination included with the Contract Documents and any subsequent determinations issued by the Illinois Department of Labor which shall supersede the determination included in the Contract Documents, all in accordance with applicable law. Contractor is responsible for determining the applicable prevailing wage rates at the time of bid submission and at the time of performance of the Work. Failure of Contractor to make such determination shall not relieve it of its obligations in accordance with the Contract Documents. Contractor shall also comply with all other requirements of the Act including without limitation those pertaining to inclusion of required language in subcontracts, job site posting, maintenance and submission of certified payroll records and inspection of records. Contractor is not barred from entering into public contracts under Section 11a of the Illinois Prevailing Wage Act due to its having been found to have disregarded its obligations under the Act.

D. To the best of Contractor's knowledge, no officer or employee of Contractor has been convicted of bribery or attempting to bribe an officer or employee of the State of Illinois, or any unit of local government, nor has any officer or employee made an admission of guilt of such conduct which is a matter of record.

E. Contractor is not barred from bidding on or entering into public contracts due to having been convicted of bid-rigging or bid rotating under paragraphs 33E-3 or 33E-4 of the Illinois Criminal Code. Contractor also certifies that no officers or employees of the Contractor

have been so convicted and that Contractor is not the successor company or a new company created by the officers or owners of one so convicted. Contractor further certifies that any such conviction occurring after the date of this certification will be reported to the Owner, immediately in writing, if it occurs during the bidding process, or otherwise prior to entering into the Contract therewith.

F. Pursuant to the Illinois Human Rights Act (775 ILCS 5/2-105), Contractor has a written sexual harassment policy that includes, at a minimum, the following information: (i) a statement on the illegality of sexual harassment; (ii) the definition of sexual harassment under State law; (iii) a description of sexual harassment utilizing examples; (iv) the Contractor's internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission and directions on how to contact both; and (vi) protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act. Contractor further certifies that such policy shall remain in full force and effect. A copy of the policy shall be provided to the Illinois Department of Human Rights upon request.

G. Contractor shall abide by the "Employment of Illinois Workers on Public Works Act" (30 ILCS 570/0.01 *et seq.*) which stipulates that whenever there is a period of excessive unemployment in Illinois, defined as any month immediately following two (2) consecutive calendar months during which the level of unemployment in Illinois exceeds five percent (5%) as measured by the U.S. Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ only Illinois laborers unless otherwise exempted as so stated in the Act. ("Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident). Other laborers may be used if Illinois laborers are not available or are incapable of performing the particular type of work involved if so certified by the Contractor and approved by the Owner.

H. (i) Contractor's bid proposal was made without any connection or common interest in the profits anticipated to be derived from the Contract by Contractor with any other persons submitting any bid or proposal for the Contract; (ii) the Contract terms are in all respects fair and the Contract will be entered into by Contractor without collusion or fraud; (iii) no official, officer or employee of the Owner has any direct or indirect financial interest in Contractor's bid proposal or in Contractor, (iv) the Contractor has not directly or indirectly provided, and shall not directly or indirectly provide, funds or other consideration to any person or entity (including, but not limited to, the Owner and the Owner’s employees and agents), to procure improperly special or unusual treatment with respect to this Agreement or for the purpose of otherwise improperly influencing the relationship between the Owner and the Contractor. Additionally, the Contractor shall cause all of its officers, directors, employees, (as the case may be) to comply with the restrictions contained in the preceding sentence.

I. Contractor knows and understands the Equal Employment Opportunity Clause administrated by the Illinois Department of Human Rights, which is incorporated herein by this reference, and agrees to comply with the provisions thereof. Contractor further

certifies that Contractor is an "equal opportunity employer" as defined by Section 2000 (e) of Chapter 21, Title 42 of the United States Code Annotated and Executive Orders #11246 and #11375 as amended, which are incorporated herein by this reference.

J. Neither Contractor nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.

K. Contractor is not barred from contracting with the Owner because of any delinquency in the payment of any tax administrated by the Illinois Department of Revenue, unless it is being contested. Contractor further certifies that it understands that making a false statement regarding delinquency in taxes is a Class A misdemeanor and, in addition, voids the Contract and allows the Owner, a municipal entity, to recover in a civil action all amounts paid to the Contractor.

L. If Contractor has 25 or more employees at the time of letting of the Contract, Contractor knows, understands and acknowledges its obligations under the Illinois Drug Free Workplace Act (30 ILCS 580/1 *et seq*.) and certifies that it will provide a drug-free workplace by taking the actions required under, and otherwise implementing on a continuing basis, Section 3 of the Drug Free Workplace Act. Contractor further certifies that it has not been debarred and is not ineligible for award of this Contract as the result of a violation of the Illinois Drug Free Workplace Act.

M. Contractor knows, understands and acknowledges its obligations under the Substance Abuse Prevention on Public Works Act, 820 ILCS 265/1 *et seq.* A true and complete copy of Contractor's Substance Abuse Prevention Program Certification is attached to and made a part of this Contractor Compliance and Certification Attachment.

N. The Contractor shall comply with the requirements and provisions of the Freedom of Information Act (5 ILCS 140/1 *et. seq*.) and, upon request of the Glen Ellyn Park District's designated Freedom of Information Act Officer (FOIA Officer), Contractor shall within two (2) business days of said request, turn over to the FOIA Officer any record in the possession of the Contractor that is deemed a public record under FOIA.

_____

CONTRACTOR

By: _____

Its: _____

STATE OF _____)
)SS
COUNTY OF _____)

I, the undersigned, a notary public in and for the State and County, aforesaid, hereby certify that _____ appeared before me this day and, being first duly sworn on oath, acknowledged that he/she executed the foregoing instrument as his/her free act and deed and as the act and deed of the Contractor.

Dated:_____

_____
(Notary Public)

(SEAL)

SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION

The Substance Abuse Prevention on Public Works Projects Act, 820 ILCS 265/1 et seq., ("Act") prohibits any employee of the Contractor or any Subcontractor on a public works project to use, possess or be under the influence of a drug or alcohol, as those terms are defined in the Act, while performing work on the project. The Contractor/Subcontractor **[circle one],** by its undersigned representative, hereby certifies and represents to the Glen Ellyn Park District that **[Contractor/Subcontractor must complete either Part A or Part B below]**:

A. The Contractor/Subcontractor **[circle one]** has in place for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act a written substance abuse prevention program, a true and correct copy of which is attached to this certification, which meets or exceeds the requirements of the Substance Abuse Prevention on Public Works Act, 820 ILCS 265/*1 et seq.* **[Contractor/Subcontractor must attach a copy of its substance abuse prevention program to this Certification.]**

_____
Name of Contractor/Subcontractor (print or type)

_____
Name and Title of Authorized Representative (print or type)

_____ Dated: _____
Signature of Authorized Representative

B. The Contractor/Subcontractor **[circle one]** has one or more collective bargaining agreements in effect for all of its employees that deal with the subject matter of the Substance Abuse Prevention on Public Works Projects Act, 820 ILCS 265/1 *et seq.*

_____
Name of Contractor/Subcontractor (print or type)

_____
Name and Title of Authorized Representative (print or type)

_____ Dated: _____
Signature of Authorized Representative

NON-COLLUSION AFFIDAVIT

"I (we) hereby certify and affirm that my (our) proposal was prepared independently for this project and that it contains no fees or amounts other than OF the legitimate execution of this work as specified and that it includes no understanding or agreements in restraint of trade."

(If an individual)

Signature of Bidder _____(Seal)

Business Address _____

_____

(If a Partnership)

Firm Name _____(Seal)

By _____

Business Address _____

_____

Of all Partners _____

Of all Firm _____

(If a Corporation)

Corporate Name _____(Seal)

By _____

Business Address _____

_____

(Corporate Seal)

Name of Officers: President _____

Secretary _____

Treasurer _____

Attest_____
Secretary

Name of Bidder _____

Date _____

CERTIFICATE OF COMPLIANCE ILLINOIS

HUMAN RIGHTS ACT

WITH ILLINOIS HUMAN RIGHTS ACT

All successful Contractors must comply with the provisions of the Illinois Human Rights Act (ACT) dealing with equal employment opportunities (Section 2-105, 775ILCS 5/2-105) including equality of employment opportunity and the regulations of the Department of Human Rights of the State of Illinois and also must provide for the adoption and implementation of written Sexual Harassment Policies. The Contract with the successful bidder will provide for this requirement. The statutory provisions require that the written Sexual Harassment policy include at a minimum the following information: (i) the illegality of sexual harassment, (ii) the definition of sexual harassment under Illinois Law, (iii) a description of sexual harassment, utilizing examples; (iv) a vendor's internal compliant process including penalty; (v) the legal recourse, investigative and compliant process available through the Department of Human Rights Commission; (vi) directions on how to contact the Department and Commission; and (vii) protection against retaliation as provided by Section 6101 of the Illinois Human Rights Act.

Firm Name_____

Address_____

_____
Signature of Officer

_____
Title

Subscribed and sworn to before me this_____day of_____, 2015

_____
Notary Public

CERTIFICATE OF COMPLIANCE ILLINOIS

DRUG-FREE WORKPLACE ACT

(Contractors with 25 or more Employees)

CERTIFICATE OF COMPLIANCE WITH
ILLINOIS DRUG-FREE WORKPLACE ACT

_____Contractor, having 25 employees, does hereby certify pursuant to Section 3 of the Illinois Drug-Free Workplace Act (Ill. Rev. Stat. Ch. 127 par. 132.313) that [he, she, it] shall provide a drug-free workplace for all employees engaged in the performance of work under the Contract by complying with the requirements of the Illinois Drug-Free Workplace Act and further certified, that [he, she, it] is not ineligible for award of the Contract by reason of debarment for a violation of the Illinois Drug-Free Workplace Act.

Firm Name_____

By:_____
(Authorized Agent of Contractor)

_____
Title

Subscribed and sworn to before me this_____day of_____, 2015

_____
Notary Public

CERTIFICATE REGARDING
SEXUAL HARASSMENT POLICY

_____ [contractor], does hereby certify pursuant to Section 2-105 of the *Illinois Human Rights Act* (775 ILCS 5/2-105) that [he, she, it] has a written sexual harassment policy that includes, at a minimum, the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under State law; (iii) a description of sexual harassment utilizing examples; (iv) an internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Department of Human Rights and Human Rights Commission; (vi) directions on how to contact the Department of Human Rights and Human Rights Commission; and (vii) protection against retaliation.

By: _____
Authorized Agent of Contractor

_____
Title

SUBSCRIBED AND SWORN TO before me
this _____ day of _____, 201

_____
NOTARY PUBLIC

EXECUTE AND ATTACH TO PROPOSAL FORM

CERTIFICATE OF BIDDER ELIGIBILITY

720 ILCS 5/33E-11 requires that all contractors bidding for public agencies in the State of Illinois certify that they are not barred from bidding on public contracts for bid rigging or bad rotation.

The following certification must be signed and submitted with bidder's bid proposal. FAILURE TO DO SO MAY RESULT IN DISQUALIFICATION OF THE BIDDER.

_____, as part of its bid for _____

_____

certifies that said contractor is not barred from bidding on the aforementioned contract as a result of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33E-4.

Firm Name: _____

By: _____
Authorized Agent of Contractor

_____
Title

SUBSCRIBED AND SWORN TO before me
this _____ day of _____, 201 .

_____
NOTARY PUBLIC

EXECUTE AND ATTACH TO PROPOSAL FORM

CERTIFICATE REGARDING THE PREVAILING WAGE ACT

Our company certifies that it is eligible for bidding on public contracts, and has complied with section 11a of the Prevailing Wage Act, 820 ILCS 130/0.01-12(2000), and has not disregarded their obligations to employees under the Prevailing Wage Act on two (2) separate occasions, and that they, or any firm, corporation, partnership or association in which such contractors or subcontractors have an interest, are not prohibited from being awarded any contract or subcontract for a public works project.

YES _____ NO _____

By: _____
Authorized Agent of Contractor

_____
Title

SUBSCRIBED AND SWORN TO before me
this _____ day of _____, 201

_____
NOTARY PUBLIC

EXECUTE AND ATTACH TO PROPOSAL FORM

CERTIFICATE REGARDING VALID BUSINESS LICENSE

Our company is eligible to do business in the State of Illinois and have submitted as part of this bid a valid business license and the Federal Employer Tax Identification Number (FEIN) or Social Security Number for individuals. Further, if applicable, our company will employ apprentices who are properly indentured into a Joint Apprenticeship Training Program which is registered and certified with the United States Department of Labor, Bureau of Apprenticeship and Training.

YES _____ NO _____

FEIN Number _____

By: _____
Authorized Agent of Contractor

_____
Title

SUBSCRIBED AND SWORN TO before me
this _____ day of _____, 201 .

_____
NOTARY PUBLIC

EXECUTE AND ATTACH TO PROPOSAL FORM

SECTION 000400-PREVAILING WAGES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Sample Illinois Department of Labor Prevailing Wages for DuPage County.

B. Related Requirements Specified Elsewhere in the Project Manual:
1. Division 1, Section 000300 - Bid Form.

C. The Contractor and all subcontractors shall not pay less than the prevailing rate of hourly wages for work indicated on the most current edition of the Illinois Department of Labor Prevailing Wages for DuPage County schedule.

1. Contractor is responsible for complying with all requirements of the Illinois Prevailing Wage Act ("Act"), 820 ILCS Section 130/0/01, et seq. to the extent that it applies.
2. The Contractor must pay the general prevailing rate of wages in the locality for each craft or type of worker or mechanic needed to execute the contract or perform such work, also the general prevailing rate for legal holiday and overtime work, as ascertained by the public body or by the Department of Labor shall be paid for each craft or type of worker needed to execute the contract or to perform such work, and it shall be mandatory upon the bidder and upon any subcontractor under him, to pay not less than the specified rates to all laborers, workers and mechanics employed by them in the execution of the contract or such work. Refer to Section 000400 - Prevailing Wage Rate Schedule for additional information and requirements.
3. The Contractor must insert a provision or stipulation regarding the payment of prevailing wage rate into the subcontract and Contractor's bond.
4. **The Contractor must post the relevant prevailing wage rates at a location at the Project Site that is easily accessible by the workers.**
5. **The Contractor and all subcontractors must create, and keep for at least three (3) years, records of all laborers, mechanics, and other workers employed by them on the Project. Refer to 820 ILCS 130/5/(a)(1) and 820 ILCS 130/5/(1), (b).**
6. **The Contractor must submit a Certified Payroll to the Owner every month for the duration of the Project including the signed statement or a certified letter in lieu thereof certifying that the Act does not apply. Submit the Certified Payroll with the Contractor's Application for Payment. The Applications for Payment will not be reviewed until the Engineerreceives the Certified Payroll. Refer to 820 ILCS 130/5(a)(2).**
7. Refer to the Illinois Department of Labor's website for additional information and requirements at www.state.il.us/agency/idol/laws/Law130.htm.
8. A sample schedule is attached to this section for informational purposes only.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

PART 4 - WAGE RATE SCHEDULE ATTACHMENT (Refer to following pages).

A. A sample prevailing wage rate schedule for DuPage County, published by the Illinois Department of Labor, is included in this section for information only.
   1. The Contractor is required to obtain and post, at the project site, a current copy of the Illinois Department of Labor Prevailing Wages listing for DuPage County effective at the start of on-site work.

B. The Contractor must contact the Illinois Department of Labor for current prevailing wages and must pay all workers prevailing wages.

Du Page County Prevailing Wage for February 2015

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		38.200	38.700	1.5	1.5	2.0	13.78	10.12	0.000	0.500
ASBESTOS ABT-MEC		BLD		35.100	37.600	1.5	1.5	2.0	11.17	10.76	0.000	0.720
BOILERMAKER		BLD		44.240	48.220	2.0	2.0	2.0	6.970	17.54	0.000	0.350
BRICK MASON		BLD		42.580	46.840	1.5	1.5	2.0	9.850	13.60	0.000	1.030
CARPENTER		ALL		43.350	45.350	1.5	1.5	2.0	13.29	13.75	0.000	0.630
CEMENT MASON		ALL		39.250	41.250	2.0	1.5	2.0	12.70	17.14	0.000	0.450
CERAMIC TILE FNSHER		BLD		35.810	0.000	1.5	1.5	2.0	10.55	8.440	0.000	0.710
COMMUNICATION TECH		BLD		32.650	34.750	1.5	1.5	2.0	9.550	15.16	1.250	0.610
ELECTRIC PWR EQMT OP		ALL		37.890	51.480	1.5	1.5	2.0	5.000	11.75	0.000	0.380
ELECTRIC PWR GRNDMAN		ALL		29.300	51.480	1.5	1.5	2.0	5.000	9.090	0.000	0.290
ELECTRIC PWR LINEMAN		ALL		45.360	51.480	1.5	1.5	2.0	5.000	14.06	0.000	0.450
ELECTRIC PWR TRK DRV		ALL		30.340	51.480	1.5	1.5	2.0	5.000	9.400	0.000	0.300
ELECTRICIAN		BLD		38.160	41.980	1.5	1.5	2.0	9.550	18.29	4.680	0.680
ELEVATOR CONSTRUCTOR		BLD		50.800	57.150	2.0	2.0	2.0	13.57	14.21	4.060	0.600
FENCE ERECTOR	NE	ALL		35.840	37.840	1.5	1.5	2.0	13.01	11.51	0.000	0.300
FENCE ERECTOR	W	ALL		45.060	48.660	2.0	2.0	2.0	10.52	18.81	0.000	0.400
GLAZIER		BLD		40.000	41.500	1.5	2.0	2.0	12.49	15.99	0.000	0.940
HT/FROST INSULATOR		BLD		48.450	50.950	1.5	1.5	2.0	11.47	12.16	0.000	0.720
IRON WORKER	E	ALL		43.000	45.000	2.0	2.0	2.0	13.45	20.65	0.000	0.350
IRON WORKER	W	ALL		45.060	48.660	2.0	2.0	2.0	10.52	18.81	0.000	0.400
LABORER		ALL		38.000	38.750	1.5	1.5	2.0	13.78	10.12	0.000	0.500
LATHER		ALL		43.350	45.350	1.5	1.5	2.0	13.29	13.75	0.000	0.630
MACHINIST		BLD		44.350	46.850	1.5	1.5	2.0	6.760	8.950	1.850	0.000
MARBLE FINISHERS		ALL		31.400	32.970	1.5	1.5	2.0	9.850	13.10	0.000	0.600
MARBLE MASON		BLD		41.780	45.960	1.5	1.5	2.0	9.850	13.42	0.000	0.760
MATERIAL TESTER I		ALL		28.000	0.000	1.5	1.5	2.0	13.78	10.12	0.000	0.500
MATERIALS TESTER II		ALL		33.000	0.000	1.5	1.5	2.0	13.78	10.12	0.000	0.500
MILLWRIGHT		ALL		43.350	45.350	1.5	1.5	2.0	13.29	13.75	0.000	0.630
OPERATING ENGINEER		BLD	1	47.100	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		BLD	2	45.800	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		BLD	3	43.250	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		BLD	4	41.500	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		BLD	5	50.850	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250

OPERATING ENGINEER		BLD	6	48.100	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		BLD	7	50.100	51.100	2.0	2.0	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		FLT		35.000	35.000	1.5	1.5	2.0	16.60	11.05	1.900	1.250
OPERATING ENGINEER		HWY	1	45.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		HWY	2	44.750	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		HWY	3	42.700	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		HWY	4	41.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		HWY	5	40.100	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		HWY	6	48.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
OPERATING ENGINEER		HWY	7	46.300	49.300	1.5	1.5	2.0	17.10	11.80	1.900	1.250
ORNAMNTL IRON WORKER	E	ALL		43.900	46.400	2.0	2.0	2.0	13.36	17.24	0.000	0.650
ORNAMNTL IRON WORKER	W	ALL		45.060	48.660	2.0	2.0	2.0	10.52	18.81	0.000	0.400
PAINTER		ALL		41.730	43.730	1.5	1.5	1.5	10.30	8.200	0.000	1.350
PAINTER SIGNS		BLD		33.920	38.090	1.5	1.5	1.5	2.600	2.710	0.000	0.000
PILEDRIVER		ALL		43.350	45.350	1.5	1.5	2.0	13.29	13.75	0.000	0.630
PIPEFITTER		BLD		46.000	49.000	1.5	1.5	2.0	9.000	15.85	0.000	1.780
PLASTERER		BLD		41.250	43.760	1.5	1.5	2.0	9.700	13.08	0.000	0.980
PLUMBER		BLD		46.650	48.650	1.5	1.5	2.0	13.18	11.46	0.000	0.880
ROOFER		BLD		40.100	43.100	1.5	1.5	2.0	8.280	10.54	0.000	0.530
SHEETMETAL WORKER		BLD		44.000	46.000	1.5	1.5	2.0	10.65	13.06	0.000	0.820
SPRINKLER FITTER		BLD		49.200	51.200	1.5	1.5	2.0	11.75	9.650	0.000	0.550
STEEL ERECTOR	E	ALL		42.070	44.070	2.0	2.0	2.0	13.45	19.59	0.000	0.350
STEEL ERECTOR	W	ALL		45.060	48.660	2.0	2.0	2.0	10.52	18.81	0.000	0.400
STONE MASON		BLD		42.580	46.840	1.5	1.5	2.0	9.850	13.60	0.000	1.030
SURVEY WORKER -> NOT IN EFFECT		ALL		37.000	37.750	1.5	1.5	2.0	12.97	9.930	0.000	0.500
TERRAZZO FINISHER		BLD		37.040	0.000	1.5	1.5	2.0	10.55	10.32	0.000	0.620
TERRAZZO MASON		BLD		40.880	43.880	1.5	1.5	2.0	10.55	11.63	0.000	0.820
TILE MASON		BLD		42.840	46.840	1.5	1.5	2.0	10.55	10.42	0.000	0.920
TRAFFIC SAFETY WRKR		HWY		32.750	34.350	1.5	1.5	2.0	6.550	6.450	0.000	0.500
TRUCK DRIVER		ALL	1	32.550	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TRUCK DRIVER		ALL	2	32.700	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TRUCK DRIVER		ALL	3	32.900	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TRUCK DRIVER		ALL	4	33.100	33.100	1.5	1.5	2.0	6.500	4.350	0.000	0.150
TUCKPOINTER		BLD		41.620	42.620	1.5	1.5	2.0	9.850	12.61	0.000	0.650

Legend: RG (Region)
TYP (Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers)
C (Class)
Base (Base Wage Rate)
FRMAN (Foreman Rate)
M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.
OSA (Overtime (OT) is required for every hour worked on Saturday)
OSH (Overtime is required for every hour worked on Sunday and Holidays)
H/W (Health & Welfare Insurance)
Pensn (Pension)
Vac (Vacation)
Trng (Training)

Explanations

DUPAGE COUNTY

IRON WORKERS AND FENCE ERECTOR (WEST) - West of Route 53.

The following list is considered as those days for which holiday rates

of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and

walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Low voltage installation, maintenance and removal of telecommunication facilities (voice, sound, data and video) including telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under: Concrete Placer; Concrete Placing Boom;

Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless

Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yeards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and

Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

END OF SECTION 000400

SECTION 000600 - CONTRACTOR QUALIFICATION STATEMENT - AIA A305

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. GENERAL

B. RELATED DOCUMENTS

C. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

D. SUMMARY

1. Each bidder shall submit an AIA Document A305, Contractor's Qualification Statement. Failure of a bidder to submit a fully completed Contractor's Qualification Statement may be considered, at the Owner's option, grounds for rejecting their bid.
2. **The AIA Document A305 must be submitted no later than February 25, 2015.** Failure to submit the Document by this date may be grounds for rejecting their bid.
3. Project Experience Listing: Attach to the AIA A305 - Contractor's Qualification Statement, a list of 5 previously completed synthetic turf field projects completed within 100 miles of Glen Ellyn within the last 4 years. Include the following information for each project:

    a. Project Name.
    b. Location.
    c. Contact name.
    d. Date the project was completed.
    e. Contract amount for the project.

PART 2 - PRODUCTS

2.1 NOT APPLICABLE

PART 3 - EXECUTION

3.1 NOT APPLICABLE

END OF SECTION 000600

AIA® Document A305™ – 1986

Contractor's Qualification Statement

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED TO: Mr. Dan Hopkins, Superintendent of Parks & Planning

ADDRESS: 185 Spring Avenue, Glen Ellyn, IL 60137

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

[ ] Corporation
[ ] Partnership
[ ] Individual
[ ] Joint Venture
[ ] Other

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

This form is approved and recommended by the American Institute of Architects (AIA) and The Associated General Contractors of America (AGC) for use in evaluating the qualifications of contractors. No endorsement of the submitting party or verification of the information is made by AIA or AGC.

NAME OF PROJECT: *(if applicable)* Newton Park Synthetic Turf Athletic Field

TYPE OF WORK: *(file separate form for each Classification of Work)*

[ ] General Construction
[ ] HVAC
[ ] Electrical
[ ] Plumbing
[ ] Other: *(Specify)*

§ 1 ORGANIZATION

§ 1.1 How many years has your organization been in business as a Contractor?

§ 1.2 How many years has your organization been in business under its present business name?

§ 1.2.1 Under what other or former names has your organization operated?

§ 1.3 If your organization is a corporation, answer the following:

§ 1.3.1 Date of incorporation:

§ 1.3.2 State of incorporation:

§ 1.3.3 President's name:

§ 1.3.4 Vice-president's name(s)

§ 1.3.5 Secretary's name:
§ 1.3.6 Treasurer's name:

§ 1.4 If your organization is a partnership, answer the following:
§ 1.4.1 Date of organization:
§ 1.4.2 Type of partnership (if applicable):
§ 1.4.3 Name(s) of general partner(s)

§ 1.5 If your organization is individually owned, answer the following:
§ 1.5.1 Date of organization:
§ 1.5.2 Name of owner:

§ 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

§ 2 LICENSING

§ 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

§ 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

§ 3 EXPERIENCE

§ 3.1 List the categories of work that your organization normally performs with its own forces.

§ 3.2 Claims and Suits. (If the answer to any of the questions below is yes, please attach details.)
§ 3.2.1 Has your organization ever failed to complete any work awarded to it?

§ 3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

§ 3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

§ 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)

§ 3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

§ 3.4.1 State total worth of work in progress and under contract:

§ 3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

§ 3.5.1 State average annual amount of construction work performed during the past five years:

§ 3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

§ 4 REFERENCES

§ 4.1 Trade References:

§ 4.2 Bank References:

§ 4.3 Surety:

§ 4.3.1 Name of bonding company:

§ 4.3.2 Name and address of agent:

§ 5 FINANCING

§ 5.1 Financial Statement.

§ 5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);

Net Fixed Assets;

Other Assets;

Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);

Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

§ 5.1.2 Name and address of firm preparing attached financial statement, and date thereof:

§ 5.1.3 Is the attached financial statement for the identical organization named on page one?

§ 5.1.4 If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidiary).

§ 5.2 Will the organization whose financial statement is attached act as guarantor of the contract for construction?

§ 6 SIGNATURE

§ 6.1 Dated at this day of

Name of Organization:

By:

Title:

§ 6.2

M being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this day of

Notary Public:

My Commission Expires:

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Kevin Camino, P.E., hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 13:18:17 on 02/10/2015 under Order No. 2727455522_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A305™ – 1986, Contractor's Qualification Statement, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

_____

(Signed)

_____

(Title)

_____

(Dated)

SECTION 000700 - GENERAL CONDITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Division 00 and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. General Conditions of the Contract for Construction, 60 pages, follow this page and are hereby made part of the Contract Documents.

1. The General Conditions have been modified by the Owner and include the Owner's Supplementary Conditions.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION (Not applicable)

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1 – GENERAL PROVISIONS

1.1 DEFINITIONS

"Addendum" or "**Addenda**" are written or graphic instrument(s) issued by the Engineer or the Owner prior to the execution of the Contract which modify or interpret the bidding documents, including the Drawings and/or Specifications, by additions, deletions, clarifications or corrections.

"**Alternate Bid**" (or "**Alternate**") is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

"Architect" means Engineer wherever the word 'Architect' or a derivation of that word appears; the word "architectural' means 'architectural or engineering, as applicable.'

"**Base Bid**" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

"**Bid**" is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

"**Bidder**" is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

"**Bulletins**" are written or graphic instruments issued by the Engineer or the Owner after the execution of the Contract which request a proposal from the Contractor that, if accepted by the Owner, will cause the execution of a Change Order to modify the Contract Documents.

The Contract Documents form the "**Contract**" for construction. The **Contract** represents the entire and integrated agreement between the parties to the Agreement and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Engineer and Contractor; (2) between the Owner and a Subcontractor or Sub-subcontractor or (3) between any persons or entities other than the Owner and Contractor. The Engineer shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Engineer's duties.

"**Contract Documents**" mean the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General Conditions, Supplementary Conditions, if any, and Special or other Conditions, if any), Drawings, Specifications, Project Manual, Addenda issued prior to the execution of the Contract or other documents listed in the Agreement and Modifications issued after the execution of the Contract. In the event of conflict, the General Conditions shall control.

"**Drawings**" are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

"**Field Order**" is a written order directed to Contractor and signed by Owner directing a change, or making a clarification in the Work, or requesting information from Contractor about the Work. A **Field Order** signed by

Contractor indicates receipt of the **Field Order**, but is not to be construed as an agreement or acceptance by the Contractor of the proposed changes set forth in the Field Order.

"**Final Completion**" means the date the Contract has been fully performed, all the Work has been completed and a final Certificate for Payment approved by the Owner has been issued by the Engineer.

"**Furnish**" means to only fabricate or purchase, transport and deliver the specified materials or items, which shall be consigned to another party.

"**Indicated**" and "**shown**" mean as described, detailed, discussed, scheduled, referenced, or called for in, or reasonably inferable from, the Contract Documents in order to produce a first-class Work product.

"**Install**" means to only supply the labor required to incorporate in the Work materials or items furnished by others. The Contractor shall also receive, unload, store, and protect such materials or items. Installation shall include any final mechanical and electrical connections, unless such work is specifically excluded.

"**Modification**" is (1) a written amendment to the Contract signed by both parties to the Agreement; (2) a Change Order; (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Engineer.

"**Or equal**", "**approved equal**", or "**equal to**" mean that the determination whether an alternative product or system is equal to that indicated or specified shall be made by the Owner or by the Engineer acting for the Owner.

"**Product Data**" are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

"**Product**" means a complete assembly of materials, systems, and equipment manufactured off the site.

"**Project**" is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

"**Project Manual**" is the volume usually assembled for the Work which may include the bidding requirements, sample forms, Contractor Certifications, Conditions of the Contract and Specifications.

"**Project site**" or "**site**" means the area within the Owner's property lines, or the portion of such area which is enclosed within the Contract limit line as designated by the Engineer, including any structures or encumbrances within such area.

"**Provide**" or derivatives thereof means the Contractor shall properly fabricate, supply, furnish or procure all labor, materials, equipment, apparatus, and accessory appurtenances necessary to transport, deliver, install, erect and construct the specified item, complete, in place and ready for operation and use, including any final connections in strict accordance with the Drawings, Specifications and other Contract Documents. The words "Contractor shall" are implied and shall be so understood wherever the direction "provide" is used.

"**Punch List Items**" shall mean and shall be limited to uncompleted items of the Work (a) that do not interfere with the use and occupancy of any area of the Site for its intended purpose and (b) that, as a group, are capable of being completed by the Contractor within thirty (30) days of issuance of any Punch List. The "**Punch List**" is the list containing the Punch list items.

"**Samples**" are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

"**Selected**", "**approved**", **"satisfactory"**, "**proper**" or "**as directed"** mean as selected, directed or approved by the Owner or by the Engineer acting for the Owner if the Contract specifically so provides.

"**Shop Drawings**" are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

"**Specifications**" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

"**Sub-bidder**" is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

"**Substantial Completion**" means the date that all of the Work has been completed to the point where it can be occupied and used for all purposes intended by Owner and has been accepted by Owner and Engineer as such, subject only to minor Punch List Items, and the Contractor has completed all Work necessary in order for the Owner to receive all required occupancy permits.

"**Unit Price**" is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services for a portion of the Work as described in the Bidding Documents. A Unit Price includes all costs associated with the performance of the portion of the Work for which the Unit Price is provided, including but not limited to labor materials, equipment, transportation, overhead and profit.

"**Work**" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 The Contract Documents shall be signed by the Owner and Contractor as provided in the Agreement. If either the Owner or Contractor or both do not sign all the Contract Documents, the Engineer shall identify such unsigned Documents.

1.2.2 By its execution of the Contract, the Contractor acknowledges, agrees, represents, declares and warrants that: (a) the Contractor has carefully and thoroughly examined the Contract Documents, and the Contract Documents are full and complete, include all items necessary for the proper execution and completion of the Work, are sufficient to have enabled the Contractor to determine the cost of the Work and to enable the Contractor to construct the Work indicated therein in accordance with laws, ordinances, codes, regulations and rules applicable to the performance of the Work, and otherwise to fulfill all its obligations thereunder, including, but not limited to, the Contractor's obligation to construct the Work for an amount not in excess of the Contract Sum on or before the date(s) of Substantial and Final Completion established in the Contract; (b) the omission from the Contract Documents of minor details which ordinarily form a part of first class work and are necessary to the completion of the Work as indicated, shall not be cause for any extra cost but shall be included as if specifically mentioned or detailed; (c) the Contractor has visited and examined the Project site and surrounding areas, examined all physical, legal and other conditions affecting the Work and correlated its personal observations with the requirements of the Contract Documents, and understands, is familiar with, and satisfied itself as to the same, including, without limitation: (i) the nature, location, and character of the Project and the site, including, without limitation surface conditions of the site and subsurface conditions observable or ascertainable upon the exercise of reasonable diligence including all structures and obstructions thereon and

thereunder, both natural and manmade and all surface and subsurface water conditions of the site and the surrounding area; (ii) the nature, location, and character of the general area in which the Project is located, including without limitation, its generally prevailing climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; (iii) the availability, quality, quantity and cost of all labor, materials, supplies, tools, equipment and professional services necessary to complete the Work in the manner and within the cost and time frame indicated by the Contract Documents.

1.2.3 By its execution of the Contract, the Contractor acknowledges, agrees, represents and warrants that it has carefully examined the Drawings, Specifications and other Contract Documents and having visited the Project site it has no actual knowledge of any discrepancies, omissions, ambiguities, or conflicts in or between the Contract Documents except those, if any, which have been clarified by Engineer by Addenda to the Contractor's satisfaction, and that if it becomes aware of any such discrepancies, omissions, ambiguities, or conflicts, it has an obligation to and will immediately notify Owner and Engineer of such fact, and will not proceed until it shall have received the written interpretation of Owner or Engineer. If any such differences or conflicts were not called to the Owner's and Engineer's attention prior to submission by the Contractor of its bid proposal, the Engineer shall decide which of the conflicting requirements will govern based upon the most stringent or highest quality of the requirements.

1.2.4 Claims for additional compensation or extensions of time because of the failure of the Contractor to carefully review the Drawings, Specifications and other Contract Documents, or to familiarize itself with the conditions set forth or referred to in the Contract Documents or other conditions which might affect the Work as provided in Subparagraphs 1.2.2 and 1.2.3, above, or because of its failure to obtain a needed interpretation before submitting its bid or before proceeding with the Work, will not be allowed.

1.2.5 The Contract Documents include all items necessary for the proper execution and completion of the Work by the Contractor. The Work shall consist of all items specifically included in the Contract Documents as well as all additional items of work which are reasonably inferable from that which is specified in order to complete the Work in accordance with the Contract Documents. The Contract Documents are complementary, and what is required by any one Contract Document shall be as binding as if required by all. Work not indicated in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce a first-class Work product.

Large scale drawings shall take precedence over small scale drawings; figured dimensions on drawings over scaled dimensions and noted material over graphic representation.

1.2.6 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.7 References made in the Specifications and Drawings to standard specifications, codes or test methods of technical societies, trade associations and similar organizations are intended to refer to the latest edition of such standards as of the date of the Specifications, unless specifically indicated to the contrary. Each tradesman is considered to be experienced and familiar with the generally accepted, published standards regarding the quality of materials and workmanship related to his own trade.

1.2.8 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Unless a task or function is specifically stated as an obligation of the Owner, it is understood to be an obligation of the Contractor. Where phrases such as "as selected", "as directed" or "as approved" are used, the following phrase "by the Owner, or by the Engineer acting for the Owner" is understood. Where phrases such as "or equal" or "approved equal" are used, the following phrase "as determined by the Owner, or by the Engineer acting for the Owner," is understood.

1.2.9 When more than one material, brand, or process is specified for a particular item of Work, without designation of preference, the choice shall be the Contractor's. The Contractor may, after notifying the Owner and Engineer, select the one it considers to be the best. Approval by the Engineer or Owner of materials, suppliers, processes, or Subcontractors does not imply a waiver of any Contract requirements including, without limitation, the Contractor's warranty.

1.2.10 In case of any conflict or discrepancy between the Drawings and Specifications or any error or ambiguity within the Drawings and Specifications, it is understood that the Contractor has included in its bid proposal and agrees to provide the greater quantity or better quality of materials and work, unless, before submission of its bid proposal, it shall have requested and received an Addendum that resolves such conflict, error, ambiguity or discrepancy.

1.2.11 Wherever a provision of the Specifications conflicts with any agreements or regulations in force among members of trade associations, unions, or councils which regulate or distinguish what work shall or shall not be included in the Specifications, the Contractor shall make all necessary arrangements to reconcile such conflicts. If progress of the Work is affected by a delay in furnishing or installing materials or equipment because of such agreements or regulations, the Engineer may require that other materials or equipment of equal kind and quality be provided with no change in the Contract Sum.

1.2.12 All Work shall conform to the Contract Documents. The Contractor shall be solely responsive and responsible for the completion of the Work in accordance with the Contract Documents. No change therefrom shall be made without review and written acceptance by the Engineer and Owner.

1.3 OWNERSHIP AND USE OF CONTRACT DOCUMENTS

1.3.1 The Owner is the owner of the Contract Documents. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Contract Documents. All copies of them, except the Contractor’s record set, shall be returned or suitably accounted for to the Owner or to the Engineer, on request, upon completion of the Work. The Contract Documents and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, the Engineer and each holder of a copyright in any of the Contract Documents sought to be so used. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Contract Documents appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the particular Contract Document sought to be used. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the respective ownership, copyright or other reserved rights of any person.

1.4 CAPITALIZED TERMS

1.4.1 Terms capitalized in these General Conditions include those which are (1) specifically defined; (2) the titles of numbered articles and identified references to paragraphs, subparagraphs and clauses in the document; (3) the titles of other documents published by the American Institute of Engineers; or (4) the titles of other documents published by the Owner. The failure to capitalize a defined term shall not affect its definition as used in these General Conditions.

1.5 INTERPRETATION

1.5.1 In the interest of brevity the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an”, but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE 2 – OWNER

2.1 DEFINITION

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term “Owner” means the Owner or the Owner’s authorized representative identified as such in the Agreement or other Contract Documents.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site; provided, however, that the furnishing of these surveys and the legal description of the site shall not relieve the Contractor from its duties under the Contract Documents in general and Subparagraph 1.2.2, 1.2.3, 3.2.2 and this Subparagraph 2.2.1 of the General Conditions in particular. When the Owner or Engineer has made investigations of the areas where the Work is to be performed, such investigations, if any, were made solely for the purposes of the Owner's study and the Engineer's design. Neither such investigations nor the records thereof are part of the Contract between the Owner and Contractor. To the extent such investigations or the records thereof are made available to the Contractor by the Owner or Engineer, such information is furnished solely for the convenience of the Contractor. Neither the Owner nor Engineer assumes any responsibility with respect to the sufficiency or accuracy of the investigations thus made, the records thereof or of the interpretations set forth therein or made by the Owner or Engineer in its use thereof, and there is no warranty or guaranty, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout the areas where the Work is to be performed, or any part thereof, or that unforeseen developments may not occur, or that materials other than or in proportions different from those indicated may not be encountered. The Contractor shall undertake such further investigations and studies as may be necessary or useful to determine subsurface characteristics and conditions.

2.2.2 Information or services required to be furnished by the Owner shall be furnished by the Owner with reasonable promptness under the circumstance to avoid unreasonable delay in orderly progress of the Work.

2.2.3 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Article 6 (Construction by Owner or by Separate Contractors), Article 9 (Payments and Completion) and Article 11 (Insurance and Bonds).

2.3 OWNER’S RIGHT TO STOP THE WORK

2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2, or fails or refuses to provide a sufficient amount of properly supervised and coordinated labor, materials, or equipment so as to be able to complete the Work within the Contract Time or fails to remove and discharge (within ten days) any lien filed upon the Owner's property or Project funds by anyone claiming by, through, or under the Contractor, or disregards the instructions of the Engineer or Owner when based on the requirements of the Contract Documents, or otherwise fails to carry out Work in accordance with the Contract Documents, the Owner, by written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity except to the extent required by Subparagraph 6.1.3. The Owner shall at all times

have access to the Project Site for purposes of observation whenever the Work is in preparation and progress.

2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven (7) day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, or fails within such seven (7) day period to eliminate (or diligently commence to eliminate) the cause of any stop work order issued under Subparagraph 2.3.1 hereof the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due to the Contractor the cost of correcting such deficiencies, including compensation for the Engineer's and any Consultant's additional services and expenses made necessary by such default, neglect or failure and the Owner's additional expenses made necessary by such default, neglect or failure. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

2.5 OWNER'S ACCESS TO SITE

2.5.1 The Owner shall at all times have access to the Project Site for purposes of observation and other purposes contemplated by or under the Contract Documents.

2.6 NON-EXCLUSIVITY OF OWNER'S REMEDIES; LIMITATIONS ON OWNER'S RESPONSIBILITY

2.6.1 The rights and remedies of the Owner stated in this Article 2 are cumulative, and shall be in addition to, and not in limitation of, any other rights of the Owner granted in the Contract Documents or at law or in equity.

2.6.2 In no event shall the Owner have control over, charge of, or any responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted to the Owner in the Contract Documents.

2.6.3 The Owner's failure to exercise any rights or authority granted to the Owner under the Contract Documents shall not constitute a waiver of such rights or authority.

ARTICLE 3 – CONTRACTOR

3.1 DEFINITION

3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative identified as such in the Agreement or other Contract Documents. It is understood and agreed that the relationship of Contractor to Owner shall be that of an independent contractor. Nothing contained herein or inferable here from shall be deemed or construed to (1) make the Contractor the agent, servant, or employee of the Owner, or (2) create any partnership, joint venture, or other association between the Owner and Contractor. Any direction or instruction by the Owner in respect of the Work shall relate to the results the Owner desires to obtain from the Work, and shall in no way affect the Contractor's independent contractor status as described herein.

3.1.2 The Contractor shall be solely responsive and responsible to the Owner for completion of the Work in accordance with the Contract Documents. Where words such as "this Contractor", "Plumbing Contractor", "Mechanical Contractor", "Electrical Contractor", "Installing Contractor", "mason", "carpenter", etc., appear, they are used for convenience only, and the Contractor remains responsive and responsible for the work of these

contractors. Nothing in these General Conditions shall be interpreted as imposing on either the Owner or Engineer, or their respective agents, employees, officers, directors, or consultants, any duty, obligation, or authority with respect to any items that are not intended to be incorporated into the completed Project, or that do not comprise the Work, including but not limited to the following: shoring, scaffolding, hoists, weatherproofing, or any temporary facility or activity because these are the sole responsibility of the Contractor.

3.2 CONTRACTOR REVIEW OF CONTRACT DOCUMENTS, OTHER INFORMATION AND FIELD CONDITIONS

3.2.1 The Contractor shall carefully study and compare the Contract Documents with each other, with information furnished by the Owner pursuant to Subparagraph 2.2.2 and with the Contractor's own observations and information, and shall at once report to the Engineer and Owner errors, inconsistencies or omissions discovered. The Contractor shall not be liable to the Owner or Engineer for damage resulting from errors, inconsistencies or omissions in the Contract Documents that usually would not have been discovered by a reasonably prudent and experienced contractor in advance and that are not of the nature of items described in and intended to be covered in Subparagraphs 1.2.2, 1.2.3, 2.2.1 and 3.2.2 hereof, unless the Contractor recognized or reasonably should have recognized such error, inconsistency or omission and failed to report it to the Owner and Engineer. If the Contractor performs any construction activity involving an error, inconsistency or omission in the Contract Documents that the Contractor recognized or reasonably should have recognized and of which the Contractor failed to notify the Owner and Engineer, the Contractor shall assume complete responsibility for such performance and shall bear the amount of the attributable costs for correction.

3.2.2 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known (or which reasonably should have been known) to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Engineer at once. The accuracy of grades, elevations, dimensions, or locations of existing conditions is not guaranteed by the Engineer or the Owner and the Contractor is responsive and responsible for verifying same. Immediately upon commencement of the Work, the Contractor shall retain the services of a licensed surveyor to verify the boundaries of the site and establish benchmarks for the Work. All discrepancies shall be reported immediately to the Engineer and Owner.

3.2.3 The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Paragraph 3.12.

3.2.4 Should any words or numbers that are necessary to a clear understanding of the Work be illegible or omitted, or should an error, or discrepancy occur in any of the Contract Documents, the Contractor shall immediately notify the Engineer of such omission, error, or discrepancy, and the Contractor shall not proceed with that portion of the Work until clarification is received. If the Contractor proceeds without so notifying the Engineer, the Contractor shall be responsive and responsible for the cost of correcting the same, including any resulting damage.

3.2.5 The Contractor may submit requests for information to the Engineer to help facilitate the Contractor's performance of the Contract. Prior to submitting each request for information, the Contractor shall first carefully study and compare the Contract Documents, field conditions, other Owner provided information, Contractor prepared coordination drawings, and prior Project correspondence and documentation to determine that the information to be requested is not reasonably obtainable from such sources.

3.2.6 Each request for information shall be submitted to the Engineer, in writing, on such form and with such accompanying information as the Engineer may require for such purpose.

3.2.7 The Contractor shall submit each request for information sufficiently in advance of the date by which such information is required in order to allow the Engineer sufficient time, in the Engineer's reasonable

professional judgment, to permit adequate review and response and to permit Contractor compliance with the latest construction schedule.

3.2.8 The Contractor shall maintain a log at the Project site that sequentially numbers and lists each request for information. This log shall also contain the Drawing reference or Specification section to which the request pertains, the date of the request, and the Engineer's resolution thereof. This log shall be reviewed at each Project meeting and the resolution of requests for information shall be made part of the minutes of such meetings.

3.2.9 The Contractor may be required to reimburse the Owner amounts reasonably charged to the Owner by the Engineer for responding to numerous Contractor requests for information where such information is available to the Contractor from a reasonably careful review and comparison of the Contract Documents, field conditions, other Owner provided information, Contractor prepared coordination drawings, or prior Project correspondence or documentation.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsive and responsible for and have charge and control over construction means, methods, techniques, sequences, and procedures for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters, and for the safe conduct of all aspects of the Work. The Contractor shall schedule and conduct regular safety meetings with its Subcontractors and shall closely monitor compliance with safety requirements. The Contractor shall review any specified construction or installation procedure (including those recommended by any product manufacturer). The Contractor shall advise the Engineer and Owner promptly:

.1 if the Contractor believes that specified procedure deviates from good construction practices; or

.2 if the Contractor believes that following the procedure will affect or void any warranties; or

.3 of any objections which the Contractor may have to the procedure.

3.3.2 The Contractor shall employ a registered engineer, or surveyor, customarily engaged in such work, to establish reference lines, bench marks, elevations, axes, grid lines, principal wall, and property lines, and field checks as required for the Work, and shall make periodic readings as mutually determined necessary by the Contractor and Engineer for the proper completion of the Work during excavation and until site improvements are in place and thereafter until Project is substantially complete. Reports on such readings shall be made available to the Engineer upon request.

3.3.3 If any errors, inconsistencies, or omissions in Contract Documents are recognized or reasonably should have been recognized by the Contractor, any employee or agent of the Contractor, or any of its Subcontractors, the Contractor shall be responsive and responsible for notifying the Owner and Engineer in writing of such error, inconsistency, or omission before proceeding with the Work. The Engineer will take such notice under advisement and within a reasonable time commensurate with job progress render an interpretation. The Engineer's interpretation shall be subject to the Owner's approval. If the Contractor fails to give such notice and proceeds with such Work, or if the Contractor reasonably should have recognized such error, inconsistency or omission in the Contract Documents prior to submitting its bid, it shall correct any errors, inconsistencies, or omissions at no additional cost to the Owner.

3.3.4 The Contractor shall be responsive and responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and any other persons or entities performing or providing portions of the Work under a contract or other arrangements with the Contractor for or

on behalf of the Contractor or any of its Subcontractors or any of its or their suppliers or any other person in privity with the Contractor, and for any damage, losses, costs and expenses, including, but not limited to, attorney's fees and court costs, resulting from such acts and omissions.

3.3.5 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Engineer in the Engineer's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

3.3.6 The Contractor shall be responsive and responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

3.3.7 The Contractor shall ensure that all material suppliers and Subcontractors, their agents, and employees adhere to the Contract Documents, and that they order materials on time, taking into account the current market and delivery conditions and that they provide materials on time. The Contractor shall coordinate its Work with that of all others, if any, on the Project including deliveries, storage, installations, and construction utilities. The Contractor shall be responsive and responsible for the space requirements, locations, and routing of its equipment. In areas and locations where the proper and most effective space requirements, locations, and routing cannot be made as indicated, the Contractor shall meet with all others involved, before installation, to plan the most effective and efficient method of overall installation.

3.3.8 The Contractor shall be responsive and responsible for, and coordinate, any and all inspections required by any governmental body that has jurisdiction over the Project. Failure to obtain, or to obtain in a proper or timely manner, any permits, licenses, or other approvals because of the failure of the Contractor to conform to this requirement shall not extend the Contract Time or entitle the Contractor to an increase in the Contract Sum.

3.3.9 The Contractor shall establish and maintain and/or cause its Subcontractors to establish and maintain bench marks and all other grades, lines and levels necessary for the Work, report errors or inconsistencies to the Owner and Engineer before commencing Work, and review the placement of the building(s) and permanent facilities on the site with the Owner and Engineer after all lines are staked out and before foundation Work is started. The Contractor shall provide access to the Work for the Owner, Engineer, other persons designated by Owner, and governmental inspectors. Any encroachments made by the Contractor or its Subcontractors (of any tier) on adjacent properties due to construction as revealed by an improvement survey, except for encroachments arising from errors or omissions not reasonably discoverable by the Contractor in the Contract Documents, shall be the sole responsibility of the Contractor, and the Contractor shall correct such encroachments within thirty (30) days of the improvement survey (or as soon thereafter as reasonably possible), at the Contractor's sole cost and expense, either by the removal of the encroachment (and subsequent reconstruction on the Project site) or agreement with the adjacent property owner(s) (in form and substance satisfactory to the Owner in its sole discretion) allowing the encroachments to remain.

3.3.10 The Contractor shall be solely responsive and responsible for performing the Work, and shall perform the Work, in compliance with the Illinois Underground Facilities Damage Protection Act [220 ILCS 50/1 *et. seq*.], including contacting J.U.L.I.E. and otherwise locating (and shall locate prior to performing any Work) all utility lines, telephone company lines and cables, cable television lines, sewer lines, water pipes, gas lines, electrical lines, including, without limitation, all buried pipelines and buried telephone cables and shall perform the Work in such a manner so as to avoid damaging any such lines, cables, pipes, and pipelines.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.4.3 Before ordering any material or doing any Work, the Contractor shall verify all measurements at the Project site and shall be responsive and responsible for the correctness of same.

3.4.4 All materials shall be delivered and stored in authorized locations in unopened containers and in ample quantity to prevent delay. Ordering of materials shall be made well in advance so as not to hinder the progress of the Work. Manufacturer's directions for storage and use shall be carefully read and followed. Grade marks, labels, etc., shall be kept readable. Contractor's site superintendent shall receive all materials.

3.4.5 The Contractor shall carefully inspect all materials delivered on and to the Project site and reject defective materials without waiting for the Engineer or Owner to observe the materials.

3.4.6 The Contractor shall only employ labor on the Project or in connection with the Work capable of working harmoniously with all trades, crafts and any other individuals associated with the Project. The Contractor shall also use its reasonable best efforts to minimize the likelihood of any strike, work stoppage or other labor disturbance.

3.4.7 The Contractor shall comply with all applicable federal, state and local laws, codes, rules and regulations pertaining to the protection of workers and the environment in the performance of the Work, including but not limited to the requirements of OSHA and the EPA and shall indemnify and hold harmless the Owner against and from any claims, losses, damages or expenses it may incur as a result of the failure of the Contractor or any of its Subcontractors to comply with such requirements.

3.4.8 The Contractor agrees to pay prevailing rates of wages in accordance with the wage determination included with the Contract Documents and any subsequent determinations issued by the Illinois Department of Labor which shall supersede the attached determination, all in accordance with applicable law.

3.5 WARRANTY

3.5.1 The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of the good quality and new unless otherwise specified under the Contract Documents, and that the Work will be free from faults and defects and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. This warranty will not be affected by the specification of any product or procedure, unless the Contractor objects promptly to such product or procedures and advises the Engineer and Owner of possible substitute products or procedures which will not affect the warranty. This warranty shall not be restricted by the limitations of any manufacturer's warranty. Inability, failure or refusal of the Subcontractor or supplier responsive and responsible for the defective materials, equipment or Work to correct the same shall not excuse the Contractor from performing under the warranty. If required by the Owner or the Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.5.2 The Contractor agrees to assign to the Owner at the time of Final Completion of the Work and prior to final payment to the Contractor, any and all manufacturers' warranties relating to materials, equipment and labor incorporated in the Work and further agrees to perform the Work in such a manner so as to preserve such manufacturers' warranties.

3.5.3 Subject to a separate agreement to be entered into between Owner and Contractor, the Contractor shall furnish maintenance and twenty-four (24) hour callback service for any problems arising from the completed

Projectfor a period of at least six (6) months after Final Completion and acceptance of the Work, or for such longer period as shall otherwise be provided in any of the Contract Documents. This service shall include regular examinations of the installation by competent and trained employees of the Contractor, and shall include furnishing all adjustments, labor and materials necessary to ensure the Project's proper performance except in the event such substandard performancearises from misuse, accidents or negligence not caused by the Contractor or any of its Subcontractors.

3.5.4 If materials or equipment are replaced during the original warranty period, a new warranty period thereon shall then begin from the date that such corrective action is completed and approved.

3.5.5 The warranty provided in this Paragraph 3.5 shall be in addition to, and not in limitation of, any other warranty or remedy required under the Contract Documents or under applicable law.

3.5.6 Correction of defective or non-conforming Work shall include, in addition to that described in Article 12, any damage to the Project or other property that may result from such corrective action, including, without limitation, any damage to its contents, to the work of other contractors, or to adjacent property.

3.5.7 All warranties shall include labor and materials and shall be signed by the manufacturer or Subcontractor as the case may be and countersigned by the Contractor. All warranties shall be addressed to the Owner and delivered to the Owner upon completion of the Work and before or with the submission of request for final payment. Except as otherwise provided in these General Conditions, elsewhere in the Contract Documents, or in any Certificate of Substantial Completion approved by the Owner and Contractor and/or Subcontractor, as applicable, all warranties shall become effective on the date of Final Completion of the entire Work unless otherwise provided in any Certificate of Substantial Completion approved by the Owner and the Contractor or Subcontractor, as applicable, but only with respect to warranties for that specific portion of the Work, and **shall run for a twelve (12) month period, unless a longer period is provided for in the Contract Documents or by law.** Where warranties overlap, the more stringent requirement shall govern. The Contractor shall consult with the Owner prior to the submission of any application to the appropriate permitting agency or authority in order to afford the Owner the opportunity to obtain a waiver or reduction of any fees or costs associated therewith.

Defective materials, equipment or workmanship occurring within the Warranty period may be repaired where such produces results conforming to the Contract Documents relating to appearance, performance and reliability. Where the nature of the defective materials, equipment or workmanship is such that acceptable results cannot be obtained by repair, such defective items shall be removed and replace with new materials, equipment or workmanship complying with the Contract Documents.

3.6 TAXES

3.6.1 To the extent applicable and required in connection with Construction Projects for units of local government and subject to Subparagraph 3.6.2 below, the Contractor shall pay consumer, use, sales, and similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect and all increases therein enacted or effective as to such bids after the time to such bids are received.

3.6.2 **The Illinois State sales tax is not applicable to the Project for materials and equipment incorporated in the Work**. The Contractor shall not include same in the "Cost of the Work" or the "Contract Sum" or the "Construction Cost", as those terms are used or defined in the Contract Documents. In the event the Owner discovers that the Contractor has included such sales taxes, the Owner shall be entitled to a credit for the full amount of such taxes and the Contractor shall sign a deductive Change Order for that amount. **The**

Owner will provide the Contractor with Owner's sales tax exemption number for Contractor's proper use in connection with this Project only.

3.6.3 The Contractor shall pay unemployment and Social Security taxes and other taxes imposed by local, city, state or federal government with respect to the Contractor's own personnel and certify to the Owner that this has been done before the Owner is required to make payment to the Contractor.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Except for permits and fees which are specifically stated to be the responsibility of the Contractor under the Contract Documents, if any, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities, including utility company excess facility charges, local building department permit fees, plan review fees, utility connection fees, and water meter fees but not local licensing and inspection fees. The Contractor shall consult with the Owner relative to the necessity of payment of fees for such items for which the Contractor is responsive and responsible prior to the submission of any application to the appropriate permitting agency or authority. The Contractor is responsive and responsible for securing and maintaining at its sole cost and expense all necessary business and trade licenses and permits. Contractor is responsible for registering with the Village of Glen Ellyn and any related fees

3.7.2 The Contractor shall comply with and give notices and permit inspections required by laws, ordinances, codes, rules, regulations and lawful orders of public authorities bearing on performance of the Work or having jurisdiction over the Work or any insurance organizations (collectively, "Legal Requirements") relating to the Work of the performance thereof. If the Contractor fails to give any such notice or to permit any such inspection, it shall be responsive and responsible for and shall indemnify and hold harmless, the Owner, the Engineer and their respective consultants, employees, officers and agents against and from any resulting Work delays, fines, penalties, judgments or damages, including without limitation reasonable attorneys' fees and court costs imposed on, or suffered, sustained or incurred by, any of the parties indemnified hereunder. The Contractor shall also be liable to the Owner for any delay in the performance of the Work or increase in the cost of the Work resulting from the Contractor's failure to fully comply with the provisions of this Subparagraph 3.7.2.

3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations (collectively "Governmental Requirements"), unless such Governmental Requirements regulate the means, methods, or techniques of performance of the Work. However, if the Contractor observes that portions of the Contract Documents are at variance with Governmental Requirements, the Contractor shall promptly notify the Engineer and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

3.7.4 If the Contractor performs Work that it knows or reasonably should have known would be contrary to Governmental Requirements, without such notice to and approval of the Engineer and the Owner, the Contractor shall assume full responsibility for such Work and delays and shall bear the attributable costs.

3.7.5 Copies of any and all permits, licenses and certificates shall be delivered to the Engineer and Owner as soon as they are obtained. The Contractor shall deliver the originals of such permits, licenses and certificates to the Engineer together with the Contractor's application for final payment.

3.8 ALLOWANCES

3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities against which the Contractor makes a reasonable objection.

3.8.2 Unless otherwise provided in the Contract Documents:

.1 materials and equipment under an allowance shall be selected reasonably promptly by the Owner to avoid unreasonable delay in the Work;

.2 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts.

.3 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances;

.4 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Clause 3.8.2.2. and (2) changes in the Contractor's costs under Clause 3.8.2.3.

3.9 SUPERINTENDENT

3.9.1 The Contractor shall adequately staff the Project site to properly and thoroughly engineer, plan, schedule, coordinate, direct, administer, and supervise all construction activities. To this end, the Contractor shall employ competent and appropriately qualified and experienced personnel, consisting of a superintendent, any necessary assistants and, if required by the Contract Documents, a registered professional engineer or registered land surveyor, each of whom shall be acceptable to the Owner and who shall not be replaced without the Owner's prior written approval. At a minimum, the superintendent shall be in attendance at the Project site full time during the preparation and performance of the Work and at any time in which any construction activity is, or is scheduled, to take place, and until the date of Final Completion. The superintendent's assistants shall be in attendance at all times necessary to assure the Contractor's compliance with the obligations of this subparagraph. The Contractor, or if required by the Contract Documents, a registered professional engineer or registered land surveyor retained by the Contractor, shall establish all exterior and building grades, lines, levels, column, wall and partition lines, and required elevations, and shall certify to the actual location of all buildings, structures, road, utilities, site grading and associated Work to be constructed on the site. Prior to commencement of construction, the Contractor shall submit for the Owner's review and approval, a plan for staffing the Project consistent with the requirements of this Subparagraph. Unless otherwise provided in the Agreement, the superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.10 CONSTRUCTION SCHEDULE

3.10.1 Promptly after being awarded the Contract, the Contractor shall prepare and submit for the Owner's and Engineer's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The schedule shall indicate the proposed starting and completion dates for the various subdivisions of the Work, as well the totality of the Work. Unless otherwise specified by the Owner or Engineer, the schedule shall be updated every thirty (30) days and submitted to the Owner and Engineer with the Contractor's Applications for Payment. Each schedule shall contain a comparison of actual progress with the estimated progress for such point in time stated in the original schedule. If any schedule submitted sets forth a date for Substantial Completion for the Work or any phase of the Work beyond the Date(s) of Substantial Completion established in the Contract (as the same may be extended as provided in the Contract Documents), then the Contractor shall submit to the Engineer and

Owner for their review and approval a narrative description of the means and methods which the Contractor intends to employ to expedite the progress of the Work to ensure timely completion of the various phases of the Work as well as the totality of the Work. To ensure such timely completion, the Contractor shall take all necessary action including without limitation, increasing the number of personnel and labor on the Project and implementing overtime and double shifts. In that event, the Contractor shall not be entitled to an adjustment in the Contract Sum, if the delay is attributable to the fault of the Contractor, in the schedule.

3.10.1.1 The Owner's or Engineer's failure to object to a submitted schedule that exceeds time limits current under the Contract Documents shall not relieve the Contractor of its obligations to meet the time limits in the Contract Documents, nor shall it make the Owner or Engineer liable for any of the Contractor's damages incurred as a result of increased construction time or not meeting the time limits in the Contract Documents. The Owner's or Engineer's failure to object to a Contractor's schedule showing completion in advance of the time limits in the Contract Documents shall not create or infer any rights in favor of the Contractor for acceleration of the Work.

3.10.2 The construction schedule shall be in a detailed critical path method (CPM) format or other format satisfactory to the Owner and the Engineer. Such Schedule shall also: (1) provide a graphic representation of activities and events that will occur during performance of the Work; (2) identify each phase of construction and occupancy; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents. The construction schedule once approved shall be deemed part of the Contract Documents. If not accepted, the construction schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and the Engineer and re-submitted for acceptance. The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner and Engineer of any delays or potential delays. The accepted construction schedule (sometimes referred to herein as the “Construction Schedule”) shall be updated to reflect actual conditions (sometimes referred to in these General Conditions as “progress reports”) as set forth in Paragraph 3.10.1 or if requested by the Owner or Engineer. In the event any progress report indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.

3.10.3 The Contractor shall prepare and keep current, for the Engineer’s approval, a schedule of submittals which is coordinated with the Contractor’s construction schedule and allows the Engineer reasonable time to review submittals.

3.10.4 The Contractor shall conform to the most recent Construction Schedule and/or other schedules approved by the Engineer and Owner.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings (the “Record Drawings”), Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record changes and selections made during construction, and in addition approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Engineer and Owner and shall be delivered to the Engineer for submittal to the Owner upon completion of the Work and before final payment is made to the Contractor.

3.11.2 Plans and sections of all concealed work, including, without limitation, concealed piping and conduit, and all changes and deviations from the Contract Drawings shall be shown and dimensioned on the “As Built” drawings. The Contractor shall develop layout drawings for all concealed work that is schematically indicated on the Contract Drawings and such site improvements shall be signed and sealed by his Engineer.

3.11.3 The Contractor and its Subcontractors shall maintain an accurate record of deviations and changes from the Contract Documents which occur in the Work; shall indicate all such deviations and changes on reproducible transparencies of the Contract Documents; and shall turn over to the Engineer upon completion of the Work all such documents and information, including, without limitation, final shop drawings and sketches, marked prints, and similar data indicating the "As Built" conditions. This requirement does not authorize any deviations without approval of the Engineer. The cost of recording and transferring the changes or deviations to the transparencies shall be included in the Contract Sum. The "As Built" transparencies shall be delivered by the Contractor to the Engineer prior to final acceptance of the Project and issuance of final payment.

3.11.4 The Contractor shall cause each mechanical and electrical contractor or subcontractor to provide the Contractor with at least three (3) copies of all operating manuals at the time of delivery of each major piece of equipment.

3.11.5 The Record Drawings shall be prepared and updated during the prosecution of the Work. The prints for Record Drawing use will be a set of black line prints provided by the Engineer to the Contractor at the start of construction. Contractor shall maintain said set in good condition and shall use colored pencils to mark up said set with "record information" in a legible manner to show: (i) deviations from the Drawings made during construction; (ii) details in the Work not previously shown; (iii) changes to existing conditions or existing conditions found to differ from those shown on any existing drawings; (iv) the actual installed position of equipment, piping, conduits, light switches, electric fixtures, circuiting, ducts, dampers, access panels, control valves, drains, openings, and stub-outs; and (v) such other information as the Owner or Engineer may reasonably request.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required, the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Engineer is subject to the limitations of Subparagraph 4.2.6.

3.12.2 The Contractor shall review, approve and submit to the Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors, and submittals made by the Contractor which are not required by the Contract Documents may be returned without action.

3.12.3 The Contractor shall not submit any Shop Drawing that is merely a tracing or other copy of any of the Contract Documents. Each Shop Drawing must be prepared by the Contractor or a subcontractor or supplier of the Contractor. The Engineer shall have the authority to reject any Shop Drawing that violates this provision, and no extension of the Contract Time or increase in the Contract Sum shall be given on account of such rejection.

3.12.4 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Engineer. Such Work shall be in accordance with approved submittals.

3.12.5 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

3.12.6 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Engineer's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Engineer in writing of such deviation at the time of submittal and the Engineer has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Engineer's approval thereof.

3.12.7 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Engineer on previous submittals.

3.12.8 Informational submittals upon which the Engineer is not expected to take responsive action may be so identified in the Contract Documents.

3.12.9 Whenever a product is specified in accordance with a Federal Specification, an ASTM Standard, an American National Standards Institute Specification, or other Association Standard, unless the manufacturer has otherwise represented compliance with said Standards or Specifications, the Contractor shall present an affidavit or certification from the manufacturer when requested by the Engineer or Owner, or required in the Specifications, certifying that the product complies with the particular Standard or Specification.

3.12.10 When professional certification of performance criteria of materials, systems, or equipment is required by the Contract Documents, the Contractor shall provide the person or party providing the certification with full information on the relevant performance requirements and on the conditions under which the materials, systems, and equipment will be expected to operate at the Project site. The certification shall be based on performance under the operating conditions at the Project Site. The Owner and Engineer shall be entitled to rely upon the accuracy and completeness of such certifications.

3.12.11 Shop Drawings shall be prepared by skilled draftsmen, shall clearly illustrate the work with scale and full size details, and shall comply with the Specifications pertaining thereto.

3.12.12 The Contractor may be required to reimburse the Owner amounts, if any, charged to the Owner by the Engineer, for reviewing re-submitted Shop Drawings, Product Data, Samples and similar submittals for which the Engineer is expected to take responsive action when such re-submittal was required because the initial submittal was not in accordance with the requirements of this Agreement, and for reviewing Shop Drawings, Product Data, Samples and similar submittals not submitted in accordance with an approved submittal schedule.

3.12.13 After the award of the Contract, a request by the Contractor for a substitution of materials or equipment in place of that specified in the Contract Documents will be considered only under one or more of the following conditions, and then only with the Owner's written consent:

.1 Required for compliance with interpretations of Governmental Requirements or insurance regulations then existing ("Legal Requirements");

.2 Unavailability of specified products, through no fault of the Contractor;

.3 Subsequent information discloses inability of specified products to perform properly or to fit in designated space;

.4 Manufacturer/fabricator refuses to certify or guarantee performance of specified product as required; and/or

.5 When in the judgment of the Engineer or Owner, a substitution would be substantially to the Owner's

best interest, in terms of cost, time, or other considerations.

Substitution requests shall be written, timely and accompanied by adequate technical and cost data. Requests shall include a complete description of the proposed substitution, name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data, and any other data or information necessary for a complete evaluation by the Engineer and Owner. The Contractor shall not proceed to use substitute materials or equipment until it has received written approval from the Owner and Engineer. Nothing in this Subparagraph grants or should be construed as granting the Contractor authority or permission to use substitute materials or equipment.

3.13 USE OF SITE AND ADJACENT AREAS

3.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

3.13.2 The Contractor shall store materials on the site where directed and in such a manner which will not damage the grounds or building, or interfere with continuing Owner use of the building. Material deliveries shall be scheduled so that materials are not stored any longer than necessary. All items furnished to the site by the Owner shall be stored as directed.

3.13.3 Only materials and equipment which are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Project site. Protection of construction materials and equipment stored at the Project site from weather, theft, damage and all other adversity is solely the responsibility of the Contractor.

3.13.4 The Contractor and any entity for which the Contractor is responsive and responsible shall not erect any sign on the Project site without the prior written consent of the Owner.

3.13.5.1 The Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the Project site and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that the public areas of Lake Ellyn Park shall be free from all debris, building materials and equipment likely to cause hazardous conditions. Without limitation of any other provision of the Contract Documents, the Contractor shall use its best efforts to minimize any interference with the occupancy or beneficial use of the Lake Ellyn Park, as more specifically described in Paragraph 9.9.

3.13.6 The Contractor shall comply with all applicable laws, codes, rules and regulations pertaining to the use of the Site and adjacent areas and roadways, including without limitation those pertaining to hours of operation, noise, dust, debris, vehicular access to and from the Site, transport and unloading of materials and equipment, and use of flag men and traffic control.

3.14 MAINTENANCE OF SITE AND ACCESS ROUTES, CLEANING UP

3.14.1 The Contractor shall keep the site and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project, and properly and lawfully dispose of, as applicable, all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall clean up and keep all streets, sidewalks and other public ways used for access to the Project site free from accumulation of spillage of fill or soils or other materials caused by operations under the Contract. The Contractor shall strictly comply with all laws, ordinances and regulations pertaining to same.

3.14.2 In addition to all other remedies provided to the Owner for the Contractor's failure to perform its

obligations under the Contract Documents, if the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to and be the responsibility of the Contractor. Also any and all penalties, fines and other costs assessed by governmental agencies as the result of Contractor's failure to comply with the requirements of this Paragraph 3.14 shall be the responsibility of and be paid by the Contractor and shall not be the basis for an increase in the Contract Sum.

3.15 ACCESS TO WORK

3.15.1 The Contractor shall provide the Owner and Engineer access to the Work in preparation and progress wherever located.

3.16.3 The Contractor shall locate, protect, and save from injury utilities of all kinds, either above or below grade, inside or outside of any structure, found in the areas affected by its work. The Contractor shall be responsive and responsible for all damage caused to such utility by the operation of equipment or delivery of materials or as the direct or indirect result of any of its work and shall repair all such damage at its expense and as a part of the work included in the Contract Documents. The Contractor shall not be entitled to any increase in the Contract Sum or the Contract Time on account of such damage to any utility.

3.16 ROYALTIES AND PATENTS

3.16.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Engineer harmless from loss on account thereof, but shall not be responsive and responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor knows or has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsive and responsible for such loss unless such information is promptly furnished to the Engineer.

3.18 INDEMNIFICATION

3.18.1 To the fullest extent permitted by law, the Contractor waives any rights of contribution against, and shall indemnify and hold harmless, the Owner and Engineer and their officers, park commissioners, employees, directors, volunteers and agents from and against all claims, damages, losses and expenses of whatsoever nature, including but not limited to legal fees (attorneys' and paralegals' fees and court costs) and economic damage, but only to the extent arising out of, incidental to or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property, other than the Work itself, including the loss of use resulting there from and (ii) is caused in whole or in part by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph. The Contractor shall similarly protect, indemnify and hold and save harmless the Owner, its park commissioners, officers, employees, volunteers and agents against and from any and all claims, costs, causes, actions and expenses including but not limited to legal fees, directly or indirectly incurred by reason of or arising from the Contractor's or any of the Contractor's Subcontractors', agents' or representatives' breach of any of its obligations under, or default of, any provision of the Contract, its failure to perform the Work in accordance with the Contract Documents, or from violations of Federal, State or local laws, ordinances or codes or requirements of governing authorities or other Legal Requirements.

3.18.2 In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may

be liable, the indemnification obligation under this Paragraph 3.18 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

3.18.3 "Claims", "damages", "losses" and "expenses" as these words are used in the Contract shall be construed to include, but not limited to (1) injury or damage resulting from the failure to use or the use, misuse or any negligent construction or installation by the Contractor, any Subcontractor, their agents, servants or employees, of any hoist, crane, stay, ladder, support, rigging, blocking, scaffolding, or any and all other kinds of items of equipment or other mechanical or structural contrivance erected or constructed by any person, or any or all other kinds of equipment whether or not owned or furnished by the Owner, or failure to comply with any "safe place to work" or similar type statute; (2) all attorneys' fees and court costs incurred in bringing an action to enforce the provisions of this indemnity or any other indemnity contained in the General Conditions, and any supplementary and special conditions ; (3) time expended by the party being indemnified and their employees, at their usual rates plus cost of travel, long distance telephone and reproduction of documents; and (4) error or omission or defect in any submission made to the Engineer for its approval or review.

3.18.4 The indemnification obligations of the Contractor under this Contract are limited only to the extent required under the Construction Contract Indemnification for Negligence Act (740 ILCS 35/0.01 et seq.).

3.18.5 The Contractor shall be solely responsive and responsible for the performance of the Work in accordance with the Contract Documents.

3.18.6 In the event any action or proceeding is brought to enforce the terms of this Agreement to recover damages by virtue of a claimed breach of any provision of this Agreement, the prevailing party in such proceeding shall be entitled to recover its attorney's fees.

3.19 WORK BY TRADE UNIONS

3.19.1 If the Work is to be performed by trade unions, the Contractor shall make all necessary arrangements to reconcile, without delay, damage or cost to the Owner and, without any recourse to the Engineer or Owner, any conflict between the Contract Documents and any agreements or regulations of any kind in force among members or councils which regulate or distinguish what activities shall not be included in the work of that particular trade. In case the progress of the Work is affected by any undue delay in furnishing or installing any items or materials or equipment required under the Contract Documents because of the conflict involving any such agreement or regulation, the Engineer may require that other material or equipment of equal kind and quality be provided at no additional cost to the Owner.

3.20 PUBLICITY

3.20.1 Excluding communications required in order to properly perform the Work in accordance with the Contract Documents, the Contractor shall not divulge information concerning the Project to anyone (including, without limitation, information contained in applications for permits, variances, etc.) without the Owner's prior written consent. The Contractor shall obtain a similar agreement from firms, Subcontractors, suppliers, and others employed by the Contractor. The Owner reserves the right to release all information concerning the Project as well as to time its release, form, and content. This requirement shall survive the expiration of the Contract.

ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

4.1 ENGINEER

4.1.1 The Engineer is the person lawfully licensed to practice Engineering or an entity lawfully practicing

Engineering identified as such in the Agreement and is referred throughout the Contract Documents as if singular in number. The term "Engineer" means the Engineer or the Engineer's authorized representative.

The Engineer for this project is Eriksson Engineering Associates, Ltd., 145 Commerce Drive, Grayslake, IL 60030. The Contractor is made aware that the Engineering is working for the Owner according to the terms of a separate professional services contract. The Engineer's services for administration of the Contract are being rendered on a part-time basis. A copy of the Engineer's Agreement with the Owner is attached (Attachment A) hereto. Terms and Conditions of the Engineer's Agreement with the Owner shall supersede any conflicting conditions of the Owner's Agreement with the Contractor where in conflict as described in Article 4.1.2.

It is the Contractor's responsibility to make the Owner aware, on a timely basis, of any issues that the Engineer's presence at the site or involvement with a process is required. The Owner will, on a timely basis, advise the Contractor and the Engineer if services are required in addition to the Engineer's Agreement with the Owner.

4.1.2 Duties, responsibilities and limitations of authority of the Engineer as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner and Engineer. As between the Owner and Engineer, only, in the event of a conflict between a provision of the Owner-Engineer Agreement and a provision of this Article 4 or other articles of these General Conditions, the provision of the Owner-Engineer Agreement shall govern. The Contractor is not an intended or actual third-party beneficiary of the Owner-Engineer Agreement.

4.1.3 The Owner may at any time employ or retain any licensed Engineer or any Owner's representative to perform all or part of the duties of the Engineer hereunder or to exercise any of its rights hereunder. Owner shall notify all parties in writing (setting forth the scope of said replacement Engineer's or Owner's representative's duties and responsibilities) prior to making this change. The Owner may also designate an Owner's representative to perform any duties or responsibilities in connection with the Project which are not included as part of the Engineer's responsibilities in its contract with the Owner. The Owner will advise the Contractor in writing of any such designation.

4.2 ADMINISTRATION OF THE CONTRACT

4.2.1 The Engineer and any other person designated in writing by the Owner will provide administration of the Contract as described in the Contract Documents, and will be the Owner's representative (1) during construction; (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the correction period described in Paragraph 12.2. The Engineer will advise and consult with the Owner. The Engineer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with other provisions of the Contract.

4.2.1.1 The Engineer will visit the site and observe the Work at intervals appropriate to the stage of construction and the status of the Project to become familiar with the progress and quality of the Work and to determine in general if the Work is proceeding or being performed in accordance with the Contract Documents. The Engineer will not be required, however, to make exhaustive or continuous on-site observations, but if in the course of conducting the periodic observations provided for herein, the Engineer becomes aware that the progress and quality of the Work is deficient to the extent that exhaustive or continuous on-site observations would be recommended in order to properly guard the Owner against defects or delay in the Work, he shall notify the Owner immediately of that fact. However, the Engineer will not be required to make exhaustive or continuous inspections to check quality or quantity of the Work. On the basis of on-site observations as an Engineer, the Engineer will keep the Owner informed of the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work.

4.2.2 The Engineer will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Paragraph 3.3. The Engineer will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Engineer will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work. Provided, however, that Engineer shall be responsible for promptly notifying Owner of the failure of Contractor, Subcontractors or other persons performing or providing any of the Work, in failing to use proper construction means, methods, techniques, sequences, procedures, safety precautions and programs, but only to the extent the Engineer becomes aware of, or should, exercising due professional diligence, be aware of same. The Engineer shall also promptly notify the Owner in writing of the failure of any of the foregoing to carry out the Work in accordance with the Contract Documents.

4.2.3 Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Engineer, provided, however, that the Owner may instruct, correspond or negotiate with the Contractor directly and in such event shall forward a copy of any writing to the Engineer and shall advise the Engineer of any significant instruction, correspondence or negotiation and shall afford the Engineer an opportunity to attend any formal discussions directly between the Owner and Contractor, if appropriate. Communications by and with the Engineer's consultants shall be through the Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner. Notwithstanding the foregoing, the Engineer and/or Owner may communicate directly with Subcontractor and material suppliers in the event of the Contractor's breach of any of its obligations under the Contract Documents. Also the Owner may instruct, correspond or negotiate with the Contractor directly and in such event shall forward a copy of any writing to the Engineer and shall advise the Engineer of any significant instruction, correspondence or negotiation and shall afford the Engineer an opportunity to attend any formal discussions directly between the Owner and Contractor, if appropriate.

4.2.4 Based on the Engineer's observations and evaluations of the progress and quality of the Work and the Contractor's Application for Payment, the Engineer shall review and, subject to approval by the Owner, certify the amount due to the Contractor and will issue Certificates for Payment in such amount.

4.2.5 The Engineer will have the authority to reject Work which does not conform to the Contract Documents. Additionally, the Engineer shall notify the Owner promptly whenever the Engineer believes that any Work does not conform to the Contract Documents. The Owner shall also have authority but not the responsibility to determine such nonconformity and to reject or accept same. Whenever the Engineer considers it necessary or advisable for implementation of the intent of the Contract Documents, the Engineer will have authority subject to Owner's prior approval to require additional inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither the authority of the Engineer or Owner nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Engineer or the Owner to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work, and failure of the Engineer or Owner to notify the Contractor of a nonconformity shall not relieve the Contractor of its obligations or liability to the Owner to promptly perform the Work in strict accordance with the Contract Documents and to correct any deficiencies.

4.2.6 The Engineer will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Engineer's action will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, the Contractor or separate contractors, while allowing sufficient time in the Engineer's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose

of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents, including without limitation the obligations under Paragraphs 3.2, 3.3, 3.5 and 3.12. The Engineer's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Engineer, of any construction means, methods, techniques, sequences or procedures. The Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.7 The Engineer will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4. All Change Orders, Construction Change Directives and field directives shall require the written approval of the Owner in order to be binding on the Owner.

4.2.8 The Engineer will conduct OBSERVATIONS to determine the date or dates of Substantial Completion and the date of Final Completion, will receive and forward to the Owner for the Owner's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents and upon Owner's approval. If the Owner and Engineer agree, the Engineer will provide one or more project representatives to assist in carrying out the Engineer's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in Agreement between the Engineer and the Owner.

4.2.9 The Engineer will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Engineer's response to such requests will be made with reasonable promptness under the circumstance and within any time limits agreed upon. Except as otherwise specifically provided in the Contract Documents, if no agreement is made concerning the time within which interpretations required of the Engineer shall be furnished in compliance with this Paragraph 4.2, then delay shall not be recognized on account of failure by the Engineer to furnish such interpretations until fifteen (15) days after written request is made for them.

4.2.10 Interpretations and decisions of the Engineer will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. The Engineer will be the initial interpreter of the requirements of the Contract Documents; however, the Engineer will consult with the Owner prior to making any such interpretations or issuing any approvals. Anything to the contrary contained in the Contract Documents notwithstanding, the Engineer shall be and is the representative of the Owner and not an independent arbiter of the Contract, and although the Engineer shall be fully informed by the Contractor of the Contractor's performance under the Contract and consulted with regard to any decision and controversies, no decision of the Owner under the Contract shall be made by the Engineer without the express written authority of the Owner. The decisions of the Engineer are binding on the Contractor, but are in the nature of recommendations to the Owner and are not binding on and may be overruled by the Owner.

4.3 CLAIMS AND DISPUTES

4.3.1 A Claim is a demand or assertion by one of the parties to the Contract seeking, as a matter of right, an adjustment of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

4.3.2 Claims, including those alleging an error or omission by the Engineer, may, upon request of both the Contractor and Owner, be referred initially to the Engineer for action as provided in Paragraph 4.4.

4.3.3 Claims by either party must be made within fifteen (15) days after occurrence of the event giving rise to such Claim or within fifteen (15) days after the claimant first recognizes or reasonably should have recognized the condition giving rise to the Claim, whichever is later. Claims must be made by written notice and describe in reasonable detail the basis for and nature thereof and an estimate of the probable increase in the Contract Sum, if any, and the probable delay in the progress of the Work and increase in the Contract Time, if any. An additional Claim made after the initial Claim has been resolved as shown in a Change Order will not be considered unless submitted within the required time period. If the Contractor fails to comply with the literal language of this subparagraph within the prescribed time limits it thereby waives any claim he may have under the Contract.

4.3.4 Pending final resolution of a Claim, including any litigation arising from the Claim, except as otherwise directed by the Owner in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

4.3.5 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

1. liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
2. failure of the Work to comply with the requirements of the Contract Documents; or
3. terms of warranties required by the Contract Documents.

4.3.6 Except as otherwise provided in Subparagraph 1.2.2, 1.2.3., and 3.2.2 of these General Conditions, if conditions are encountered at the site which are (i) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or by or in any tests, reports or other documents provided to or obtained by the Contractor, or (ii) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing Party shall be given to the other Party promptly before conditions are disturbed and in no event later than fifteen (15) days after first observance of the conditions. The Engineer will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, except as otherwise provided in Subparagraph 1.2.2, 1.2.3 and 3.2.2 of these General Conditions, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Engineer determines that the conditions at the site are not materially different from those indicated in the Contract Documents or by or in any tests, reports, or other document provided to or obtained by the Contractor, and that no change in the terms of the Contract is justified, the Engineer shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within fifteen (15) days after the Engineer has given notice of the decision. If the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Engineer for initial determination, subject to further proceedings pursuant to Paragraph 4.4.

4.3.7 Except as provided in Subparagraph 7.4.3, if the Contractor wishes to make any Claim for an increase in the Contract Sum, written notice by the Contractor shall be given to the Owner and Engineer not later than fifteen (15) days after the first observance of the condition giving rise to such claim and before proceeding to execute the Work; provided, however, that the Contractor shall use its best efforts to furnish the Engineer and Owner, as expeditiously as possible, with notice of any Claim including, without limitation, those in connection with concealed or unknown conditions, once such Claim is recognized, and shall cooperate with the Engineer and Owner in any effort to mitigate the alleged or potential damages, delay or other adverse consequences arising out of the condition which is the cause of such a Claim. Said notice shall itemize all claims and shall contain sufficient detail and substantiating data to permit evaluation of same by the Owner and Engineer. No such claim shall be valid unless so made. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.3**.** If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Engineer; (2) an order by the

Owner to stop the Work where the Contractor was not at fault; (3) a written order for a minor change in the Work issued by the Engineer; (4) failure of payment by the Owner; (5) termination of the Contract by the Owner; (6) the Owner's suspension; or (7) other reasonable grounds, the Claim shall be filed in accordance with the procedure established herein. Any change in the Contract Sum resulting from such Claim shall be authorized by Change Order or Construction Change Directive, as the case may be. This Paragraph 4.3 is not intended to and shall not create any additional bases upon which the Contractor may be entitled to an increase in the Contract Sum beyond those bases provided elsewhere in this Contract. In no event shall the Contractor make a Claim for additional costs resulting from any delays in the progress of the Work, which were not caused by the Owner. The Owner's exercise of any of its rights under this Agreement shall not constitute "cause" within the meaning of the foregoing sentence.

4.3.8 CLAIMS FOR ADDITIONAL TIME

4.3.8.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

4.3.8.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction. In the event of a dispute, requests for extensions of construction time due to adverse weather conditions shall include U.S. Weather Bureau Climatological Reports for the months involved plus a report indicating the average precipitation, temperature, etc., for the past ten (10) years from the reporting station nearest the Project. The 10-year average will be the basis for determining the number of adverse weather days and the effect resulting therefrom on construction which the Contractor would normally expect to encounter. Extensions of time may be requested for any month of construction for days lost due to adverse weather in excess of the normally expected lost time, provided, however, if the Owner determines that the seasonal average of adverse weather days during construction is less than would be normally expected, no Change Order shall be issued and the request for extension of time shall be denied.

4.3.9 If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding ten (10) days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in Subparagraphs 4.3.7 or 4.3.8.

4.3.10 The Contractor agrees to waive any right which it may have to punitive damages from the Owner and agrees not to make any claim or demand for punitive damages against the Owner.

4.4 RESOLUTION OF CLAIMS AND DISPUTES

4.4.1 The Engineer (if the matter is referred to the Engineer for initial decision) will review Claims and take one or more of the following preliminary actions within ten (10) days of receipt of a Claim: (1) request additional supporting data from the claimant; (2) submit a schedule to the parties indicating when the Engineer expects to take action; (3) reject the Claim in whole or in part, stating reasons for rejection; (4) recommend approval of the Claim by the other party; or (5) suggest a compromise. The Engineer may also, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim.

4.4.2 If a Claim has been resolved, the Engineer will prepare or obtain appropriate documentation.

4.4.3 If a Claim has not been resolved, the party making the Claim shall, within ten (10) days of receipt of the

Engineer's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Engineer; (2) modify the initial Claim; or (3) notify the Engineer that the initial Claim stands.

4.4.4 If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Engineer, the Engineer will notify the parties in writing that the Engineer's decision will be made within seven (7) days, which decision shall be considered advisory only and not binding on the parties in the event of litigation or arbitration in respect of the Claim. Upon expiration of such time period, the Engineer will render to the parties the Engineer's written decision relative to the Claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Owner or Engineer acting for the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

ARTICLE 5 - SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" or subcontractor is referred to throughout the Contract Documents as if singular in number and means a Subcontractor, subcontractor or an authorized representative of the Subcontractor or subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract shall furnish in writing to the Owner and Engineer (a) the name, trade and subcontract amount for each Subcontractor proposed for each principal portion of the Work; and (b) the name of all persons/entities proposed as manufacturers or suppliers of the principal products identified in the Specifications (including those who are to furnish materials or equipment fabricated to a special design). The Engineer will promptly reply to the Contractor in writing stating whether or not the Owner or Engineer, after due investigation, has a reasonable objection to any such proposed person or entity. Failure of the Owner or Engineer to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Engineer has made a reasonable and timely objection.

5.2.3 If the Owner or Engineer has a reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Engineer has no reasonable objection. The Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

5.2.4 Subcontractors listed by the Contractor and not objected to by the Owner or Engineer must be used on the portion of the Work for which they were proposed and shall not be changed except with the written consent of the Engineer and Owner.

5.2.5 In the event of a conflict between the Owner and Engineer regarding the selection of Subcontractors, the Owner's decision shall govern.

5.3 SUBCONTRACT PROVISIONS; SUBCONTRACTUAL RELATIONS

5.3.1 All subcontracts shall be in writing and shall specifically provide that the Owner is an intended third-party beneficiary of such subcontract and that the Owner shall have the right to enforce the Subcontractor's obligations thereunder after the occurrence of a default under the Contract by the Contractor. By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligation and responsibilities which the Contractor, by these Documents, assumes toward the Owner and Engineer. Each subcontract agreement shall preserve and protect the rights of the Owner and Engineer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar written agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their representatives and proposed Sub-subcontractors.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.4.1 All subcontract agreements shall conform to the requirements of the Contract Documents and the Contractor hereby irrevocably assigns to the Owner and Owner's permitted assigns all its interest in any subcontract agreements and purchase orders now existing or hereinafter entered into by the Contractor for performance of any part of the Work, which assignment will be effective in the event of the Contractor's failure to perform the Work in accordance with the Contract Documents and upon acceptance by the Owner in writing and only as to those subcontract agreements and purchase orders that the Owner designates in said writing. It is agreed and understood that the Owner may accept said assignment at any time during the course of construction prior to Final Completion. The Contractor shall promptly submit to the Owner a true and complete copy of each subcontract upon execution of same. Each subcontract shall contain a contingent assignment of the subcontract to the Owner, consistent with this Subparagraph. Upon acceptance by the Owner of a subcontract; (1) the Contractor shall promptly furnish to the Owner true and complete copies of the designated subcontract agreements and purchase orders, both as may have been amended by approved change order together with copies of any and all such amendments, and (2) the Owner shall only be required to compensate the designated Subcontractor(s) or supplier(s) for compensation accruing to such party(ies) for Work done or materials delivered from and after the date on which the Owner accepts the subcontract agreement(s) or purchase order(s). All sums due and owing by the Contractor to the designated Subcontractor(s) or supplier(s) for work performed or material supplied prior to the Owner's acceptance of the subcontract agreement(s) or purchase order(s) shall constitute a debt between such parties and the Contractor. It is further agreed that no subcontract agreement or purchase order shall contain any restriction that would prohibit assignment under the terms and conditions stated hereinabove. It is further agreed and understood that such assignment is part of the consideration to the Owner for entering into the Contract with the Contractor and may not be withdrawn prior to Final Completion.

5.4.2 Each subcontract shall specifically provide that the Owner shall only be responsible to the Subcontractor for those obligations of the Contractor under the subcontract that first accrue subsequent to the Owner's exercise of any rights under this conditional assignment and its acceptance of that subcontract.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Document in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor. The Contractor shall cooperate with the Owner's own forces and of each separate Contractor in the performance of the Work to avoid conflicts and delays. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule and Contract Sum deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

6.1.4 Work by the Owner or by separate contractors, if any, may be indicated on the Drawings to show the space it will occupy and its location with reference to other work. Any work not specifically noted "Not in Contract" or "NIC" shall be included in the Work of the Contractor.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Engineer and Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acknowledgement that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

6.2.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the party responsive and responsible thereof.

6.2.4 The Contractor shall promptly remedy damage caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.6.

6.2.5 Should the Contractor cause damage to the work or property of any separate contractor and/or in the event of any other claim, dispute, or matter in question between the Contractor and any separate contractor, the Contractor shall promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the

dispute. In any event, the Contractor shall indemnify, defend, and hold harmless the Owner, its park commissioners, officers, employees and agents, to the full extent agreed to under Paragraph 3.18 of the General Conditions.

6.2.6 The Owner and each separate contractor, if any, shall have the same responsibilities for cutting and patching for any work which they perform, as are described for the Contractor in Paragraph 3.16.

6.3 OWNER'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraphs 3.13 and 3.14, the Owner may after forty-eight (48) hours' notice to the Contractor and the Contractor's failure to cure, clean up and allocate the cost among those responsive and responsible.

ARTICLE 7 - CHANGES IN THE WORK

7.1 CHANGES

7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Engineer; a Construction Change Directive requires agreement by the Owner and, if deemed necessary by the Owner, also by the Engineer and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Engineer alone.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work. Except as permitted in Subparagraph 9.7.2, a change in the Contract Sum or the Contract Time shall be accomplished only by Change Order.

7.1.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

7.1.5 In order to evaluate proposals for changes to the Work, the Contractor shall submit a complete itemization of all costs, including hours of labor, quantities of materials, amounts of subcontracts, etc., separately defining Work deleted and Work added. In no case will a lump sum proposal be approved without such itemization.

7.1.6 The combined allowance for overhead and profit in connection with changes to the Work, other than changes where adjustments to the Contract Sum are calculated based on unit prices, shall be the **lesser** of the amount included in the Contractor's bid proposal, the amount stated in the Owner-Contractor Agreement, or the following:

For the Subcontractor's additional work, including the cost of labor and materials purchased by the Subcontractor: 10% of the net increase after taking into account cost deductions for deleted or reduced Work.

For the Contractor's administration of his subcontractor's additional work: 5% of the net increase after taking

into account cost deductions for deleted or reduced Work.

For Contractor's additional work performed by his own forces, including the cost of labor and materials purchased directly by the Contractor: 10% of the net cost increase after taking into account cost deductions for deleted or reduced Work.

For Contractor's or Subcontractor's deleted Work: 0%.

In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. In no case will a change involving over $200 individually or in the aggregate be approved without such itemization.

7.1.7 When both additions and credits covering related work or substitutions are involved in any one change, the allowance for overhead and profit shall be calculated on the basis of the net increase.

7.2 CHANGE ORDERS

7.2.1 A Change Order is a written instrument prepared by the Engineer and signed by the Owner, Contractor and Engineer stating their agreement upon all of the following:

.1 a change in the Work;
.2 the amount of the adjustment in the Contract Sum, if any; and
.3 the extent of the adjustment in the Contract Time, if any.

7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Subparagraph 7.3.6

7.2.3 Agreement on any Change Order shall constitute a final settlement, and accord and satisfaction between the Owner and Contractor, of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the Construction Schedule. In the event a Change Order increases the Contract Sum, the Contractor shall include the Work covered by such Change Order in Applications for Payment as if such Work were originally part of the Contract Documents.

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.1 A Construction Change Directive is a written order directed to the Contractor which has been prepared by the Engineer and signed by the Owner and Engineer, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 unit prices stated in the Contract Documents or subsequently agreed upon
.3 costs to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 as provided in Subparagraph 7.3.6.

7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Engineer and Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Once a Construction Change Directive is signed by the Contractor, such agreement shall be effective immediately and shall be recorded as a Change Order.

7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Engineer on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, in accordance with the amounts indicated in the proposal form and the agreement between the Owner and Contractor, or in the absence of same, a reasonable allowance for profit and overhead. In such case, and also under Clause 7.3.3.3, the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting together with appropriate supporting data. Contractor shall submit detailed itemized breakdowns of quantities and unit costs, including overhead and profit as separate items with its response to any request for price. Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph 7.3.6 shall be limited to the following:

.1 costs of labor, including social security [old age], and unemployment insurance, fringe benefits required by agreement or custom, and workers' or workman's compensation insurance;
.2 cost of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
.3 rental cost of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others. Unless otherwise established in the Contract (1) the rental value of the Contractor's own equipment shall not be more than the rates in the current edition of "Compilation of Rental Rates for Construction Equipment" prepared by Associated Equipment Distributors, Oak Brook, Illinois, without the Owner's written consent.
.4 costs of premiums for all bonds and insurance and permit fees and sales, use or similar taxes related to the Work; and
.5 Additional costs of supervision and field office personnel directly attributable to the change. Overtime when specifically authorized by the Owner and not attributable to delays caused by the Contractor or Subcontractor will be paid for by the Owner on the basis of premium payment only, plus the cost of insurance and taxes based on the premium payment. The Contractor shall submit detailed itemized breakdowns of quantities and unit costs, including overhead and profit as separate items with response to request for price.

7.3.7 Pending final determination of cost to the Owner, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Engineer. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change; in such situations, if the amount of either the credit or the addition is in dispute, the amount of the other, non-disputed item may not be included in the Application for Payment.

7.3.8 If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for

determining it, the adjustment or the method shall be determined in accordance with Subparagraph 4.4 of these General Conditions.

7.3.9 When the adjustments in the Contract Sum and Contract Time are determined as provided herein, such determination shall be effective immediately and shall be recorded by preparation of and execution of an appropriate Change Order.

7.3.10 No change in the Work, whether by way of alteration or addition to the Work, shall be the basis of an addition to the Contract Sum or a change in the Contract Time unless and until such alteration or addition has been authorized by a Change Order executed and issued in accordance with and in strict compliance with the requirements of the Contract Documents and applicable law. Accordingly, no course of conduct or dealing between the parties, nor any express or implied acceptance of alterations or additions to the Work and no claim that the Owner has been unjustly enriched shall be the basis of any claim to an increase in the Contract Sum or change in the Contract Time.

7.4 MINOR CHANGES IN THE WORK

7.4.1 The Engineer and Owner will have authority to order by Bulletin or by Field Order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents or the design of the Project. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

7.4.2 A Field Order or Bulletin shall not be recognized as having any impact upon the Contract Sum or the Contract Time and the Contractor shall have no claim therefore unless it shall, in no event later than fifteen (15) days from the date such direction or order was given, submit to the Owner for Owner's evaluation of, and decision with respect to, any adjustment in the Contract Sum or Contract Time to which the Contractor believes it is entitled hereunder as a result of the change in the Work described in the Field Order or Bulletin, including sufficient detail to allow the Owner to evaluate the price. Information furnished by the Contractor must include quantities, unit prices, labor rates and hours, productivity factors, markups, and cumulative effect or such other information as may be reasonably requested by the Owner or Engineer acting on the Owner's behalf.

7.4.3 Upon receipt of a Bulletin or Field Order, the Contractor shall promptly proceed with the Work involved, or as otherwise directed by the Field Order or Bulletin.

7.5 CONTINUATION OF WORK PENDING RESOLUTION

7.5.1 Pending final determination of cost to the Owner or extension of time to the Contractor, unless otherwise directed by the Owner, the Contractor shall continue to perform the Work in accordance with the Contract Documents.

ARTICLE 8 - TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work. Contract Time shall be based on days that begin at 12:00 midnight and include the following twenty-four (24) hours. Calendar days shall include Saturdays, Sundays and legal holidays, in addition to working days. Working days shall not include Saturdays, Sundays or legal holidays, and shall include only straight time working hours.

8.1.2 The date of commencement of the Work is the date established in the Agreement. The date shall not be

postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.

8.1.3 The date of Substantial Completion is the date certified by the Engineer and approved by the Owner in accordance with Paragraph 9.8.

8.1.4 The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION

8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 The Contractor shall not, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five (5) days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic’s liens and other security interests.

8.2.3 The Contractor shall carry the Work forward regularly, diligently, uninterruptedly and expeditiously and in a good workmanlike and professional manner at such a rate of progress and with an adequate work force as will insure the completion of the Work in accordance with the Contract Documents by the date established in the Contract. It is expressly understood and agreed by and between the Contractor and Owner that the time for completion of the Work is a reasonable time, taking into consideration the average climatic range, usual commercial conditions, and all other conditions and factors prevailing in this locality.

8.2.4 If the Contractor fails to maintain the progress of the construction, as indicated in the Contractor's Construction Schedule, he shall furnish such additional labor and other services, or shall work sufficient overtime, as may be necessary to conform to the schedule, at no additional cost to the Owner.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 If the Contractor is delayed at any time in the progress of the Work prior to Substantial Completion by: any wrongful act or neglect of the Owner; changes ordered in the Work which are not caused by the wrongful or negligent acts, errors or omissions of the Contractor, its agents, employees or Subcontractors; or by occurrences beyond the control and without the fault or negligence of the Contractor and which by the exercise of reasonable diligence the Contractor is unable to prevent or provide against, including regional labor disputes (not disputes limited to the work force of, or provided by, the Contractor or its Subcontractors) as they affect the Work that cannot be resolved by the Contractor's agreeing to the wages, hours, working conditions and other terms as they have been or will be established as the pattern settlement with respect to said dispute, provided that prior to execution of the Contract by the Owner, the Contractor has advised the Owner in writing of the expiration during the Contract Time of applicable labor contracts; fire, unusual delay in deliveries not reasonably foreseeable, unavoidable casualties, adverse weather conditions not reasonably foreseeable, unusual subsurface or concealed Site conditions which could not have been discovered in the exercise of due diligence and which differ materially from those ordinarily found to exist and generally recognized as inherent in the Work indicated in the Contract Documents, or by other occurrences which the Engineer, subject to the Owner's reasonable approval, determines may justify delay, then, provided that the Contractor is in compliance with all other relevant provisions of the Contract Documents, the Contract Time shall be extended by Change Order or Construction Change Directive for the length of time that the completion of the Project is delayed which is actually and directly caused by such occurrence as determined by the Engineer and approved by the Contractor

and Owner; provided, however, that such extension of Contract Time shall be net of any delays caused by or due to the fault or negligence of the Contractor or which are otherwise the responsibility of the Contractor and shall also be net of any contingency or "float" time allowance included in the Contractor's construction schedule.

8.3.2 The Contractor shall, in the event of any occurrence likely to cause a delay, cooperate in good faith with the Engineer and Owner to minimize and mitigate the impact of any such occurrence and do all things reasonable under the circumstances to achieve this goal.

8.3.3 Claims relating to time shall be made in accordance with applicable provisions of Paragraph 4.3.

8.3.4 If the Contractor, but for a delay not within the Contractor's control, would have completed the Work prior to the time set forth in the Project schedule, the Contractor shall not be entitled to any recovery of damages arising out of any delay which prevented such early completion of the Work.

8.3.5 If the Contractor submits a progress report indicating, or otherwise expresses an intention to achieve, completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to achieve such earlier completion shall be created or implied. Under the terms and conditions of the Contract, the Owner is and shall remain the sole beneficiary of any float time in the schedule.

8.3.6 If conditions, events or circumstances occur which may cause a delay in the progress of the Work the Contractor shall make a claim as provided in Paragraph 4.3 hereof within ten (10) days after the first occurrence of such condition, event, or circumstance, describing in reasonable detail the nature thereof and an estimate of the cost and probable effect of delay on progress of the Work. Failure of the Contractor to provide such notice shall constitute a complete waiver and release by the Contractor of any claim of entitlement to an extension in the Contract Time or increase in the Contract Sum.

ARTICLE 9 - PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and, including adjustments authorized in accordance with the Contract Documents, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Engineer may require. This schedule, unless objected to by the Engineer, shall be used as a basis for reviewing the Contractor's Applications for Payment.

9.2.2 The Schedule of Values shall state the names of all Subcontractors, material suppliers and the amounts to become due each. It shall state the value of work to be completed by the Contractor's own forces. At the direction of the Engineer, it shall include quantities, if applicable. The Contractor's overhead and profit shall each be carried as separate items. The total for all items shall aggregate the Contract Sum.

9.3 APPLICATION FOR PAYMENT

9.3.1 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month. The Contractor shall prepare and submit to the Engineer and Owner for their review and

comment, an itemized Application for Payment for all Work completed for the previous month in accordance with the schedule of values. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Engineer may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for elsewhere in the Contract Documents. Except as provided in Subparagraph 9.3.4, below, until Final Completion, the Owner will pay ninety percent (90%) of the amount due to the Contractor on account of progress payments. No interest will be paid on retention amounts.

9.3.1.1 Such application may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives but not yet included in Change Orders.

9.3.1.2 Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason. However, this Subparagraph shall not apply to routine retainage the Contractor intends to withhold from a Subcontractor in accordance with its subcontract.

9.3.2 Unless otherwise specifically provided in the Contract Documents, payments will be made on account of materials or equipment only if and when incorporated in the Work. If specifically agreed in writing by the Owner in advance, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. Only if and to the extent, approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures, and the production by the Contractor of documentary evidence, satisfactory to the Owner to establish the Owner's title to such materials and equipment, to ensure the protection and security of such materials and equipment; and to otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such materials and equipment stored off the site. The Contractor will submit requisitions from the suppliers and Subcontractors to substantiate the amounts requested on the Application for Payment.

9.3.2.1 Included as part of each payment requisition, the Contractor shall furnish the following in form and substance satisfactory to the Engineer and Owner:

A. A notarized Affidavit, executed on AIA Document G702 or on a form approved by the Engineer, stating that all monetary obligations to all Subcontractors and to suppliers of materials, equipment, services and labor for the period covered by the Contractor's application have been completely fulfilled and discharged.

B. Partial Waivers of Lien in form and substance satisfactory to the Engineer and Owner evidencing that all wages for labor and all costs of material and of services for work performed by the Contractor's own forces and by his Subcontractors have been paid in full for the period covered by the Contractor's previous application.

C. Such other documents as shall be necessary, in the sole judgment of the Engineer or Owner, to waive all possible claims of liens to date and comply with all applicable State and local laws.

9.3.2.2 Each partial payment request shall be made on or about the tenth (10^{th}) day of each month and the Contractor shall request payment of ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the Work for the previous month but not yet paid and if specifically permitted by the Contract Documents ninety percent (90%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site up to the first day of that month, less the aggregate amount of the previous payments and less any applicable retainage.

9.3.2.3 Prior to issuance of a final completion Certificate by the Engineer, the Contractor shall furnish appropriate final Waivers of Lien, and Affidavits in form and substance acceptable to the Engineer and Owner, evidencing that all wages for labor and all costs of material or services performed by the Contractor's own

forces and by Subcontractors and suppliers for the entire Project have been paid in full. All lien waivers submitted should include a statement that all labor has been fully paid in accordance with the Prevailing Wage Act of the State of Illinois and all materials were taken from fully paid stock and transported to the Project site in the Contractor's own vehicles, or that supporting waivers of lien for such materials or transportation are attached.

9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

9.3.4 Provided that there are no outstanding liens or claims and that in the opinion of the Owner the previous Work has been done properly and is on schedule for completion of construction and the unpaid balance in each case is sufficient to complete the unfinished Work, upon at least seventy-five percent (75%) completion of the Work, the Owner shall have the option, in its sole discretion, to make subsequent payments in each case for ninety-five percent (95%) of the value of the completed Work.

9.3.5 Upon giving ten (10) days written notice to the Contractor, the full Contract retainage may be reinstated and the retention restored to the basis established in Subparagraph 9.3.1 if the manner of completion of the Work and its progress do not remain satisfactory to the Owner, or if any surety of the Contractor withholds its consent.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 The Engineer will, within seven (7) days after receipt of the Contractor's Application for Payment, either issue to the Owner for review and concurrence a Certificate for Payment, and/or notify the Owner in writing of the Engineer's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Engineer to the Owner, but not to the Contractor, based on the Engineer's observations at the site and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Engineer's knowledge, information and belief, quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Engineer. The issuance of a Certificate for Payment will further constitute a representation to the Owner but not to the Contractor that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Engineer has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences or procedures; (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purposes the Contractor has used money previously paid on account of the Contract Sum.

9.4.3 The first payment application shall be accompanied by the Contractor's Partial Waiver of Lien only, for the full amount of payment. Each subsequent monthly payment application shall be accompanied by the Contractor's Partial Waiver, and by the Partial Waiver of Subcontractors and Suppliers who were included in the immediately preceding payment application to the extent of that payment. Application for Final Payment

shall be accompanied by Final Waivers of Lien from the Contractor, Subcontractors and Suppliers who have not previously furnished such final waivers. Final Waivers shall be for the full amount of the Contract. All applications for payment shall be accompanied by affidavits, in triplicate, from the Contractor and Subcontractors containing such information and in such form as to comply with the Illinois Mechanic's Lien Act (770 ILCS 60/0.01 et seq.) and showing in detail the sources of all labor and materials used and contracted to be used on the Project, including names and addresses of subcontractors and material suppliers; amounts paid and remaining to be paid to each; together with all other documents as shall be necessary, in the sole judgment of the Engineer and Owner, to waiver all claims of liens to date and comply with all applicable state and local laws.

All waivers (partial and final) shall include language as applicable indicating either that:
(i) all material taken from fully paid stock and delivered to the job site in our own vehicles and all labor has been fully paid in accordance with prevailing wage laws; or
(ii) materials were provided by the following suppliers for whom waivers of lien are attached and all labor has been fully paid in accordance with prevailing wage laws.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

9.5.1 The Engineer after consultation with the Owner may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Engineer's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Engineer is unable to certify payment in the amount of the Application, the Engineer will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Engineer cannot agree on a revised amount, the Engineer will promptly issue a Certificate for Payment for the amount for which the Engineer is able to make such representations to the Owner. The Engineer may also decide not to certify payment or, because of, but not limited to, subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Engineer's opinion to protect the Owner from loss because of, but not limited, to:

.1 defective Work not remedied;
.2 third party claims filed or reasonable evidence indicating probable filing of such claims;
.3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
.5 damage to the Owner or another contractor;
.6 reasonable evidence that the Work will not be completed within the Contract Time or that the unpaid balance would not be adequate to cover damages for the anticipated delay, or
.7 failure to carry out the Work in accordance with the Contract Documents.

9.5.2 When the above or other reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.5.3 No interest will be paid on payments withheld.

9.6 PROGRESS PAYMENTS

9.6.1 After the Engineer has issued a Certificate for Payment which the Owner has approved, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Engineer.

9.6.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of

the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount of which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. This provision is not to be construed as a "conditional payment" provision. In the event that payment to the Contractor is delayed without fault of the Subcontractor, payment to the Subcontractor shall be made within a reasonable time for work properly performed by the Subcontractor. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.6.3 The Engineer will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Engineer and Owner on account of portions of the Work done by such Subcontractor. Notwithstanding Subparagraph 4.2.4 the Engineer may communicate directly with the Subcontractor on the matters covered by this Subparagraph 9.6.3.

9.6.4 Neither the Owner nor Engineer shall have an obligation to pay or to see the payment of money to a Subcontractor except as may otherwise be required by law.

9.6.5 Payment to material suppliers shall be treated in a manner similar to that provided in Subparagraphs 9.6.2 and 9.6.3 for payment to Subcontractors.

9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.6.7 Subject to Paragraph 9.3.2.1(B), anything else to the contrary contained or implied herein notwithstanding, no progress payment need be made by the Owner until such time as the Contractor, Subcontractors or any other persons performing the Work or furnishing materials or equipment for the Project furnishes such documents as the Owner may reasonably require (including without limitation sworn notarized contractor's statements, affidavits and waivers of lien).

9.7 FAILURE OF PAYMENT

9.7.1 If the Engineer does not issue a Certificate for Payment, through no fault of the Contractor, within seven (7) days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents the amount certified by the Engineer, then the Contractor may, upon seven (7) additional days' written notice to the Owner and Engineer, during which such Certification for Payment is not received, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately.

9.7.2 If the Owner is entitled to reimbursement or payment from the Contractor under or pursuant to the Contract Documents, such payment shall be made upon demand by the Owner within the same time frame as the Contractor is paid by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary but provided Owner has followed the procedures provided in the Contract Documents for notice to the Contractor and opportunity of the Contractor to cure or remedy any default or defect, if the Contractor fails to promptly make any payment due the Owner, or the Owner incurs any costs and expenses to cure any default of the Contractor or to correct defective Work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect to deduct an amount equal to that which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner.

9.8 SUBSTANTIAL COMPLETION

9.8.1 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Engineer and Owner a

comprehensive list of items to be completed or corrected. The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the Engineer and Owner will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Engineer's or Owner's inspection discloses an item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such items upon notification by the Engineer. The Contractor shall then submit a request for another inspection by the Engineer and Owner to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Engineer will prepare a Certificate of Substantial Completion for review and concurrence by the Owner which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. The Engineer will make only two (2) such inspections to determine Substantial Completion. If these inspections determine that the Work is not substantially complete, either because of major items not completed or an excessive number of Punch List Items, successive inspections requested by the Contractor shall be charged to the Contractor. With respect to Work enumerated on the list accompanying the Certificate of Substantial Completion, the guarantee or warranty period shall start at the time of subsequent acceptance of this Work in writing by the Owner.

9.8.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Engineer and concurrence therewith by the Owner, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents. Warranties required by the Contract Documents shall commence on the date of Final Completion of the Work or designated portion thereof, unless otherwise indicated in the Certificate of Final Completion.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Subparagraph 11.3.10 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor having accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Engineer as provided under Subparagraph 9.8.1. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Engineer.

9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Engineer shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.9.3 Unless otherwise agreed by the Owner, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon

receipt of a final Application for Payment, the Engineer and Owner will promptly make such inspection and, when the Engineer and Owner find the Work acceptable under the Contract Documents and the Contract fully performed, the Engineer will promptly issue a final Certificate for Payment to the Owner for concurrence stating that to the best of the Engineer's knowledge, information and belief, and on the basis of the Engineer's observations and inspection, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in said final Certificate is due and payable. The Engineer's final Certificate for Payment will constitute a further representation to the Owner but not to the Contractor that the conditions listed in Subparagraph 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. The Owner's failure to object to, and the Owner's acceptance of, the Engineer's findings and/or certifications hereunder shall not limit the Engineer's obligation to properly perform its duties under the Contract Documents and shall not constitute the Owner's acceptance of Work not complying with the requirements of the Contract Documents or the Owner's waiver of any claims or remedies it may have with respect to any such defective or delayed Work.

9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Engineer (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsive and responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied; (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be cancelled or allowed to expire until at least thirty (30) days' prior to written notice has been given to the Owner; (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable or cover the period required by the Contract Documents; (4) consent of surety, if any, to final payment if required by the terms of any bond provided by the Contractor for the Project; (5) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner; and (6) all other documents required to be furnished to the Owner prior to final payment under the Contract Documents, including without limitation manufacturers' and special warranties, operating manuals, as built drawings, etc. If a Subcontractor refuses to furnish a release or waiver required by the Owner because of claimed nonpayment by the Contractor of sums due, the Owner may withhold from payment to the Contractor the amount claimed due by the Subcontractor. The Owner reserves the right but does not assume any obligation to issue payment directly to a Subcontractor or to issue dual payee checks in the event of a dispute.

9.10.3 If, after Substantial Completion of the Work, Final Completion thereof is materially delayed, including as the result the Owner initiated changes in the Work, through no fault of the Contractor, and the Engineer so confirms, the Owner shall, upon application by the Contractor and certification by the Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for the Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Engineer prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims. The making of final payment shall not constitute a waiver of claims by the Owner except as specifically provided in the Contract Documents.

9.10.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment. Such waivers shall be in addition to the waiver described in Subparagraph 4.3.5

ARTICLE 10 – PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor expressly agrees, covenants, represents and warrants that it is in the charge of and in control of the Work and that it shall have sole exclusive responsibility to comply with the requirements of applicable federal, state and local laws, codes and regulations related to the safe and healthy performance of the Work and shall be solely responsive and responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. Neither the Owner nor Engineer is in charge of the Work or in control of the execution or supervision of the Work. The obligation of the Contractor under this Subparagraph 10.1.1 shall be construed to include but not be limited to injury or damage because the Contractor, its agents or employees failed to use or misused any scaffold, hoist, crane, stay, ladder, support, or other mechanical contrivance erected or constructed by any person, or any or all other kinds of equipment, whether or not owned or furnished by the Contractor. The Contractor expressly agrees that it is exclusively responsive and responsible for compliance with all federal, state and local laws, codes and regulations for construction and that it is the "employer" within the meaning of those laws, codes and regulations. Any provision in the Contract Documents in conflict with this paragraph shall be null and void. It is the express intent of the parties that this provision be given broad and liberal construction to effectuate the intent of the parties that the Contractor, and not the Engineer or Owner, is in charge of the Work.

10.1.2 In the event the Contractor encounters on the site material which it reasonably believes to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Engineer in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless, by written agreement of the Owner and Contractor, or in accordance with final determination by an environmental consultant retained by the Owner. The term "rendered harmless" shall be interpreted to mean that levels of asbestos and polychlorinated biphenyls are less than any applicable exposure standards set forth in OSHA regulations. In no event, however, shall the Owner have any responsibility for any substance or material that is brought to the Project site by the Contractor, any Subcontractor, any materialman or supplier or any entity for whom any of them is responsive and responsible. The Contractor agrees not to use any fill or other materials, which are not from the Project site, which are hazardous, toxic, or comprised of any items that are hazardous or toxic. However, the Contractor will not knowingly use any hazardous or toxic materials, whether from the site or not.

10.1.3 The Contractor shall not be required pursuant to Article 3 to perform without its consent any Work relating to asbestos or polychlorinated biphenyl (PCB).

10.1.4 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Engineer, Engineer's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to, attorney's fees, arising out of or resulting from performance of the Work in the affected area if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Owner, anyone directly or indirectly employed by the Owner or anyone for whose acts the Owner may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder, provided however that Owner shall have no obligation under this Subparagraph 10.1.4 with respect to any toxic or hazardous materials brought on the site by the Contractor, and the Contractor shall indemnify and hold harmless the Owner with respect to any toxic or hazardous materials which it, its employees, subcontractors or agents bring onto the site, in accordance with paragraph 3.18.1.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take all necessary and reasonable precautions for the safety of, and shall provide all necessary and reasonable protection to prevent damage, injury or loss to:

.1 employees, other persons performing the Work and other persons who may be affected thereby including but not limited to Owner's staff and the general public;
.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
.3 other property at the site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction, personalty of the general public and Owner's staff.

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.2.1 If the Contractor fails to give such notice or fails to comply with such laws, ordinances, rules, regulations, and lawful orders, it shall be liable for and shall indemnify and hold harmless the Owner and Engineer and their respective employees, officers, and agents, against any resulting fines, penalties, judgments, or damages, including reasonable attorneys' fees, imposed on or incurred by the parties indemnified hereunder.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. The Contractor shall also be responsive and responsible, at the Contractor's sole cost and expense, for all measures necessary to protect any property adjacent to the Project and improvements therein. Any damage to such property or improvements shall be promptly repaired by the Contractor.

10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall give the Owner and Engineer reasonable advance notice and the Owner and/or Engineer may, but are not obligated to, advise the Contractor in writing that such activity is prohibited or of objections to the activity, provided however, that this right and the exercise or failure to exercise this right shall not create any obligation or liability on the part of the Engineer or Owner. The Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.5 The definition of "hazardous materials" shall include, but not be limited to, all of the materials and substances listed as being toxic or hazardous from time to time by the United States Environmental Protection Agency or the Illinois Environmental Protection Agency.

10.2.6 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them or by anyone for whose wrongful acts they may be liable and for which the Contractor is responsive and responsible under Clauses 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Engineer or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph 3.18.

10.2.7 The Contractor shall designate a responsive and responsible member of the Contractor's organization

at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Engineer. The person designated as responsive and responsible for prevention of accidents shall hold regularly scheduled meetings with representatives of Subcontractors, and in the event of separate contracts, hold meetings with other contractors, to promote compliance with governing safety regulations.

10.2.8 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.2.9 The Contractor shall promptly report to the Engineer and Owner in writing all accidents arising out of or in connection with the Work that cause death, personal injury, or property damage. The report shall give full details, including statements of witnesses, hospital reports, and other information in the possession of the Contractor. In addition, in the event of any serious injury or damage, the Contractor shall immediately notify the Owner and Engineer by telephone or messenger of such accident.

10.3 EMERGENCIES

10.3.1 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3, above, and Article 7, above.

ARTICLE 11- INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor, or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
.2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
.3 claims for damages insured by usual personal injury liability coverage which are sustained (i) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (ii) by another person;
.4 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
.5 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and
.6 claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18, above.

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

11.1.3 Notwithstanding the above, the insurance required by Paragraph 11.1 shall be on an occurrence basis.

11.1.4 Notwithstanding anything contained or implied elsewhere in the Contract Documents, the Contractor shall procure and maintain for the duration of the Contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, his agents, representatives, employees or any Subcontractor. The Contractor shall maintain insurance of the types and in the amounts listed below:

A. Commercial General and Umbrella Liability Insurance

Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than $5,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to this Project/location.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 10 93, or a substitute form providing equivalent coverage, and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

Owner, Engineer and Engineer's consultants shall be included as an insured under the CGL, using ISO additional insured endorsement CG 20 10 or a substitute providing equivalent coverage, and under the commercial umbrella, if any. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance afforded to Owner.

If Owner has not been included as an insured under the CGL using ISO additional insured endorsement CG 20 10 under the Commercial General and Umbrella Liability Insurance required in this Contract, the Contractor waives all rights against Owner and its officers, officials, employees, volunteers and agents for recovery of damages arising out of or incident to the Contractor's work.

There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage unless such endorsement or modification has been explicitly disclosed to Owner in a separate writing and Owner has expressly consented to same in writing shared by a duly authorized officer of the Owner.

B. Continuing Completed Operations Liability Insurance

Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella liability insurance with a limit of not less than $5,000,000 each occurrence for at least one year following Final Completion of the Work.

Continuing CGL insurance shall be written on ISO occurrence form CG 00 01 10 93, or substitute form providing equivalent coverage, and shall, at minimum, cover liability arising from products-completed operations and liability assumed under an insured contract.

Continuing CGL insurance shall have a products-completed operations aggregate of at least two times its each occurrence limit.

Continuing commercial umbrella coverage, if any, shall include liability coverage for damage to the insured's completed work equivalent to that provided under ISO form CG 00 01.

C. Business Auto and Umbrella Liability Insurance

Contractor shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than $2,000,000 each occurrence. Such insurance shall cover liability arising out of any auto including owned, hired and non-owned autos.

Business auto insurance shall be written on Insurance Services Office (ISO) form CA 00 01, CA 00 05, CA 00 12, CA 00 20, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01.

D. Workers Compensation Insurance

Contractor shall maintain workers compensation as required by statute and employers liability insurance. The commercial umbrella and/or employers liability limits shall not be less than $1,000,000 each accident for bodily injury by accident or $1,000,000 each employee for bodily injury by disease, or the minimum limit required under applicable law, whichever is greater.

E. General Insurance Provisions

1. Evidence of Insurance

Prior to beginning work, Contractor shall furnish Owner with a certificate(s) of insurance and applicable policy endorsement(s), executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth above.

All certificates shall provide for thirty (30) days' written notice to Owner prior to the cancellation or material change of any insurance referred to therein. Written notice to Owner shall be by certified mail, return receipt requested.

Failure of Owner to demand such certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Owner shall have the right, but not the obligation, of prohibiting Contractor or any subcontractor from entering the project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by Owner.

Failure to maintain the required insurance may result in termination of this Contract at Owner's option.

With respect to insurance maintained after final payment in compliance with a requirement above, an additional certificate(s) evidencing such coverage shall be promptly provided to Owner whenever requested.

Contractor shall provided certified copies of all insurance policies required above within ten (10) days of Owner's written request for said copies.

2. Acceptability of Insurers

For insurance companies which obtain a rating from A.M. Best, that rating should be no less than A VII using the most recent edition of the A.M. Best's Key Rating Guide. If the Best's rating is less than A VII or a Best's rating is not obtained, the Owner has the right to reject insurance written by an insurer it deems unacceptable.

3. Cross-Liability Coverage

If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

4. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to the Owner. At the option of the Owner, the Contractor may be asked to eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, employees, volunteers and agents or required to procure a bond guaranteeing payment of losses and other related costs including but not limited to investigations, claim administration and defense expenses.

5. Subcontractors

Contractor shall cause each subcontractor employed by Contractor to purchase and maintain insurance of the types and amounts specified above. When requested by the Owner, Contractor shall furnish copies of certificates of insurance evidencing coverage for each subcontractor.

11.1.4 Certificates of Insurance acceptable to the Owner and Engineer shall be filed with the Owner prior to commencement of the Work. These Certificates and the Insurance policies required by this Paragraph 11.1, shall contain a provision that coverages afforded under such policies will not be canceled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. Information concerning reduction of coverage shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

11.1.5 The obligations of the Contractor under the provisions of this Article 11 shall not extend to the liability of the Engineer, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications, or (2) the giving of or the failure to give directions or instructions by the Engineer, his agents or employees to the extent that such giving or failure to give is the cause of the injury or damage.

11.2 OWNER'S/OWNER’S SEPARATE CONTRACTORS’ LIABILITY INSURANCE

11.2.1 The Owner at its option may, but is not obligated to, purchase and maintain additional liability insurance to protect it against claims which may arise from operations under the Contract or damage to its property. The Contractor shall not be responsive and responsible for purchasing and maintaining this optional Owner’s liability insurance unless specifically required by the Contract Documents.

11.3 PROPERTY INSURANCE

Owner shall purchase and maintain property insurance during the construction of the Work at the Site.

11.4 PERFORMANCE BOND AND PAYMENT BOND

11.4.1 Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

11.4.3 The Performance Bond shall be in an amount equal to at least 100% of the full amount of the Contract Sum as security for the faithful performance of the obligations of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to at least 100% of the full amount of the Contract Sum as security for required payments to all persons performing labor and furnishing materials in connection with the Contract Documents. Such bond shall be on AIA Document A-311, A312-1984 or A312-2010, issued by the American Institute of Architects, shall be issued by a surety satisfactory to the Owner, and shall name the Owner as primary co-obligee. Such bonds shall be from an Illinois Admitted Bonding Company acceptable to the Owner and having a minimum policy holder rating of "B+" in the latest edition of Best's Insurance Guide in effect as of the date of the Contract. Bonds shall remain in full force and effect for one (1) year following Final Completion or such longer period as provided elsewhere in the Contract Documents. The cost of the bonds is to be included in the Contract Sum stated by the Contractor in its Bid Proposal.

11.4.4 Whenever the Contractor shall be and is declared by the Owner to be in default under the Contract, the Surety and the Contractor are each responsive and responsible to make full payment to the Owner for any and all extra Work incurred by the Engineer as a result of the Contractor's default and to pay to Owner all attorneys' fees and court costs incurred by Owner as a result of the Contractor's default, and in protecting Owner's rights under the Contract to remedy Contractor's default.

11.4.5 The Contractor shall (i) furnish all Surety Company's bonds through Surety Company's local agents approved by and/or as directed by the Owner; (ii) fully cover and guarantee with said bond the faithful performance and completion of the entire Contract, including without limitation, the faithful performance of prevailing wage requirements; and (iii) guarantee with said bond payment in all cases by the Contractor or by the Surety Company for all labor performed, and all material and supplies furnished with the entire Work in the contract. Said bond shall remain in full force and effect during the entire period of all general guarantees given by the Contractor with the Contract as called for in the Specifications and Contract, except in cases where other bonds are specifically called for in the Specifications and Contract in connection with special guarantees.

11.4.6 The Contractor shall (i) furnish with all bonds a certified copy of the power of attorney from the Surety Company stating that the person executing said bond is duly authorized by the Surety Company to execute said bond; (ii) furnish a certified copy of the certificate from said Surety Company's state showing said Surety Company licensed and authorized to transact business and execute said bond in Illinois; and (iii) if requested by the Owner, furnish a copy of current financial statements of said Surety Company.

11.5 MISCELLANEOUS PROVISIONS

11.5.1 The Contractor is responsive and responsible for determining that Subcontractors are adequately insured against claims arising out of or relating to the Work. The premium cost and charges for such insurance shall be paid by each Subcontractor.

11.5.2 No vehicles which are not covered by insurance comparable to that required herein, whether borrowed or leased shall be used in the Work.

11.5.3 The Contractor shall notify the Owner in writing of any actual or possible claim for personal injury or property damage relating to the Work, or of any occurrence which might give rise to such a claim, promptly (not later than two (2) working days) upon the Contractor's first knowledge of same.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered contrary to the Engineer's or Owner's request or the request of any

governmental inspector or officer or to requirements specifically expressed in the Contract Documents or to applicable Governmental Requirements, it must, if required in writing by the Engineer or by a governmental inspector or officer, be uncovered for the Engineer's or Owner's or a governmental inspector's or officer's observation and be replaced at the Contractor's sole cost, risk and expense without change in the Contract Sum or Contract Time.

12.1.2 If a portion of the Work has been covered which the Engineer or Owner or a governmental inspector or officer has not specifically requested to observe prior to its being covered and which was not covered contrary to the Contract Documents or Governmental Requirements, the Engineer or Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner and the Contract Time shall be equitably adjusted, if and as appropriate, to the extent of any actual delay in the progress of the Work caused thereby. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsive and responsible for payment of such costs.

12.2 CORRECTION OF WORK

12.2.1 The Contractor shall promptly correct Work rejected by the Engineer or Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear costs, risks and expenses of correcting such rejected Work, including additional testing and inspections and reasonable compensation for the Engineer's services and expenses made necessary thereby. If prior to the date of Substantial Completion, the Contractor, a Subcontractor or anyone for whom either is responsive and responsible uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing and other building systems, machinery, equipment or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

12.2.2 If, within one (1) year after the date of Final Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Subparagraph 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This obligation under this Subparagraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition. Corrective work shall be warranted to be free from defects for a period equal to the longer of six (6) months after the completion of the corrective Work or one (1) year after the date of Final Completion (subject to extension as previously described) or such longer period of time as may be prescribed by law or in equity, or expiration of the term of any applicable special warranty, if applicable, required by the Contract Documents. Notwithstanding the foregoing, the Contractor shall correct Work deficiently or defectively performed, and replace defective or nonconforming materials, even though such deficiency, defect or nonconformity may be discovered more than one (1) year after Final Completion, if the correction is of a latent defect and arises from poor workmanship or improper materials or is required to be made to workmanship or materials covered by the Contractor or Subcontractors contrary to the Engineer's or Owner's request or to the request of a governmental officer, or to requirements specifically expressed in the Contract Documents or to Governmental Requirements, and was therefore not visible for inspection by the Engineer or Owner or governmental officer, as applicable, at the time the Work was performed. The Contractor shall, within a reasonable time after receipt of written notice thereof, but in no event later than forty-eight (48) hours after receipt of such notice with respect to mechanical systems and no later than seventy-two (72) hours after receipt of notice with respect to all other items, commence to correct, repair, and make good any defects in the Work.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the

requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 If the Contractor fails to correct nonconforming Work within a reasonable time under the circumstances presented to the Owner, the Owner may correct it in accordance with Paragraph 2.4. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time as provided in Subparagraph 12.2.2, above, or within such longer period of time as fixed by written notice from the Engineer or Owner, the Owner may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten (10) days after written notice, the Owner may upon ten (10) additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Engineer's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due to the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

12.2.5 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.6 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents, or at law. Establishment of the time period of one (1) year as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work. The Owner retains all rights to which it is entitled under Illinois law pertaining to the assertion of claims including without limitation claims for defective or incomplete Work or breach of contract, including without limitation the relevant statutory limitation period for commencement of any such actions.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so by providing written notice to the Contractor stating the manner in which the Work is not in accordance with the Contract Documents, and specifically stating the Owner's acceptance thereof notwithstanding such defect subject to a stated reduction in the Contract Sum instead of requiring its removal and correction.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

13.1.1 The Contract shall be governed by the law of Illinois.

13.2 SUCCESSORS AND ASSIGNS

13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other Party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as expressly set forth in the Contract, neither party to the Contract shall assign the Contract in whole or in part without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsive and responsible for all obligations under the Contract.

13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Except as expressly provided in the Contract Documents, duties and obligations imposed under the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

13.4.2 No action or failure to act by the Owner, Engineer, or Contractor shall constitute a waiver of a right or duty afforded any of them under the Contract nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as otherwise may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Tests, inspections and approvals of any portions of the Work required by the Contract Documents or by any applicable laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Except as otherwise expressly provided in the Agreement, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority and shall bear all related costs of such tests, inspections and approvals. The Contractor shall give the Engineer and Owner timely notice of when and where tests and inspections are to be made so the Engineer and Owner may observe such procedures. Notwithstanding that responsibility for testing, inspections or approvals may be expressly assigned to the Owner under the Agreement, the costs of testing, inspections and approvals necessitated by the Contractor's failure to perform the Work in accordance with the Contract Documents or otherwise attributable to the fault of the Contractor, shall not be a "Cost of the Work" payable by the Owner, but shall be the sole responsibility and cost of the Contractor.

13.5.2 If the Engineer, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1 the Engineer will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Engineer of when and where tests and inspections are to be made so the Engineer may observe such procedures. The Owner shall bear such costs except as provided in Subparagraph 13.5.3.

13.5.3 If such procedures for testing, inspection or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Engineer's services and expenses. Also the cost of testing, Engineer's services and consultant's services, inspections and approvals related to operations to remedy defective Work, shall be borne entirely by the Contractor.

13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Engineer.

13.5.5 If the Engineer is to observe tests, inspections or approvals required by the Contract Documents, the Engineer will do so promptly and, where practicable, at the normal place of testing.

13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 INTEREST

13.6.1 Except as otherwise expressly provided in the Agreement or by law, payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate and in accordance with the Local Government Prompt Payment Act.

13.7 CONFIDENTIALITY

13.7.1 The Contractor acknowledges that certain of the Owner's valuable, confidential, and proprietary information may come into the Contractor's possession. Accordingly, the Contractor agrees to hold all information it obtains from or about the Owner in strictest confidence, not to use such information other than for the performance of the Contractor's services in the ordinary course under the Contract Documents, and to cause any of its employees, subcontractors, or consultants to whom such information is transmitted to be bound to the same obligation of confidentiality to which the Contractor is bound. In the event of any violation of this provision, the Owner shall be entitled to preliminary and permanent injunctive relief as well as an equitable accounting of all profits or benefits arising out of such violation, which remedy shall be in addition to any other rights or remedies to which the Owner may be entitled.

13.8 CONTRACTOR'S RESPONSIBILITY FOR ADDITIONAL ENGINEERING FEES

13.8.1 If more than two submittals are required for any Shop Drawing or other submittal, the Contractor shall be liable for any Engineer's fees incurred as the result of such submittals. If the Work is not complete after submittal of the Contractor's written notice pursuant to Paragraph 9.10.1, the Contractor shall be liable for any additional Engineer's fees incurred for any inspection following the initial inspection after receipt of such notice. If the Contractor defaults and causes the Engineer to provide additional services, the Contractor shall be responsive and responsible for same. If the Contractor submits an extensive number of claims and the majority of such claims are rejected, the Contractor shall be responsive and responsible for any additional Engineer's fees for any such rejected claims. Any funds due under this Paragraph shall be deducted by the Owner from the amounts due the Contractor. The provisions of this Subparagraph 13.8.1 are in addition to and not a limitation on the Contractor's responsibility for additional Engineer's fees contained elsewhere in these General Conditions or other Contract Documents.

ARTICLE 14 – TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of one hundred twenty (120) days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor, for any of the following reasons:

.1 issuance of an order of a court or other public authority having jurisdiction;
.2 an act of government, such as a declaration of national emergency, making material unavailable; or
.3 because the Engineer has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Subparagraph 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents.

14.1.2 If one of the above reasons exists, the Contractor may, upon fourteen (14) days' prior written notice to the Owner and Engineer, terminate the Contract, unless this reason is cured prior to the expiration of the notice

period, and recover from the Owner payment of Work properly executed in accordance with the Contract Documents (the basis for such payment shall be as provided in the Contract) and for payment for costs directly related to Work thereafter performed and charges thereafter incurred which are required to be performed or paid by the Contractor in order to properly terminate the Work, including reasonable demobilization and cancellation charges provided said Work is authorized in advance by the Engineer and Owner. The Owner shall have the right to cure any defect or default prior to the date stated in any written notice herein, in which event the Contractor shall continue with the Work. If the Contractor terminates such Work, and receives payment in connection with his equipment, tools or materials, such equipment, materials or tools shall be left and shall remain on the Site if the Owner so elects.

14.1.3 If the work is stopped for a period of sixty (60) days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven (7) additional days' written notice to the Owner and Engineer, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.2. The Owner shall not be responsible for damages for loss of anticipated profits on Work not performed in the event of termination described in Subparagraphs 14.1.1 and 14.1.2.

14.2 TERMINATION BY THE OWNER FOR CAUSE

14.2.1 If the Contractor shall institute proceedings or consent to proceeding requesting relief or arrangement under the Federal Bankruptcy Act or any applicable Federal or State Law, or if a petition under any federal or state insolvency law is filed against the Contractor and such petition is not dismissed within sixty (60) days from the date of said filing, or if the Contractor admits in writing his inability to pay his debts generally as they become due, or if he makes a general assignment for the benefit of his creditors, or if a receiver, liquidator, trustee, or assignee is appointed on account of his bankruptcy or insolvency; or if a receiver of all or any substantial portion of the Contractor's properties is appointed; or if the Contractor abandons the Work; or if he fails, except in cases for which extension of time is provided, to prosecute promptly and diligently the Work or to supply enough properly skilled workmen or proper materials for the Work; or if the Contractor submits an application for payment, sworn statement, waiver of lien, affidavit or document of any nature whatsoever which is intentionally falsified; or if the Contractor fails to make prompt payment to Subcontractors for materials or labor or otherwise breaches obligations under any subcontract with a Subcontractor; or if a mechanic's or materialman's lien or a notice of lien is filed against any part of the Project and is not promptly bonded or insured over by the Contractor in a manner reasonably satisfactory to the Owner; or if the Contractor disregards any laws, statutes, ordinances, rules, regulations or orders of any governmental body or public or quasi-public authority having jurisdiction of the Work or the Project premises; or if the Contractor otherwise violates any material provision of the Contract Documents, then, without prejudice to any right or remedy available the Owner may, after giving the Contractor seven (7) days' written notice, terminate the employment of the Contractor, and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and accept assignment of Subcontracts and may complete the Work by whatever reasonable method the Owner may deem expedient. If requested by the Owner, the Contractor shall remove any part or all of his equipment, machinery and supplies from the Project within seven (7) days from the date of such request, and in the event of the Contractor's failure to do so, the Owner shall have the right to remove or store such equipment, machinery and supplies at the Contractor's expense.

14.2.2 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until Final Completion of the Work.

14.2.3 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Engineer's services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be

paid to the Contractor or Owner, as the case may be, shall be certified by the Engineer, upon application, and this obligation for payment shall survive termination of the Contract.

14.2.4 The Owner's right to terminate the Contract pursuant to Subparagraph 14.2 shall be in addition to and not in limitation of its right to stop the Work without terminating the Contract pursuant to Subparagraph 2.3.

14.2.5 If the Owner terminates this Contract without cause and not for one of the reasons provided in Subparagraph 14.2.1, then, in such event (and only in such event), it shall reimburse the Contractor for actual cost to the Contractor of labor and materials incorporated by it in work performed to date of such termination including, but not limited to, Work in progress, and materials purchased and costs of cancelling subcontracts and purchase orders, less the aggregate of all amounts paid on account. In such event, also, the Owner shall further assume all reasonable obligations, subcontracts, purchase orders, commitments and un-liquidated claims that the Contractor may have theretofore, in good faith acting in a reasonable manner, undertaken or incurred in connection with said Work, and the Contractor shall as a condition of receiving payments mentioned in this Article, execute and deliver all papers and take all steps, including legal assignment of its contractual rights, as the Owner may require for the purpose of vesting them in the rights and benefits of the Contractor under such obligations or commitments. In acting hereunder, the Owner shall have the right to determine whether it desires to compromise liabilities assumed pursuant to the terms hereof of to proceed to completion with respect to any such obligation, subcontract, purchase order, commitment or un-liquidated claim. Nothing in this Subparagraph shall be construed as imposing any obligations on the Owner in the event termination should be made for one of the causes outlined in Subparagraph 14.2.1.

14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

14.3.2 If suspension, delay or interruption ordered by the Owner constitutes in the aggregate more than twenty percent (20%) of the total number of days scheduled for completion, an adjustment shall be made for increases in the cost of the performance of this Contract, excluding profit caused by such suspension, delay or interruption. No adjustment shall be made to the extent:

.1 That the performance is, was, or would have been so suspended, delayed or interrupted by another cause, including without limitation the fault or negligence of the Contractor or any Subcontractor; or
.2 That an equitable adjustment is made or denied under another provision of this Contract.

14.3.3 Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

14.3.4 Any adjustments made to the Contract Sum pursuant to Subparagraph 14.3.2 shall be subject to the provisions of Subparagraph 7.3.6.

14.4 Termination By Owner For Convenience

14.4.1 The Owner may at any time terminate the Contract in whole or in part for the Owner's convenience and without cause. Termination by the Owner under this Paragraph 14.4 shall be by a notice of termination delivered to the Contractor, either by certified mail, return receipt requested or hand delivery specifying the extent of termination and the effective date.

14.4.2 Upon receipt of a notice of termination for convenience, the Contractor shall immediately, in accordance with instructions from the Owner and Engineer, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Paragraph 14.4.2 except as otherwise provided in this Paragraph:

.1 cease operation as specified in the notice;
.2 place no further orders and enter into no further Subcontracts for materials, labor, services, equipment, or facilities except as necessary to complete continued portions of the Contract;
.3 terminate all subcontracts and orders to the extent they relate to the Work terminated;
.4 proceed to complete the performance of Work not terminated; and
.5 take actions that may be necessary, or that the Owner may direct, for the protection and preservation of the terminated work.

14.4.3 Notwithstanding the foregoing, the Contractor shall not be required to proceed to complete the performance of Work not terminated, or to take action for the protection and preservation of the terminated Work, unless and until the Contractor shall have received (i) payment from the Owner of all amounts due to the Contractor under the Contract Documents for Work properly performed prior to the date of termination, or reasonable evidence of adequate and secure funds to pay same, as well as reasonable evidence of adequate and secure funds to pay for the Contractor's reasonable, necessary and actual costs of disengagement from the terminated portion of the Work, and (ii) reasonable evidence of adequate and secure funds to pay for the cost of completing the Work not terminated and for protecting and preserving the terminated Work.

14.4.4 Upon such termination, the Contractor shall recover, as its sole remedy, payment for (a) Work performed in accordance with the Contract Documents in connection with the terminated portion of the Work prior to the effective date of termination; (b) items fabricated in accordance with the Contract Documents off the Project site, delivered and stored in accordance with the Owner's instructions; (c) actual costs incurred by the Contractor for clearing its equipment off the site and to comply with Section 14.4.2.5 above; and (d) actual costs of terminating subcontracts, rental agreements, and orders. The Contractor hereby waives and forfeits all other claims for payment and damages, including, without limitation, anticipated profits.

14.4.5 The Owner shall be credited for (1) payments previously made to the Contractor for the terminated portion of the Work, and (2) claims which the Owner has against the Contractor under the Contract; provided, however, that if any such items are in dispute, such amount in dispute shall be held in escrow until final resolution.

14.4.6 In the event of such termination during the Work, the sum payable to the Contractor for the Work shall be prorated based upon the amount of properly performed Work completed. The Owner shall receive proper credit for sums already paid. Upon any such termination all obligations of the Owner (other than payment of sums due to the Contractor for services properly performed but not previously paid prior to the date of terminations) shall cease as of the effective date of termination.

ARTICLE 15 - EQUAL EMPLOYMENT OPPORTUNITY

15.1 The Contractor shall maintain and shall require its Subcontractors to maintain policies of employment as follows:

15.1.1 In the event of the Contractor's non-compliance with the provisions of this equal opportunity clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the Contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of this Contract, the Contractor agrees as follows:

1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to a person's ability to perform the essential functions of the job, association with a

person with a disability, military status or an unfavorable discharge from military service, or record of arrest; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

2) That, if it hires additional employees in order to perform this Contract or any portions thereof, it will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizenship status, age, physical or mental handicap or disability unrelated to a person's ability to perform the essential function of the job, or association with a person with a disability, military status or an unfavorable discharge from military service, or record of arrest.

4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's rules and regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and rules and regulations, the Contractor will promptly notify the Department and the Owner and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

5) That it will submit reports as required by the Department's rules and regulations, furnish all relevant information as may from time to time be requested by the Department or the Owner, and in all respects comply with the Illinois Human Rights Act and the compliance with the Illinois Human Rights Act and the Department's rules and regulations.

6) That it will permit access to all relevant books, records, accounts and work sites by personnel of the Owner and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights act and the Department's rules and regulations.

7) That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the Contract obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as with other provisions of this Contract, the Contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the Owner and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

15.2 The Contractor is encouraged to utilize qualified minority businesses as subcontractors for supplies, services and construction.

ARTICLE 16 - SEXUAL HARASSMENT POLICY

16.1 Pursuant to Section 2-105 of the Illinois Human Rights Act (775 ILCS 5/1-101 et seq.) (“Act”), the Contractor shall have in effect and in force, a written sexual harassment policy which includes, at a minimum, the following provisions: (i) a statement on the illegality of sexual harassment; (ii) the definition of sexual harassment under Illinois law; (iii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process, including penalties; (v) the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights (“Department”) and the Illinois Human Rights Commission

("Commission"); (vi) directions on how to contact the Department and the Commission; and (vii) protections against retaliation as provided by Section 6-101 of the Act.

16.2 The Contractor understands, acknowledges, agrees and warrants to the Owner that it is now, and will remain for the entirety of the Contract in compliance with Section 2-105. A violation of Section 2-105 is grounds for the immediate cancellation of the Contract. However, any forbearance or delay by the Owner in canceling the Contract shall not be construed as Owner's consent to such violation and shall not constitute a waiver of any rights the Owner may have, including, without limitation, cancellation of the Contract.

ARTICLE 17 – SUBSTANCE ABUSE PREVENTION POLICY

17.1 The Contractor shall comply with and cause all subcontractors to comply with the requirements and provisions of the Illinois Substance Abuse Prevention on Public Works Projects Act (820 ILCS 265/1 et seq.) (the "Act") by:

17.1.1 Prohibiting the use, possession, distribution or delivery of any drug or alcohol (as defined under the Act) or allowing any employee to be under the influence of any said drug or alcohol while performing the Work;

17.1.2 Filing a written substance abuse prevention program with the Owner for the prevention of substance abuse among its employees prior to the commencement of the Work. Said program shall be available to the general public and, at a minimum, contain the following:

a) A minimum requirement of a 9 panel urine drug test plus a test for alcohol. Testing an employee's blood may only be used for post-accident testing, however, blood testing is not mandatory for the employer where a urine test is sufficient;

b) A prohibition against the actions for the use, possession, distribution or delivery of any drug or alcohol (as defined under the Act) or any employee under the influence of any said drug or alcohol while performing the Work;
c) A requirement that employees performing the Work submit to pre-hire, random, reasonable suspicion, and post-accident drug and alcohol testing. Testing of an employee before commencement of the Work is not required if the employee participated in a random testing program during the 90 days preceding the date on which the employee commenced work hereunder; and
d) A procedure for notifying an employee that he or she may not perform any of the Work if he or she: 1) uses, possess, delivers or is under the influence of a drug or alcohol as prohibited under the Act; 2) tests positive for the presence of a drug as outlined in the Act; or 3) refuses to submit to drug or alcohol testing as required under the Contractor's substance abuse program until the employee tests negative for the presence of drugs or alcohol as outlined in the Act or has been approved to commence or return to work in accordance with the Contractor's substance abuse program.

17.1.3 Immediately removing and/or prohibiting access to the Work site of any employee who: 1) uses, possess, delivers or is under the influence of a drug or alcohol as prohibited under the Act; 2) tests positive for the presence of a drug as outlined in the Act; or 3) refuses to submit to drug or alcohol testing as required under the Contractor's substance abuse program. Said employee shall be prohibited from the Work site until he or she tests negative for the presence of drugs or alcohol as outlined in the Act or has been approved to commence or return to work in accordance with the Contractor's substance abuse program; and

17.1.4 Complying with all other requirements of the Act.

17.2. Failure by the Contractor to comply with the requirements of the Illinois Substance Abuse Prevention on Public Works Projects Act shall constitute a material default of the Contract and shall give the Owner the right

to pursue any remedy available to it at law or in equity, including termination of this Agreement for cause in the Owner's sole discretion and any other remedy as provided in this Contract. In the event of a default hereunder, Contractor shall also pay to the Owner all damages Owner is entitled to under this Contract that arise from the default, together with interest, costs, and the Owner's reasonable attorney fees.

END OF SECTION 000700

Attachment A

March 4, 2014

Mr. David Harris
Executive Director
Glen Ellyn Park District
185 Spring Avenue
Glen Ellyn, Illinois 60137

Re: Newton Park Synthetic Turf Project
Glen Ellyn, Illinois

Dear Dave:

Eriksson Engineering Associates, Ltd. (EEA) is pleased to submit this proposal to provide professional engineering (civil) services in connection with the replacement of the natural turf at Glen Ellyn Park District's Newton Park main competition field with synthetic turf in Glen Ellyn, Illinois (hereinafter referred to as "the Project").

The new synthetic turf system shall accommodate a full-size football field, with the ability to split into two 80' x 55' fields for soccer and/or lacrosse. The installation of this turf will require an extensive underdrainage system for stormwater runoff collection, abandonment of any existing sprinkler/irrigation system, and relocation of utilities under the field. It is assumed no compensatory storage, floodplain or riverine analysis will be required. Stormwater detention may be required by the Village of Glen Ellyn per the DuPage County standards. If storage is required, it will most likely be provided in an underground system of void storage space, underdrain, and storm sewers.

The Part of the Project for which EEA shall provide design and construction phase services includes the following on-site elements unless noted otherwise.

1. Site demolition work (but not building structures).
2. Site geometric control (the location of pavements, fencing, athletic field, athletic field appurtenances, walkways, and underground utilities).
3. Pathways, walkways, and pavements.
4. Grading, seeding, and erosion control for disturbed areas.
5. Stormwater Management.

EEA will not design or specify any power or communications systems, irrigation systems, landscape architecture stylized plant areas other than natural turf, or gas distribution systems. EEA's design decisions and drawings will be based upon topographic and land survey data to be provided by the Owner. EEA understands that this data will be provided to EEA in an electronic format and that all underground utility information will be included on the survey. The Owner shall provide a current Title Report to verify locations of any known easements or encumbrances.

All of EEA's drawings and technical specifications shall be prepared in a lump sum format. The Owner shall prepare the bidding and contracting requirements (front end) portion of the Project Manual including Invitation to Bid, Contract, General and Supplementary Conditions, and be the administrator of the Construction Contract(s). EEA shall prepare CSI format technical specifications.

SCOPE OF SERVICES

A. Project Kick-off/Data Collection and Site Analysis

1. We shall attend a Project kick-off meeting with the Park District staff, stakeholders, and/or other consultants as needed to review project requirements and programming goals.

2. We shall confer with you and as appropriate, representatives of the Village of Glen Ellyn, DuPage County, and other governing agencites as needed to review development criteria, restrictions, and permitting requirements.

3. We shall review previous studies/documents that are provided to us such as the surveys, architectural drawings, record drawings, soil reports, etc., and comment on the implications that they may have on This Part of the Project.

4. We shall analyze the existing stormwater management system in accordance with the Village of Glen Ellyn's requirements to determine its ability to accommodate the surface characteristics that will result upon construction of the Project.

5. We shall visit the Project area and become familiar with the site conditions as they relate to the scope of the facility redevelopment.

6. We shall prepare preliminary site design and detailing plans for This Part of the Project.

7. We shall assist the Park District in determining an appropriate project delivery method.

B. Schematic Design

1. We shall prepare conceptual Schematic Design drawings and scope specifications for the Project.

2. We shall have one (1) meeting with the Park District staff to review deliverables.

3. We shall prepare a report summarizing the conceptual solutions based on the parameters and goals established.

4. We shall prepare and submit applications for the Illinois Department of Natural Resources – Endangered Species, Illinois Historic Preservation Agency, and Kane-DuPage Soil & Water

Conservation District Land Use Opinion consultation processes.

C. Design Development

1. We shall prepare Design Development drawings and scope specifications for the Project.

2. We shall attend coordination meetings with the Park District and/or other consultants to review and coordinate the drawings and specifications. Included in the stipulated fee for this task is attendance at no more than two (2) such meetings.

3. We shall prepare a rendered site plan sufficient for a Board Review meeting. Consultant attendance is not included at said Board Meeting.

4. We shall provide field turf material samples and site color elevations to the Park District for presentation purposes.

5. We shall provide a suggested maintenance outline including a list of potential equipment needs and recommended upkeep.

6. We shall prepare a Statement of Probable Construction Cost for the Project.

D. Construction Documents

1. We shall prepare final drawings and CSI format specifications for This Part of the Project. The drawings and specifications shall be prepared in accordance with generally accepted professional practices and substantially in conformance with standards of the governmental agencies having jurisdiction thereof. Consultant makes no warranty, either expressed or implied, as part of this Agreement. Nothing in this Agreement shall require Consultant to exercise professional skill and judgment greater than that which can be reasonably expected from other engineers performing similar services to those required hereunder.

2. We shall submit drawings and specifications to the Park District at the 50% and 95% Construction Document stages for review and approval. We shall incorporate the changes requested by Park District staff.

3. We shall assist you in the preparation and processing of permit applications and checklists normally prepared by the design professional in connection with This Part of the Project through the Village of Glen Ellyn, DuPage County, and Illinois Environmental Protection Agency NPDES permit submittals.

4. We shall attend coordination meetings with the Park District and/or other consultants, as needed, to review and coordinate the drawings and specifications. Included in our fee is attendance at two (2) such meetings.

5. We shall prepare an updated Statement of Probable Construction Cost based upon the final Construction Documents for the Park District.

E. Permitting, Bidding, and Construction Phase

1. We shall assist the Park District through the Village of Glen Ellyn, DuPage County, and Illinois Environmental Protection Agency NPDES permit approval process. We are anticipating two (2) review comment and response submittals for each agency mentioned above.

2. We shall assist the Park District in receiving and documenting questions concerning the bid documents relative to This Part of the Project.

3. We shall prepare addenda to clarify documents prepared by EEA.

4. We shall evaluate bidder proposed substitutions for basic quality and applicability when requested by you and/or the Contractor.

5. We shall review shop drawings and submittals made by the Trade Contractor(s) within 5 working days as they relate to This Part of the Project.

6. We shall assist you by answering questions arising from field conditions and shall prepare supplemental documents to clarify the original documents relative to this Part of the Project.

7. We shall provide updated construction drawings and/or specifications as needed to address change orders modifications.

8. We shall attend coordination meetings with the Park District, the Contractor, and/or other consultants, as needed, to review and coordinate the drawings and specifications. Included in our fee is attendance at eight (8) such meetings.

9. We shall conduct site observation visits to determine whether construction is in general conformance with the construction documents and specifications. Included in our fee is four (4) site visits.

10. We shall perform SWPPP site inspection visits to assess whether the site erosion and sediment controls are functioning and in conformance with the requirements as per the DuPage County Stormwater and Flood Plain Ordinance. We shall provide inspection reports within five (5) calendar days. Included in our fee is eight (8) SWPPP site inspection visits.

11. We shall assist you and the Contractor by monitoring the construction schedule and endeavor to meet the Owner's substantial completion timeline.

12. We shall prepare a Final Punchlist at the completion of the project to verify general compliance with the contract documents.

13. We shall review the as-built drawings and specifications performed by the Contractor for conformance to the Construction Documents. We shall coordinate with the Contractor to provide the Park District final as-built drawings.

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Work by Owner.
4. Access to site.
5. Coordination with occupants.
6. Work restrictions.
7. Specification and drawing conventions.
8. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: Synthetic Turf Athletic Fields.

1. Project Location: Newton Park -707 Fairview Avenue, Glen Ellyn, IL 60137.

B. Owner: Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL 60137.

1. Owner's Representative: Mr. Dan Hopkins, Superintendent of Parks and Planning, telephone: (630) 942-7265, fax: (630) 858-2479, , email: dhopkins@gepark.org.

C. Engineer: Mr. Kevin Camino, P.E., Eriksson Engineering Associates, Ltd., 145 Commerce Drive, Suite A, Grayslake, IL 60030, telephone: (847) 223-4804 x14, fax: (847) 223-4864, cellular phone: (847) 254-6704, email: kcamino@eea-ltd.com.

D. Contractor: FieldTurf has been engaged as the synthetic turf Contractor for this project. Contact Lindsay Aggattas, Senior Project Administrator, FieldTurf, 15129 Kimberley Court, Houston, TX 77079, telephone: (281) 531-4720, fax: (281) 596-0127, email:

Lindsay.Agattas@fieldturf.com.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Demolition, earthwork, underdrainage, storm sewers, water lines, curbs, fencing, and stone section in preparation for synthetic turf installation..

B. Type of Contract:

1. Project will be constructed under a single prime contract.

2. Contractor shall coordinate all work with the Synthetic Turf Contractor in order to meet Substantial and Final Completion dates indicated in Section 000300 Bid Form. Note: Turf installation typically requires a minimum of 4 weeks so the field base work must be completed well in advance of the Substantial Completion date.

3. Synthetic Turf Contractor is under a separate contract with the Owner.

1.5 WORK BY OWNER

A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

B. Preceding Work: Owner will perform the following construction operations at Project site. Those operations are scheduled to be substantially complete before work under this Contract begins.

1. The Owner will have a private utility location service locate and mark existing underground private utilities. The Contractor is responsible for contacting JULIE and having all public utilities located and marked. All utility locating and marking must be completed before the Contractor commences any on-site construction activities.

1.6 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas as indicated as construction limits on the drawings. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: 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.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.7 COORDINATION WITH OCCUPANTS

A. Park Users: Users will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate usage. Perform the Work so as not to interfere with User's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.8 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. a.m. to 7:00 p.m. p.m., Monday through Saturday, unless otherwise indicated.

1. Sundays: 8:00 a.m. to 5:00 p.m.
2. Holidays: 12:00 p.m. to 5:00 p.m.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

D. Nonsmoking Site: Smoking is not permitted on park district property.

E. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.
4. References: Any use of the term “Architect” in the Contract Documents shall be used interchangeably with the term “Engineer”.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. 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. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate Bid A: Water line and quick connects.

1. Base Bid: No water line or quick connects. .
2. Alternate: Provide all water lines, quick connects and associated appurtenances as indicated on the Drawings.

B. Alternate Bid B: Fencing.

1. Base Bid: No fence.
2. Alternate Bid: Provide 4’ high, PVC, vinyl coated chain link fence and additional curb width as indicated on the Drawings.

C. Alternate Bid C: Scoreboard relocation.

1. Base Bid: Existing scoreboard to remain.
2. Alternate Bid: Relocate scoreboard to location shown on the Drawings. Provide all necessary demolition work, columns, footings, electrical and communication lines as necessary.

END OF SECTION 012300

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

B. Related Sections include the following:

1. Division 01 Section "Allowances" for procedural requirements for handling and processing allowances.
2. Division 01 Section "Unit Prices" for administrative requirements for using unit prices.
3. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.
4. Division 01 Section "Alternates" for procedural requirements for handling and processing alternate bids.

1.3 MINOR CHANGES IN THE WORK

A. Engineer will issue Supplemental Instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, through the following means:

1. AIA Document G710, "Architect's Supplemental Instructions."
2. Email communications.
3. Fax communications.
4. Telephone communications.
5. Verbal communications.

B. Only changes issued formally through a Change Order or Construction Change Directive will authorize changes to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and

Specifications.

1. Proposal Requests issued by entities other than the Engineer are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
2. Within 10 days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to the Engineer.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
7. Refer to the Supplementary Conditions for the time limits on Contractor-Initiated Proposals.

    a. Proposal Request Form: Use AIA Document G709 for Proposal Requests.

1.5 ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances,

mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within 14 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 14 days after such authorization.

1.6 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request the Engineer will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: The Engineer may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Sections include the following:

1. Division 01 Section "Allowances" for procedural requirements governing handling and processing of allowances.
2. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
3. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
4. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:

a. Application for Payment forms with Continuation Sheets.
b. Submittals Schedule.
c. Contractor's Construction Schedule.

B. Submit the Schedule of Values to Engineer at earliest possible date but no later than 7 days before the date scheduled for submittal of initial Applications for Payment.

C. Format and Content: 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.

1. Identification: 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.

2. Submit draft of AIA Document G703 Continuation Sheets.
3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:

    a. Related Specification Section or Division.
    b. Description of the Work.
    c. Change Orders (numbers) that affect value.
    d. Dollar value.

4. Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
5. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
6. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
7. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

    a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.

8. 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.
9. Allowances: 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.
10. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

11. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

A. The Engineer will not review the Contractor's applications for payment until the Engineer receives the following:

1. The Contractor must submit electronically, in Adobe PDF format, a Certified Payroll to the Owner every month for the duration of the Project including the signed statement. Submit the Certified Payroll to the Engineer with the Contractor's Applications for Payment. Refer to 820 ILCS 130/5(a)(2).

2. The Contractor must submit electronically, in Adobe PDF format, the Contractor's Daily Sign-in Log for the previous month related to the application for payment period.

B. Each Application for Payment shall be consistent with previous applications and payments as certified by Engineer and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

C. Payment Application Times: Progress payments shall be submitted to Engineer by the first day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

D. Submit a "pencil copy" of the application via email or fax seven (7) days prior to the progress payment submittal date stated above.

E. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.

F. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer will return incomplete applications without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
3. Indicate retainage amount specified in the Supplementary Conditions.

G. Transmittal: Submit three (3) signed and notarized original copies of each Application for Payment to the Engineer by a method ensuring receipt within 24 hours. Submit three (3) copies of waivers of lien and similar attachments.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must 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 who is lawfully entitled to a lien.
5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.

I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule (preliminary if not final).
4. Submittals Schedule (preliminary if not final).
5. List of Contractor's staff assignments.
6. Certificates of insurance and insurance policies.
7. Performance and payment bonds.

J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

K. Final Payment Application: 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. Updated final statement, accounting for final changes to the Contract Sum.
3. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
5. AIA Document G707, "Consent of Surety to Final Payment."
6. Evidence that claims have been settled.
7. Warranty Documents (if not previously submitted).
8. O&M Manuals (if not previously submitted).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Administrative and supervisory personnel.
2. Project meetings.
3. Requests for Interpretation (RFIs).
4. Coordination Drawings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

C. Related Sections include the following:

1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures

required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

1.5 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project Superintendent and Project Manager, provide other administrative and supervisory personnel as required for proper performance of the Work.

1. Refer to Division 00 Supplemental Conditions for additional requirements regarding the Project Superintendent.

1.6 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Engineer of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Engineer, within five days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Engineer, but no later than 10 days after execution of the Agreement. Hold the conference at Project site. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for testing and inspecting.
    g. Procedures for processing Applications for Payment.
    h. Submittal procedures.
    i. Preparation of Record Documents.
    j. Use of the premises and existing building.
    k. Work restrictions.
    l. Owner's occupancy requirements.
    m. Responsibility for temporary facilities and controls.
    n. Parking availability.
    o. Office, work, and storage areas.
    p. Equipment deliveries and priorities.
    q. First aid.
    r. Security.
    s. Progress cleaning.
    t. Working hours.

3. Minutes: Record and distribute meeting minutes.

C. Progress Meetings: Conduct progress meetings at weekly intervals. Establish the meeting date and time with the Owner and Engineer.

1. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and 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 Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Status of submittals.
3) Deliveries.
4) Temporary facilities and controls.
5) Work hours.
6) Hazards and risks.
7) Progress cleaning.
8) Quality and work standards.
9) Status of correction of deficient items.
10) Field observations.
11) RFIs.
12) Status of proposal requests.
13) Pending changes.
14) Status of Change Orders.
15) Pending claims and disputes.
16) Documentation of information for payment requests.

3. Minutes: Record and distribute the meeting minutes.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.7 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.
2. Date.
3. Name of Contractor.
4. Name of Engineer.
5. RFI number, numbered sequentially.

6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

    a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

C. Hard-Copy RFIs: CSI Form 13.2A.

1. Identify each page of attachments with the RFI number and sequential page number.

D. Engineer's Action: Engineer will review each RFI, determine action required, and return it. Allow seven working days for Engineer's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for coordination information already indicated in the Contract Documents.
    d. Requests for adjustments in the Contract Time or the Contract Sum.
    e. Requests for interpretation of Engineer's actions on submittals.
    f. Incomplete RFIs or RFIs with numerous errors.

2. Engineer's action may include a request for additional information, in which case Engineer's time for response will start again.
3. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within seven (7) days of receipt of the RFI response.

E. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.

F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Engineer.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Engineer's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Preliminary Construction Schedule.
2. Contractor's Construction Schedule.
3. Submittals Schedule.
4. Special reports.

B. Related Sections include the following:

1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
4. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 SUBMITTALS

A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:

1. Scheduled date for first submittal.
2. Specification Section number and title.
3. Submittal category (action or informational).
4. Name of subcontractor.
5. Description of the Work covered.
6. Scheduled date for Engineer's final release or approval.

B. Preliminary Construction Schedule: Submit two opaque copies.

1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.

C. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.

D. Special Reports: Submit two copies at time of unusual event.

1.4 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.

1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.

a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.

3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."

B. Time Frame: Extend schedule from date established for Notice of Award to date of Final Completion.

1. Contract completion date shall not be changed by submission of a schedule that shows a late completion date, unless specifically authorized by Change Order.

C. Activities: Treat each field or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:

1. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
2. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineer's administrative procedures necessary for certification of Substantial Completion.

D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
3. Work Restrictions: Show the effect of the following items on the schedule:

a. Uninterruptible services.

E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Relinquish to Turf Contractor, Substantial Completion, Final Completion.

2.3 PRELIMINARY CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within seven days of date established for the Notice of Award.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 15 days of date established for the Notice of Award. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

2.5 SPECIAL REPORTS

A. General: Submit special reports directly to Owner within two days of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable. Submit a special report for any jobsite injury.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule at each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Engineer Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for the following:

1. Periodic construction photographs.
2. Final Completion construction photographs.

B. Related Sections include the following:

1. Division 01 Section "Allowances" for requirements for photographic documentation provided under an allowance.
2. Division 01 Section "Unit Prices" for procedures for unit prices for extra photographs.
3. Division 01 Section "Submittal Procedures" for submitting photographic documentation.
4. Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.

1.3 SUBMITTALS

A. Construction Photographs: On a weekly basis, submit digital images of each photographic view within seven days of taking photographs.

1. Digital Images: Submit a complete set of digital image electronic files as a Project Record Document on CD-ROM. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as the sensor, uncropped.

1.4 QUALITY ASSURANCE

A. Photographer Qualifications: The photographer can be either the project superintendent or a professional photographer who has been regularly engaged as a professional photographer of construction projects for not less than three years.

1.5 COORDINATION

A. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities, including temporary lighting required to produce clear, well-lit photographs without obscuring shadows.

1.6 USAGE RIGHTS

A. If using a professional photographer, obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPEG format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1024 by 768 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.

B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

1. Date Stamp: Include date stamp in each image.

C. Periodic Construction Photographs: On a weekly basis, take a minimum of ten (10) color, digital photographs of each project area at each project site. Select vantage points to show status of construction and progress since last photographs were taken.

1. Send the photographs from the week to the Engineer via email on the day before the weekly construction progress meeting.
2. Name the photographs to indicate the location and date of the photograph using the following naming conventions:

a. YYMMDD Curb 01.jpg

D. Engineer-Directed Construction Photographs: From time to time, Engineer may instruct photographer about number and frequency of digital photographs and general directions on vantage points.

E. Final Completion Construction Photographs: Take a minimum of ten (10) color, digital photographs of each project area at each project site after date of Substantial Completion for submission as Project Record Documents.

1. Do not include a date stamp.

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. All submittals must be submitted electronically unless actual product samples and materials. The Contractor is responsible for scanning all necessary submittals to Adobe Acrobat PDF format.

C. Related Sections include the following:

1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
4. Division 01 Section "Photographic Documentation" for submitting construction photographs.
5. Division 01 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
6. Division 01 Section "Closeout Procedures" for submitting warranties.
7. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
8. Divisions 02 through 33 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Engineer's responsive action.

B. Informational Submittals: Written information that does not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

C. Electronic Submittal: Submittal in electronic Adobe Acrobat PDF format, version 6.0, or later

or Autodesk AutoCAD, version 2009 or later.

1.4 SUBMITTAL PROCEDURES

A. General: Electronic copies of CAD Drawings of the Contract Drawings will be provided by Engineer for Contractor's use in preparing submittals.

B. Only Electronic Submittals Permitted: All submittals, with the exception of physical samples or color selectors, must be submitted in electronic format using Adobe Acrobat 6.0 or later format.

1. Transmit all submittals via email to the Engineer.
2. Transmit each submittal via an individual email with the email subject listing the project number, date of the submittal, and the submittal number (i.e. EEA465 YYMMDD Submittal 213250-01.pdf).
3. If the submittal information was not available originally in an electronic format, the original hard copy submittal should be scanned to Adobe Acrobat PDF format and submitted electronically.
4. Hard copy submittals (other than physical samples) will be returned to the Contractor with no action taken for resubmittal in electronic format.

C. Number of Copies:

1. Electronic Submittals: Submit via email only one (1) copy in Adobe Acrobat PDF format.

    a. The Engineer will return one (1) marked-up copy to the Contractor via email.

2. Physical Samples: Submit two (2) copies.

    a. The Engineer will return one (1) marked-up sample to the Contractor via physical shipment.
    b. The Engineer reserves the right to return physical sample submittals as Adobe Acrobat PDF files containing annotated digital photographs of the physical samples.

D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

E. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.

F. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 10 business days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 10 days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Engineer's consultants, Owner, or other parties is required, allow 15 business days for initial review of each submittal.
    a. Concrete related submittals including structures and curb.
    b. Sewer and Water Pipe
    c. Goal Posts
    d. Electrical submittals.
    e. Plumbing submittals.

5. Submittals received after 4:00 p.m. will be recorded as received the following business day.

G. Identification of Electronic Submittals: Name each electronic Adobe Acrobat PDF file with the following format (project number, submittal date, submittal number), (i.e., EEA465 YYMMDD submittal number, EEA450 080425 102123-01.pdf). Inside the electronic submittal, provide the following information within the Adobe Acrobat PDF file:

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Include the following information on the submittal for processing and recording action taken:

    a. Project name.
    b. Date.
    c. Name and address of Engineer.
    d. Name and address of Contractor.
    e. Name and address of subcontractor.
    f. Name and address of supplier.
    g. Name of manufacturer.
    h. Submittal number or other unique identifier, including revision identifier.

3. Submittal number shall use Specification Section number followed by a dash and then a sequential number (e.g., 061000-01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000-01A).
4. Use the submittal number in the file naming described above (e.g. EEA450 080425 061000-01A.pdf)

    a. Number and title of appropriate Specification Section.

H. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract

Documents on submittals.

I. Transmittal: File and transmit each electronic Adobe Acrobat PDF submittal individually in separate emails. Engineer will return submittals, without review, received from sources other than Contractor.

1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal. Submit electronically.

J. Resubmittals: Make resubmittals in same form as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked "Reviewed" or "Reviewed As Noted" approval notation from Engineer's action stamp.

K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

L. Use for Construction: Use only final submittals with mark indicating "Reviewed" or "Reviewed as Noted" approval notation from Engineer's action stamp.

1.5 CONTRACTOR'S USE OF ENGINEER'S CAD FILES

A. General: At Contractor's written request, copies of Engineer's CAD files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:

1. The CAD files will contain only base plan information without titleblocks, dimensions, annotations, details, elevations, etc.
2. The CAD files are provided as a courtesy to the Contractor and the Engineer and the Engineer's consultants do not guarantee the accuracy of the CAD files.
3. The Contractor must verify all dimensions, quantities, areas and conditions independently.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

1. Submit electronic submittals directly to the Engineer via email.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark the submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's written recommendations.
    b. Manufacturer's product specifications.
    c. Manufacturer's installation instructions.
    d. Standard color charts.
    e. Manufacturer's catalog cuts.
    f. Wiring diagrams showing factory-installed wiring.
    g. Printed performance curves.
    h. Operational range diagrams.
    i. Mill reports.
    j. Standard product operation and maintenance manuals.
    k. Compliance with specified referenced standards.
    l. Testing by recognized testing agency.
    m. Application of testing agency labels and seals.
    n. Notation of coordination requirements.

4. Submit Product Data before or concurrent with Samples.
5. Number of Copies: Submit one electronic copy of Product Data, unless otherwise indicated. Engineer will return one copy. Mark up and retain one returned electronic copy as a Project Record Document.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal of Engineer's CAD base floor plan drawings are otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Dimensions.
    b. Identification of products.
    c. Fabrication and installation drawings.
    d. Roughing-in and setting diagrams.
    e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    f. Shopwork manufacturing instructions.
    g. Templates and patterns.
    h. Schedules.
    i. Design calculations.
    j. Compliance with specified standards.
    k. Notation of coordination requirements.
    l. Notation of dimensions established by field measurement.
    m. Relationship to adjoining construction clearly indicated.
    n. Seal and signature of professional engineer if specified.

2. Electronic Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
3. Number of Copies: Submit one electronic copy of each submittal. Engineer will return one copy.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

    a. Generic description of Sample.
    b. Product name and name of manufacturer.
    c. Sample source.
    d. Number and title of appropriate Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Engineer will return submittal with options selected.

5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit two sets of Samples. Engineer will retain one Sample set; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.

        1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
        2) If variation in color, pattern, texture, or other characteristic is inherent in

material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Construction Manager's action.

F. Submittals Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

G. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."

H. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."

I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.
4. Number of Copies: Submit one electronic copy and two opaque copies of subcontractor list, unless otherwise indicated. Engineer will return one electronic copy.

    a. Mark up and retain one returned electronic copy as a Project Record Document.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

1. Number of Copies: Submit one electronic copy of each submittal, unless otherwise indicated. Engineer will not return copies.
2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Test and Inspection Reports: Comply with requirements specified in Division 01 Section "Quality Requirements."

B. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."

C. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

D. Qualification Data: Prepare written information that demonstrates capabilities and experience

of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.

E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

L. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

M. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."

N. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

O. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

P. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

Q. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

R. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

S. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:

1. Preparation of substrates.
2. Required substrate tolerances.
3. Sequence of installation or erection.
4. Required installation tolerances.
5. Required adjustments.
6. Recommendations for cleaning and protection.

T. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

U. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

V. Construction Photographs: Comply with requirements specified in Division 01 Section " Photographic Documentation."

W. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Engineer.

1. Engineer will not review submittals that include MSDSs and will return the entire submittal for resubmittal.

2.3 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit one electronic copy of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with Contractor's approval stamp before submitting to Engineer.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S / ACTION

A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections

or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. Reviewed.
2. Reviewed As Noted.
3. Revise & Resubmit.
4. Rejected.

C. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

3.3 ELECTRONIC RECORD DOCUMENTS

A. For record documents of the submittals, prepare a series of CD-ROM discs with copies of all electronic submittals organized as follows:

1. Folder Structure: Create and electronic folder or directory names for each specification section in the Project Manual that contains submittal requirements (i.e., 102113, 102123, etc.)
2. Place copies of all submittals in their appropriate folder or directory.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and -control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Sections include the following:

1. Division 01 Section "Allowances" for testing and inspecting allowances.
2. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
3. Division 31 Section “Earth Moving” for Owner’s geotechnical engineering testing agency.
4. Division 32 Section “Concrete Paving” for Owner’s testing and inspection agency.
5. Division 32 Section “Asphalt Paving” for Owner’s testing agency.
6. Divisions 02 through 33 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

A. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer.

B. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

C. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

D. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

E. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

F. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

G. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has

resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

G. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.6 QUALITY CONTROL

A. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

   a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

D. Testing Agency Responsibilities: Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, and an electronic copy via email of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Location of Work inspected.
4. Date test or inspection results were transmitted to Engineer.
5. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Engineer's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Engineer. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if

bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AAMA American Architectural Manufacturers Association (847) 303-5664

www.aamanet.org

AASHTO American Association of State Highway and Transportation Officials (202) 624-5800

www.transportation.org

ACI American Concrete Institute (248) 848-3700

www.concrete.org

ACPA American Concrete Pipe Association (972) 506-7216

www.concrete-pipe.org

AGC Associated General Contractors of America (The) (703) 548-3118

www.agc.org

AI Asphalt Institute (859) 288-4960

www.asphaltinstitute.org

AIA American Institute of Architects (The) (800) 242-3837
(202) 626-7300

(312) 670-2400

ALCA Associated Landscape Contractors of America
(Now PLANET - Professional Landcare Network)

ALSC American Lumber Standard Committee, Incorporated (301) 972-1700

www.alsc.org

ANSI American National Standards Institute (202) 293-8020

www.ansi.org

ASCE American Society of Civil Engineers (800) 548-2723
(703) 295-6300

ASCE/SEI American Society of Civil Engineers/Structural Engineering Institute
(See ASCE)

ASSE American Society of Sanitary Engineering (440) 835-3040

www.asse-plumbing.org

ASTM ASTM International (610) 832-9500
(American Society for Testing and Materials International)

www.astm.org

AWS American Welding Society (800) 443-9353
(305) 443-9353

AWWA American Water Works Association (800) 926-7337
(303) 794-7711

BHMA Builders Hardware Manufacturers Association (212) 297-2122

www.buildershardware.com

BICSI BICSI, Inc. (800) 242-7405
(813) 979-1991

CDA Copper Development Association (800) 232-3282
(212) 251-7200

CLFMI Chain Link Fence Manufacturers Institute (301) 596-2583

www.chainlinkinfo.org

CPPA Corrugated Polyethylene Pipe Association (800) 510-2772

www.cppa-info.org (202) 462-9607
(706) 278-3176

CRSI Concrete Reinforcing Steel Institute (847) 517-1200

www.crsi.org

CSA Canadian Standards Association (800) 463-6727

747-4000

CSA CSA International (866) 797-4272
(Formerly: IAS - International Approval Services) (416) 747-4000

www.csa-international.org

CSI Construction Specifications Institute (The) (800) 689-2900

(703) 684-0300

EIA Electronic Industries Alliance (703) 907-7500

www.eia.org

EJCDC Engineers Joint Contract Documents Committee (703) 295-5000

www.ejdc.org

EJMA Expansion Joint Manufacturers Association, Inc. (914) 332-0040

www.ejma.org

ETL SEMCO Intertek ETL SEMCO (800) 967-5352
(Formerly: ITS - Intertek Testing Service NA)

www.intertek.com

FM Approvals FM Approvals LLC (781) 762-4300

www.fmglobal.com

FM Global FM Global (401) 275-3000
(Formerly: FMG - FM Global)

www.fmglobal.com

FMRC Factory Mutual Research
(Now FM Global)

GA Gypsum Association (202) 289-5440

www.gypsum.org

GANA Glass Association of North America (785) 271-0208

www.glasswebsite.com

GRI (Part of GSI)

GS Green Seal (202) 872-6400

www.greenseal.org

GSI Geosynthetic Institute (610) 522-8440

www.geosynthetic-institute.org

HPW H. P. White Laboratory, Inc. (410) 838-6550

www.hpwhite.com

IAS International Approval Services
(Now CSA International)

ICRI International Concrete Repair Institute, Inc. (847) 827-0830

www.icri.org

IEST Institute of Environmental Sciences and Technology (847) 255-1561

www.iest.org

ISO International Organization for Standardization 41 22 749 01 11

www.iso.ch
Available from ANSI (202) 293-8020

www.ansi.org

ITS Intertek Testing Service NA
(Now ETL SEMCO)

ITU International Telecommunication Union 41 22 730 51 11

www.itu.int/home

LPI Lightning Protection Institute (800) 488-6864

www.lightning.org

MH Material Handling
(Now MHIA)

MHIA Material Handling Industry of America (800) 345-1815
(704) 676-1190

MSS Manufacturers Standardization Society of The Valve and Fittings Industry Inc. (703) 281-6613

www.mss-hq.com

NAIMA North American Insulation Manufacturers Association (703) 684-0084

www.naima.org

NCAA National Collegiate Athletic Association (The) (317) 917-6222

www.ncaa.org

NFHS National Federation of State High School Associations (317) 972-6900

www.nfhs.org

NFPA NFPA (800) 344-3555
(National Fire Protection Association) (617) 770-3000

www.nfpa.org

NFRC National Fenestration Rating Council (301) 589-1776

www.nfrc.org

NHLA National Hardwood Lumber Association(800) 933-0318
(901) 377-1818

NLGA National Lumber Grades Authority (604) 524-2393

www.nlga.org

NRMCA National Ready Mixed Concrete Association (888) 846-7622
(301) 587-1400

OPL Omega Point Laboratories, Inc.
(Now ITS)

PCI Precast/Prestressed Concrete Institute (312) 786-0300

www.pci.org

PDI Plumbing & Drainage Institute (800) 589-8956
(978) 557-0720

PGI PVC Geomembrane Institute (217) 333-3929

http://pgi-tp.ce.uiuc.edu

PLANET Professional Landcare Network (800) 395-2522
(Formerly: ACLA - Associated Landscape Contractors of America) (703) 736-9666

www.landcarenetwork.org

SAE SAE International (877) 606-7323
(724) 776-4841

SEI/ASCE Structural Engineering Institute/American Society of Civil Engineers
(See ASCE)

www.smpte.org

SSPC SSPC: The Society for Protective Coatings (877) 281-7772
(412) 281-2331

STI Steel Tank Institute (847) 438-8265

www.steeltank.com

SWRI Sealant, Waterproofing, & Restoration Institute (816) 472-7974

www.swrionline.org

TPI Turfgrass Producers International (800) 405-8873
(847) 649-5555

UL Underwriters Laboratories Inc. (877) 854-3577
(847) 272-8800
UNI Uni-Bell PVC Pipe Association (972) 243-3902

www.uni-bell.org
USGBC U.S. Green Building Council (800) 795-1747

www.usgbc.org

Retain list of code agencies below if required. The Section Text in MASTERSPEC Sections is prepared assuming list is retained.

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

IAPMO International Association of Plumbing and Mechanical Officials (909) 472-4100

www.iapmo.org
ICC International Code Council (888) 422-7233

www.iccsafe.org
ICC-ES ICC Evaluation Service, Inc. (800) 423-6587

www.icc-es.org (562) 699-0543
UBC Uniform Building Code
(See ICC)

C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ACOE Army Corps of Engineers (202) 761-0011

www.usace.army.mil
CPSC Consumer Product Safety Commission (800) 638-2772

(301) 504-7923
DOC Department of Commerce (202) 482-2000

www.commerce.gov

DOD Department of Defense (215) 697-6257

http://.dodssp.daps.dla.mil

DOE Department of Energy (202) 586-9220

www.energy.gov

EPA Environmental Protection Agency (202) 272-0167

www.epa.gov

FAA Federal Aviation Administration (866) 835-5322

www.faa.gov

FCC Federal Communications Commission (888) 225-5322

www.fcc.gov

FDA Food and Drug Administration (888) 463-6332

www.fda.gov

GSA General Services Administration (800) 488-3111

www.gsa.gov

HUD Department of Housing and Urban Development (202) 708-1112

www.hud.gov

LBL Lawrence Berkeley National Laboratory (510) 486-4000

www.lbl.gov

NCHRP National Cooperative Highway Research Program
(See TRB)

NIST National Institute of Standards and Technology (301) 975-6478

www.nist.gov

OSHA Occupational Safety & Health Administration (800) 321-6742
(202) 693-1999

PBS Public Buildings Service
(See GSA)

PHS Office of Public Health and Science (202) 690-7694

www.osophs.dhhs.gov/ophs

RUS Rural Utilities Service (202) 720-9540
(See USDA)

SD State Department (202) 647-4000

www.state.gov

TRB Transportation Research Board (202) 334-2934

http://gulliver.trb.org

USDA Department of Agriculture (202) 720-2791

www.usda.gov

USPS Postal Service (202) 268-2000

www.usps.com

D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG Americans with Disabilities Act (ADA) (800) 872-2253

Architectural Barriers Act (ABA) (202) 272-0080

Accessibility Guidelines for Buildings and Facilities

Available from U.S. Access Board

www.access-board.gov

CFR Code of Federal Regulations (866) 512-1800
Available from Government Printing Office (202) 512-1800

www.gpoaccess.gov/cfr/index.html

DOD Department of Defense Military Specifications and Standards (215) 697-2664
Available from Department of Defense Single Stock Point

http://dodssp.daps.dla.mil

DSCC Defense Supply Center Columbus
(See FS)

FED-STD Federal Standard
(See FS)

FS Federal Specification (215) 697-2664
Available from Department of Defense Single Stock Point

http://dodssp.daps.dla.mil
Available from Defense Standardization Program

www.dps.dla.mil
Available from General Services Administration (202) 619-8925

www.gsa.gov
Available from National Institute of Building Sciences (202) 289-7800

www.wbdg.org/ccb

FTMS Federal Test Method Standard
(See FS)

MIL (See MILSPEC)

MIL-STD (See MILSPEC)
MILSPEC Military Specification and Standards (215) 697-2664
Available from Department of Defense Single Stock Point

http://dodssp.daps.dla.mil
UFAS Uniform Federal Accessibility Standards(800) 872-2253
Available from Access Board (202) 272-0080

www.access-board.gov

E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. General Scope of Work: Provide all temporary facilities and control as required by the Drawings or Specifications and as required to maintain a safe work site including, but not limited to, the following:

1. The park will continue to be occupied during the construction. Maintain access to the remaining park areas outside the delineated construction zone.

2. Existing Electrical Transformers and HVAC Equipment:

a. Protect all existing electrical and mechanical equipment that is not indicated for removal and replacement.

1) Coordinate shut-downs of all existing utilities with the Owner. Shut-down all equipment when construction activities could generate damaging dust or debris.

2) Protect the existing mechanical equipment and electrical transformers with temporary wood framing, polyethylene sheet, and plywood. Provide necessary ventilation for the transformers.

3. Existing Trees in Construction Area:

a. Provide temporary chain link or plastic fences around the drip lines of all trees within the perimeter construction fences.

b. Owner shall remove and relocate trees along east property line under separate contract.

C. Related Sections:

1. Division 01 Section "Summary" for work restrictions and limitations on utility

interruptions.

2. Division 32 Section "Concrete Paving" for construction and maintenance of cement concrete pavement for temporary roads and paved areas.
3. Division 32 Section "Asphalt Paving" for construction and maintenance of asphalt pavement for temporary roads and paved areas.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Owner will pay sewer service use charges for sewer usage by all entities for construction operations.

C. Water Service: Owner will pay water service use charges for water used by all entities for construction operations.

D. Electric Power Service: Owner will pay electric power service use charges for electricity used by all entities for construction operations.

E. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

F. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations. Power is available up to 208v three phase. 480v power is not available.

1.4 INFORMATIONAL SUBMITTALS

A. Site Plan: Show temporary facilities, utility hookups, staging areas, stockpile locations and parking areas for construction personnel.

B. Dust-Control Plan: Submit coordination drawing and narrative that indicates the dust-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
   1. Electrical transformer protection.
   2. Other dust-control measures.
   3. Stockpile protection.
   4. Waste management plan.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide galvanized steel bases for supporting posts.

2.2 TEMPORARY FACILITIES

A. Common-Use Field Office: The Owner will designate a location for a temporary field office in one of the Owner's buildings. Keep office clean and orderly. Furnish and equip offices as necessary for the Contractor's use.

1. At the Contractor's option, provide a prefabricated or mobile field office.

B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by

locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

1. Locate facilities to limit site disturbance as specified in Division 01 Section "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.

C. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

1. Toilets: Do not use the Owner's existing toilet facilities. Provide temporary toilets for the workers' use.

E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Perform daily construction cleanup and final cleanup.

F. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

G. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.

1. Provide additional telephone lines for the following:

a. Provide a dedicated telephone line for each facsimile machine in each field office.

2. At each telephone, post a list of important telephone numbers.

a. Police and fire departments.
b. Ambulance service.
c. Contractor's home office.
d. Engineer's office.
e. Owner's office.
f. Principal subcontractors' field and home offices.

3. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office. Provide superintendent and project manager with a desktop or laptop computer at the project site to allow email communication and Internet access at the project site and communication with the Owner and Engineer.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Engineer schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.
3. Maintain access to existing fire lane located on the south side of the project area at all

times.

D. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

E. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

a. Provide temporary, directional signs for construction personnel and visitors.

2. Maintain and touchup signs so they are legible at all times.

F. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal." All waste removal must be by the Village approved contractor. Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Division 01 Section "Summary."

B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from the project site during the course of the project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

C. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

D. Tree and Plant Protection: Comply with requirements specified in Division 01 Section "Temporary Tree and Plant Protection." Install temporary fencing located outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

E.

F. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

1. Extent of Fence: To coincide with construction limits as indicated on Drawings. Coordinate exact location with Owner.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.

H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

J. Temporary Enclosures: Provide temporary enclosures for protection of construction (including stockpiles), in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

K. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

1. Prohibit smoking in construction areas and on park district property.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

B. Related Sections include the following:

1. Division 01 Section "Allowances" for products selected under an allowance.
2. Division 01 Section "Alternates" for products selected under an alternate.
3. Division 01 Section "References" for applicable industry standards for products specified.
4. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
5. Divisions 02 through 33 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from

those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use CSI Form 13.1A.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

    a. Statement indicating why specified material or product cannot be provided.
    b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    e. Samples, where applicable or requested.
    f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
    i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
    j. Cost information, including a proposal of change, if any, in the Contract Sum.
    k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
    l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Engineer's Action: If necessary, Engineer will request additional information or

documentation for evaluation within 7 days of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

a. Form of Acceptance: Change Order.
b. Use product specified if Engineer cannot make a decision on use of a proposed substitution within time allocated.

B. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Engineer will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
b. Use product specified if Engineer cannot make a decision on use of a comparable product request within time allocated.

C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to

ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Refer to Divisions 02 through 33 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are

specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.

3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Engineer will make selection.
5. Where products are accompanied by the term "match sample," sample to be matched is Engineer's.
6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
5. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
6. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
7. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Engineer's sample. Engineer's decision will be final on whether a proposed product matches.

    a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

8. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

    a. Standard Range or Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or "standard range of colors, patterns, textures" or similar phrase, Engineer will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

A. Timing: Engineer will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Engineer.

B. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
2. Requested substitution does not require extensive revisions to the Contract Documents.
3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect Contractor's Construction Schedule.
6. Requested substitution has received necessary approvals of authorities having jurisdiction.
7. Requested substitution is compatible with other portions of the Work.
8. Requested substitution has been coordinated with other portions of the Work.
9. Requested substitution provides specified warranty.
10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

2.3 COMPARABLE PRODUCTS

A. Conditions: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. General installation of products.
4. Coordination of Owner-installed products.
5. Progress cleaning.
6. Starting and adjusting.
7. Protection of installed construction.
8. Correction of the Work.

B. Related Sections include the following:

1. Division 01 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
2. Division 01 Section "Submittal Procedures" for submitting surveys.
3. Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of plumbing, mechanical, and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.

B. Existing Utilities: The existence and location of underground plumbing, electrical work and other utilities and construction indicated as existing are not guaranteed.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewers, storm sewers, and water-service piping; and underground electrical services.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

a. Description of the Work.
b. List of detrimental conditions, including substrates.
c. List of unacceptable installation tolerances.
d. Recommended corrections.

2. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A, "Request for Interpretation."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.

B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
3. Inform installers of lines and levels to which they must comply.
4. Check the location, level and plumb, of every major element as the Work progresses.
5. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.
6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

3.4 FIELD ENGINEERING

A. Identification: Identify existing benchmarks and control points.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in

applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner and the Owner's construction forces.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 Section "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition waste.
2. Disposing of nonhazardous demolition and construction waste.

B. Related Sections include the following:

1. Division 01 Section "Temporary Facilities and Controls" for environmental-protection measures during construction, and location of waste containers at Project site.

1.3 WASTE REMOVAL BY VILLAGE CONTRACTOR

A. All waste removal must be by the Village approved contractor. Other waste removal companies are not permitted to do the removal in Glen Ellyn and cannot be used by the Contractor.

1.4 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

E. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with Division 01 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

3.3 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator

acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

B. Related Sections include the following:

1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
2. Division 01 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
3. Division 01 Section "Execution" for progress cleaning of Project site.
4. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
5. Divisions 02 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
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, Final Completion 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. Complete startup testing of systems.
7. Submit test/adjust/balance records.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
10. Complete final cleaning requirements, including touchup painting.
11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit one electronic copy of list in Microsoft Excel spreadsheet format. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of areas in sequential order, starting with the stadium, practice fields, detention and surrounding areas.
2. Organize items applying to area by major element.Include the following information at the top of each page:

a. Project name.
b. Date.
c. Name of Engineer.
d. Name of Contractor.
e. Page number.

1.6 WARRANTIES

A. Submittal Time: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

1. Submit one electronic Adobe Acrobat PDF format of all warranties to the Engineer and Owner.

B. Partial Occupancy: Submit properly executed warranties within 15 days 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 8-1/2-by-11-inch 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.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: 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: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

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 exposed finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
f. Remove debris and surface dust from limited access spaces, including equipment vaults, manholes, , and similar areas.
g. Remove labels that are not permanent.
h. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

i. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign

substances.

j. Replace parts subject to unusual operating conditions.

k. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

l. Leave Project clean and ready for use.

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 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Record Photographs.

B. Related Sections include the following:

1. Division 01 Section "Closeout Procedures" for general closeout procedures.
2. Divisions 02 through 33 Sections for specific requirements for Project Record Documents of the Work in those Sections.
3. Divisions 01 Section “Photographic Documentation” for final completion photographs.

1.3 SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit electronic copy and one paper set(s) of marked-up Record Prints.
2. Electronic Format: Submit all Record Drawings in electronic format in addition to paper Record Drawings.

    a. Submit in both Autodesk AutoCAD 2009 or later format and Adobe Acrobat 6.0 or later format.

3. Number of Copies: Submit copies of Record Drawings as follows:

    a. Final Submittal: Submit one electronic set(s) of marked-up Record Prints in Adobe Acrobat format, one set(s) of Record AutoCAD 2007 Drawing files, and two copies printed from record plots. Plot and print each Drawing, whether or not changes and additional information were recorded.

1) Electronic Media: CD-R.

B. Record Specifications: Submit one electronic copy in Adobe Acrobat PDF format and one paper copy of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one electronic copy in Adobe Acrobat PDF format and one paper copy of each Product Data submittal.

1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

D. As-built Requirements: Satisfy requirements per Village of Glen Ellyn and DuPage County and as stated on the Construction Drawings.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
b. Accurately record information in an understandable drawing technique.
c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

2. Content: Types of items requiring marking include, but are not limited to, the following:

a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Locations and depths of underground utilities.
d. Location, depth and size of underground detention structure(s).
e. Revisions to routing of piping and conduits.
f. Revisions to electrical circuitry.
g. Actual equipment locations.
h. Locations of concealed internal utilities.
i. Changes made by Change Order or Construction Change Directive.
j. Changes made following Engineer's written orders.
k. Field records for variable and concealed conditions.
l. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record CAD Drawings: Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Engineer. When authorized, prepare a full set of corrected AutoCAD Drawings and Adobe Acrobat PDF files of the Contract Drawings, as follows:

1. Format: Autodesk AutoCAD DWG, 2009 or later version, operating in Microsoft Windows operating system.
2. Incorporate changes and additional information previously marked on Record Prints. Delete, redraw, and add details and notations where applicable.
3. Refer instances of uncertainty to Engineer for resolution.
4. Engineer will furnish Contractor one set of AutoCAD 2009 Drawings of the Contract Drawings for use in recording information.

    a. Engineer and the Engineer's consulting engineers make no representations as to the accuracy or completeness of CAD Drawings as they relate to the Contract Drawings.
    b. CAD Software Program: The Contract Drawings are available in Autodesk AutoCAD 2009 or later version.

C. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing Record Drawings where Engineer determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.

1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.

2. An as-built survey prepared by a licensed professional land surveyor shall include all detention basins, storm sewers and structure locations, sizes, rim and invert elevations, final detention volume calculations for the basins and watermain and valve locations.
3. Consult Engineer for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared Record Drawings into Record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.

D. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification

on cover sheets.

2. Record CAD Drawings: Organize CAD information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each CAD file.
3. Identification: As follows:

    a. Project name.
    b. Date.
    c. Designation "PROJECT RECORD DRAWINGS."
    d. Name of Engineer.
    e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.

END OF SECTION 017839

SECTION 22 11 13 - WATER DISTRIBUTION PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes water-distribution piping and related components outside the building for combined water service and fire-service mains.

B. Utility-furnished products include water meters that will be furnished to the site, ready for installation.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.
   1. Piping specialties.

B. Field quality-control test reports.

C. Operation and Maintenance Data: For water valves and specialties to include in emergency, operation, and maintenance manuals.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Comply with standards of authorities having jurisdiction for potable-water-service piping, including materials, installation, testing, and disinfection.

B. Piping materials shall bear label, stamp, or other markings of specified testing agency.

C. NFPA Compliance: Comply with NFPA 24 for materials, installations, tests, and flushing.

D. NSF Compliance:

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.

B. Protect stored piping from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor when storing inside.

C. Protect flanges, fittings, and specialties from moisture and dirt.

1.6 PROJECT CONDITIONS

A. Interruption of Existing Water-Distribution Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water-distribution service according to requirements indicated:
   1. Notify Engineer no fewer than two days in advance of proposed interruption of service.
   2. Do not proceed with interruption of water-distribution service without Engineer's written permission.

PART 2 - PRODUCTS

2.1 COPPER TUBE AND FITTINGS

A. Soft Copper Tube: ASTM B 88, Type K, water tube, annealed temper.
   1. Copper fittings at points of connection: brass or bronze body.
   2. Copper, Solder-Joint Fittings: ASME B16.22, wrought-copper, solder-joint pressure type.
      a. Copper Tube 1-1/2" diameter and under shall be installed in one continuous piece where the required length is 50 ft. and under.
      b. Copper Tube over 1-1/2" diameter shall be installed in one continuous piece where the required length is 30 ft and under.

B. Bronze Flanges: ASME B16.24, Class 150, with solder-joint end. Furnish Class 300 flanges if required to match piping.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Refer to Division 31 Section "Earth Moving" for excavating, trenching, and backfilling.

3.2 PIPING INSTALLATION

A. Water-Main Connection: Tap water main according to requirements of water utility company and of size and in location indicated.

B. Extend water-service piping and connect to water-supply source and building-water-piping systems at outside face of building wall in locations and pipe sizes indicated.
   1. Terminate water-service piping at building wall until building-water-piping systems are installed. Terminate piping with caps, plugs, or flanges as required for piping material. Make connections to building-water-piping systems when those systems are installed.

C. Install underground piping with restrained joints at horizontal and vertical changes in direction. Use restrained-joint piping, thrust blocks, anchors, tie-rods and clamps, and other supports.

3.3 JOINT CONSTRUCTION

A. Make pipe joints according to the following:

1. Copper-Tubing, Pressure-Sealed Joints: Use proprietary crimping tool and procedure recommended by copper, pressure-seal-fitting manufacturer.
2. Dissimilar Materials Piping Joints: Use adapters compatible with both piping materials, with OD, and with system working pressure.

3.4 WATER METER INSTALLATION

A. Install water meters, piping, and specialties according to utility company's written instructions.

B. Water Meters: Install **displacement**-type water meters, 2-inch and smaller, in meter boxes with shutoff valves on water meter inlets. Include valves on water meter outlets and valved bypass around meters unless prohibited by authorities having jurisdiction.

3.5 BACKFLOW PREVENTER INSTALLATION

A. Install backflow preventers of type, size, and capacity indicated. Include valves and test cocks. Install according to requirements of plumbing and health department and authorities having jurisdiction.

B. Do not install backflow preventers that have relief drain in vault or in other spaces subject to flooding.

C. Do not install bypass piping around backflow preventers.

3.6 FIELD QUALITY CONTROL

A. Piping Tests: Conduct piping tests before joints are covered and after concrete thrust blocks have hardened sufficiently. Fill pipeline 24 hours before testing and apply test pressure to stabilize system. Use only potable water.

B. Hydrostatic Tests: Test at not less than one-and-one-half times working pressure.
1. Increase pressure in 50-psig increments and inspect each joint between increments. Hold at test pressure for 2 hours; decrease to 0 psig. Slowly increase again to test pressure and hold for 1 more hour. Maximum allowable leakage is 2 quarts per hour per 100 joints. Remake leaking joints with new materials and repeat test until leakage is within allowed limits.

C. Prepare reports of testing activities.

3.7 CLEANING

A. Clean and disinfect water-distribution piping as follows:
1. Purge new water-distribution piping systems and parts of existing systems that have been altered, extended, or repaired before use.
2. Use purging and disinfecting procedure prescribed by authorities having jurisdiction or, if method is not prescribed by authorities having jurisdiction, use procedure described in AWWA C651 or do as follows:
   a. Fill system or part of system with water/chlorine solution containing at least 50 ppm of chlorine; isolate and allow to stand for 24 hours.

b. Drain system or part of system of previous solution and refill with water/chlorine solution containing at least 200 ppm of chlorine; isolate and allow to stand for 3 hours.
c. After standing time, flush system with clean, potable water until no chlorine remains in water coming from system.
d. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedure if biological examination shows evidence of contamination.

B. Prepare reports of purging and disinfecting activities.

END OF SECTION 22 11 13

SECTION 31 10 00 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Protecting existing trees shrubs plants and grass to remain.
   2. Removing existing trees shrubs plants and grass.
   3. Clearing and grubbing.
   4. Stripping and stockpiling topsoil.
   5. Removing above- and below-grade site improvements.
   6. Disconnecting and capping or sealing site utilities.
   7. Temporary erosion and sedimentation control measures.

1.2 MATERIAL OWNERSHIP

A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

B. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.

C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.

D. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 31 Section "Earth Moving".

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly flag trees and vegetation to remain or to be relocated.

C. Protect existing site improvements to remain from damage during construction.
   1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control Drawings.

B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.

C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE PROTECTION

A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.

B. Do not excavate within tree protection zones, unless otherwise indicated.

C. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Engineer.

3.4 UTILITIES

A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
   1. Arrange with utility companies to shut off indicated utilities.

B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Engineer not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Engineer's written permission.

C. Removal of underground utilities is included in Division 22 and 33 Sections covering site utilities.

3.5 CLEARING AND GRUBBING

A. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
   1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density required for the proposed condition and as specified in Division 31 Section "Earth Moving”.

3.6 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.

C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   1. Limit height of topsoil stockpiles to 8 feet
   2. Dispose of excess topsoil as specified for waste material disposal
   3. Do not stockpile topsoil within drip line of trees to remain.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

3.8 DISPOSAL

A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 10 00

SECTION 31 20 00 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Preparing subgrades for walks, pavements, lawns and grasses and exterior plants.
   2. Base course for concrete walks and pavements.
   3. Base course for asphalt paving.
   4. Excavating and backfilling for utility trenches.
   5. Excavating and backfilling trenches for buried plumbing and electrical utilities.

B. Related Sections include the following:
   1. Division 01 Section "Allowances" for quantity allowance provisions related to unit-price rock excavation and authorized additional excavation.
   2. Division 01 Section "Unit Prices" for unit-price rock excavation and authorized additional excavation provisions.
   3. Division 31 Section "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
   4. Division 32 Section "Turf and Grasses" for finish grading, including preparing and placing topsoil and planting soil for lawns.

1.2 UNIT PRICES

A. Unit prices for earthwork are included in Division 01 Section "Unit Prices."

B. Quantity allowances for earthwork are included in Division 01 Section "Allowances."

1.3 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.
   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Course placed between the subbase course and paving.

C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.

D. Drainage Fill:
   1. Course placed over the excavated subgrade before laying subdrainage pipe and placed around and over the subdrainage pipe.

E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.

F. Fill: Soil materials used to raise existing grades.

G. Structures: curbs, sewerage, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below base, drainage fill, or topsoil materials.

I. Utilities: On-site underground pipes, conduits, ducts, and cables.

1.4 SUBMITTALS

A. Product Data: For the following:
1. Geotextiles.

1.5 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.
1. Contractor shall be responsible for contacting the Owner’s Geotechnical Testing Agency at those times required by the specifications for the appropriate materials and soils testing.
2. Contractor shall coordinate with the Owner’s Geotechnical Testing Agency as to the Testing Agency’s requirements for advance notification, but allow for a minimum 24-hr notification.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer's written permission.
3. Contact utility-locator service for area where Project is located before excavating.

B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, GC, SC, SW, SP, ML, CL and SM, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

B. Unsatisfactory Soils: Soil Classification Groups MH, CH, OL, OH, and PT according to ASTM D 2487, or a combination of these groups.
   1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
   2. Unsatisfactory soils hereunder are Clean Construction or Demolition Debris (CCDD) as defined by the State of Illinois Environmental Protection Agency and is acceptable as fill material at CCDD facilities.

C. Non-special Waste Containing Soils: Either satisfactory or unsatisfactory soils that contain non-special waste that are non-liquid non-hazardous industrial process and pollution control waste and are excluded from special waste meeting all the requirements of Section 3.475 of the Illinois Environmental Protection Act.
   1. Are not CCDD
   2. Are not hazardous
   3. Are not a liquid (as determined by paint-filter test SW-846 Method 9095)
   4. Are not regulated asbestos-containing material as defined in 40 Code of Federal Regulations, Section 61.141
   5. Do not contain polychlorinated biphenyls (PCBs) regulated in accordance with 40 Code of Federal Regulations, Part 761
   6. Are not formerly hazardous waste rendered non-hazardous
   7. Do not result from shredding recyclable metals

D. Non-Hazardous Special Waste Containing Soils: Either satisfactory or unsatisfactory soils that contain special waste as defined by Illinois Environmental Protection Act (Act) Section 809.103 and that has not been determined as hazardous in that Section of the Act.

E. Hazardous Waste Containing Soils: Either satisfactory or unsatisfactory soils that contain hazardous special waste as defined by Section 3.220 of the Illinois Environmental Protection Act and as determined by Section 722.111 of Title 35 of Illinois Administrative Code.

F. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; less than 3 percent stones ¾-inch or larger in any dimension and roots, plants, sod, clay lumps, and other extraneous materials harmful to plant growth.
   1. Topsoil shall be free of all deleterious material that may adversely affect the use of the planted surface including any metal, wood, plastic, glass or other manmade materials not intended specifically as a soil supplement.
   2. Topsoil shall be free of obnoxious weeds and invasive plants or other undesirable organisms and disease-causing plant pathogens.
   3. Topsoil particle sizes shall fall in the following ranges as percentages by mass both separately and in combination:
      a. Clay: 35 percent to 60 percent
      b. Silt: 35 percent to 60 percent

c. Sand: less than 60 percent
d. Silt and Clay in combination: less than 65 percent

4. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

G. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone ASTM D 2940; conforming to State of Illinois, Dept of Transportation Gradation CA-6.

H. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone; ASTM D 2940; conforming to State of Illinois, Dept of Transportation Gradation CA-6 or CA-7.

I. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; conforming to State of Illinois, Dept of Transportation Gradation CA-7 or CA-11.

J. Drainage Fill: Narrowly graded mixture of washed crushed stone, or washed crushed or uncrushed gravel; ASTM D 448; coarse-aggregate conforming to State of Illinois, Dept of Transportation Gradation CA-7

2.2 GEOTEXTILES

A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 248 lbf; ASTM D 4632.
3. Sewn Seam Strength: 223 lbf ; ASTM D 4632.
4. Tear Strength: 90 lbf; ASTM D 4533.
5. Puncture Strength: 90 lbf ;ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Water Flow Rate: 110 gpm minimum; ASTM D 4491
8. Permittivity: 0.02 per second, minimum; ASTM D 4491.
9. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

B. Separation Geotextile: Nonwoven needle punched geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 1; AASHTO M 288.
2. Grab Tensile Strength: 315 lbf; ASTM D 4632.
3. Sewn Seam Strength: 284 lbf ; ASTM D 4632.
4. Tear Strength: 113 lbf; ASTM D 4533.
5. Puncture Strength: 113 lbf ;ASTM D 4833.
6. Apparent Opening Size: No. 70 sieve, maximum; ASTM D 4751.
7. Water Flow Rate: 110 gpm minimum; ASTM D 4491
8. Permittivity: 0.02 per second, minimum; ASTM D 4491.
9. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing."

C. Protect and maintain erosion and sedimentation controls during earthwork operations.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Discharge from dewatering operations must meet with local and State National Pollutant Discharge Elimination System (NPDES) requirements.
   1. Incorporate structural and non-structural Best Management Practices (BMP's) as necessary to meet NPDES and local requirements.
   2. Waste material shall be legally disposed of where mechanical means are used to separate sediments and other pollutants from dewatering discharge water

C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
   1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
   2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to as a minimum to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Where topsoil depth exceeds the proposed subgrade elevation and where within pavement **or synthetic turf** areas, remove all topsoil encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
   1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
   2. Remove rock to lines and grades indicated to permit installation of permanent construction:

3.5 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1/2 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.7 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

B. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit and as indicated. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits as indicated. Remove projecting stones and sharp objects along trench subgrade.

3.8 SUBGRADE INSPECTION

A. Notify Owner's Geotechnical Testing Agency when excavations have reached required subgrade.

B. If Owner's Geotechnical Testing Agency determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below synthetic turf with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
   1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
   2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
   3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.9 UNAUTHORIZED EXCAVATION
   1. Fill unauthorized excavations under other construction or utility pipe as directed by Owner's Geotechnical Testing Agency.

3.10 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
2. Enclose stockpile using silt fence
3. Install temporary stabilization to include turf grass seed and erosion control blanket.

3.11 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:
   1. Surveying locations of underground utilities for Record Documents.
   2. Testing and inspecting underground utilities.
   3. Removing concrete formwork.
   4. Removing trash and debris.
   5. Removing temporary shoring and bracing, and sheeting.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.12 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
   1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

C. Place and compact final backfill to final subgrade elevation and as indicated.
   1. Under or within two feet of pavement edge use Engineered Fill as backfill
   2. Under non pavement areas use satisfactory soil as backfill

3.13 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material.
   2. Under walks, pavements and synthetic turf areas, use satisfactory soil material.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry otherwise satisfactory material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF BACKFILLS AND FILLS

A. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact materials to not less than the following percentages of maximum dry density according to ASTM D 1557
1. Under structures**,** and steps scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent Modified Proctor.
2. Under pavements, curbs walks, and synthetic turf areas scarify and recompact top 4 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent Modified Proctor.
3. Under lawn or unpaved areas compact each layer of backfill or fill soil material at 85 percent Modified Proctor.

3.16 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
1. Lawn or Unpaved Areas: Plus or minus 1 inch.
2. Walks: Plus or minus 1/2 inch.
3. Pavements and synthetic turf areas: Plus or minus 1/2 inch.

3.17 SUBSURFACE DRAINAGE

A. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches of final subgrade, in compacted layers 6 inches (150 mm) thick. Overlay drainage backfill with 1 layer of subsurface drainage geotextile, overlapping sides and ends at least 6 inches .
1. Compact each material layer to **85** percent of maximum dry unit weight according to ASTM D 1557.

3.18 BASE COURSE

A. Place base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place base course under synthetic turf as follows:
   1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
   2. Shape base course to required crown elevations and cross-slope grades.
   3. Place base course 4 inches or less in compacted thickness in a single layer.
   4. Compact base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.19 FIELD QUALITY CONTROL

A. Geotechnical Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Testing agency will test compaction of soils in place according to ASTM D 1557and ASTM D6938, as applicable. Tests will be performed at the following locations and frequencies:
   1. Synthetic Turf Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 3500 sq. ft. or less of area, but in no case fewer than 2 tests.
   2. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than 1 tests.

D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.20 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
   1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
   1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.21 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Transport surplus topsoil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Engineer.

1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 31 20 00

SECTION 32 12 16 - ASPHALT PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Hot-mix asphalt patching.
2. Hot-mix asphalt paving.

B. Related Sections:
1. Division 31 Section "Earth Moving" for aggregate subbase and base courses and for aggregate pavement shoulders.
2. Division 32 Section “Unit Paving” for bituminous setting bed for pavers

1.3 DEFINITION

A. Hot-Mix Asphalt Paving Terminology: Refer to ASTM D 8 for definitions of terms.

1.4 SUBMITTALS

A. Material Certificates: For each paving material, from manufacturer.

B. Material Test Reports: For each paving material.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Imprinted-asphalt manufacturer's authorized installer who is trained and approved for installation of imprinted asphalt required for this Project.

B. Testing Agency Qualifications: Qualified according to ASTM D 3666 for testing indicated.

C. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of IDOT for asphalt paving work.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
1. HMA Temperature: Delivered between 250 deg F and 350 deg F
2. Asphalt Base Course: Minimum surface temperature of 40 deg F in the shade and rising at time of placement.

3. Asphalt Surface Course: Minimum surface temperature of 45 deg F in the shade at time of placement and rising at time of placement.

PART 2 - PRODUCTS

2.1 AGGREGATES

A. General: Use materials and gradations that have performed satisfactorily in previous installations.

B. Coarse Aggregate: ASTM D 692, sound; angular crushed stone, crushed gravel.
1. Used in Surface Course: IDOT B Quality or better
2. Used in Binder Course: IDOT C Quality or better

C. Fine Aggregate: ASTM D 1073, sharp-edged natural sand or sand prepared from stone, gravel, or combinations thereof.
1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.
2. Quality: IDOT B Quality or better.

D. Fractionated Reclaimed Asphalt Pavement (FRAP) shall consist of RAP from Class I HMA mixtures. Coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality or as below where more stringent. All FRAP shall be fractionated prior to testing. Testing shall be per and meet all IDOT requirements.
1. Used in HMA Surface Course, N50: Coarse aggregate quality B or better.
   a. Where FRAP is used alone, or where FRAP/RAS are used in conjunction the Maximum (virgin) Asphalt Binder Replacement (ABR) shall not exceed 25%. Where ABR exceeds 20% the low and high virgin asphalt grades shall each be reduced by one grade.
2. Used in HMA Binder Coarse, N50: Coarse aggregate quality C or better.
   a. Where FRAP is used alone, or where FRAP/RAS are used in conjunction the Maximum (virgin) Asphalt Binder Replacement (ABR) shall not exceed 30%. Where ABR exceeds 20% the low and high virgin asphalt grades shall each be reduced by one grade

E. Mineral Filler: ASTM D 242, rock or slag dust, hydraulic cement, or other inert material.

2.2 ASPHALT MATERIALS

A. Asphalt Binder: AASHTO M 320 and AASHTO MP 1a, PG64-22, PG 58-28, PG58-22

B. Tack Coat: IDOT SS-1, SS-1hP, CSS-1, CSS-1hP, emulsified asphalt or cationic emulsified asphalt, slow curing, diluted in water, per Section 1032 of the Standard Specifications for Road and Bridge Construction and of suitable grade and consistency for application.

C. Water: Potable.

2.3 MIXES

A. Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes designed according to the Illinois Modified Strategic Highway Research Program criteria and the IDOT Special Provision “Superpave Bituminous Concrete Mixtures”.
   1. Binder Course Mixture N50, IL-19.0, Surface Course Mixture N50, IL-9.5,Mix “D” designed in accordance with Sections 1030 and Sections 406 and 407 of the Standard Specifications for Road and Bridge Construction and the special provision, “Quality Control/Quality Assurance of Bituminous Concrete Mixtures.”
   2. Provide mixes with a history of satisfactory performance in geographical area where Project is located.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that subgrade is dry and in suitable condition to begin paving.

B. Verify that underground utilities and other items requiring a cut and installation beneath the asphalt surface have been completed and that asphalt surface has been repaired flush with adjacent asphalt prior to beginning installation of imprinted asphalt.

3.2 PATCHING

A. Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base.
   1. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated.
   2. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new base.

B. Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, hot-mix asphalt paving at a rate of 0.05 to 0.15 gal./sq. yd.
   1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
   2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

C. Patching: Partially fill excavated pavements with hot-mix asphalt base course mix and, while still hot, compact. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

3.3 SURFACE PREPARATION

A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

B. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
   1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.

2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.4 HOT-MIX ASPHALT PLACING

A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
   1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
   2. Spread mix at minimum temperature of 250 deg F.
   3. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
   4. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.

B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
   1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt base course before placing asphalt surface course.

C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.5 JOINTS

A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
   1. Clean contact surfaces and apply tack coat to joints.
   2. Offset longitudinal joints, in successive courses, a minimum of 6 inches and not more than 12 inches.
   3. Offset transverse joints, in successive courses, a minimum of 24 inches.
   4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints according to AI MS22, for both "Ending a Lane" and "Resumption of Paving Operations."
   5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
   6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.6 COMPACTION

A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
   1. Complete compaction before mix temperature cools to 195 deg F.

B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.

C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
   1. Average Density: 95 percent of reference laboratory density based on AASHTO T 209 and Illinois Modified AASHTO T 166 or "In Place Nuclear Method" according to Illinois Modified ASTM D 2950 but not less than 92 percent nor greater than 98 percent.

D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.

E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.

F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.

G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 INSTALLATION TOLERANCES

A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
   1. Base Course: Plus 1/2 inch, Minus 1/4 inch
   2. Surface Course: Plus 1/4 inch, no minus.

B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
   1. Base Course: 1/4 inch.
   2. Surface Course: 1/8 inch.

3.8 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.

C. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.

D. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to AASHTO T 168.
   1. Reference maximum theoretical density will be determined by averaging results from four samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.
   2. Field density of in-place compacted pavement to be determined by "In Place Nuclear Method" according to Illinois Modified ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.
   3. Average Density: 95 percent of reference laboratory density based on AASHTO T 209 and Illinois Modified AASHTO T 166 or "In Place Nuclear Method" according to Illinois Modified ASTM D 2950 but not less than 92 percent nor greater than 98 percent

E. Replace and compact hot-mix asphalt where core tests were taken.

F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.9 DISPOSAL

A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill.

END OF SECTION 32 12 16

SECTION 32 13 13 - CONCRETE PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes exterior cement concrete pavement for the following:
   1. Curbs and gutters.
   2. Walkways.

B. Related Sections include the following:
   1. Division 31 Section "Earth Moving" for subgrade preparation, grading, and subbase course.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.

1.4 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.

C. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.5 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.
   1. Use flexible or curved forms for curves with a radius 100 feet or less.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

B. Reinforcing Bars: ASTM A 615, Grade 60; deformed.

C. Joint Dowel Bars: Plain steel bars, ASTM A 615, Grade 60. Cut bars true to length with ends square and free of burrs.

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout the Project:
1. Portland Cement: ASTM C 150, Type I, gray, Supplement with the following:
a. Fly Ash: ASTM C 618, Class F.

B. Normal-Weight Aggregates: ASTM C 33 Class 4S, coarse aggregate, uniformly graded. Provide aggregates from a single source.
1. Maximum Coarse-Aggregate Size: 1-1/2” nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.

2.4 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Concrete Sealer: Water based USEPA VOC compliant penetrating sealer for concrete. Cured concrete to conform to ASTM C309.
1. Dries to low or medium luster, UV resistant, no color change.
2. Reduction of Water absorption (NCHRP Series II): 75% minimum

3. Reduction of Chloride Ion absorption (NCHRP Series II): 85% minimum.

2.5 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1752, Polyethylene closed cell joint filler

2.6 CONCRETE MIXTURES

A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.
   1. Use a qualified independent testing agency for preparing and reporting proposed concrete mixture designs for the trial batch method.

B. Proportion mixtures to provide normal-weight concrete with the following properties:
   1. Minimum Compressive Strength (28 Days): 4500 psi.
   2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.32-0.42.
   3. Slump Limit: 4 inches , plus or minus 1/2 inch.

C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
   1. Air Content: 5 to 8 percent for 1-inch to 1-1/2-inch nominal maximum aggregate size.

D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
   1. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

F. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement according to ACI 301 requirements for concrete exposed to deicing chemicals.

2.7 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C and ASTM C 1116. Furnish batch certificates for each batch discharged and used in the Work.
   1. When air temperature is between 85 deg F and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 45 minutes.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.

B. Proceed with concrete pavement operations only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

3.2 PREPARATION

A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

D. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.5 JOINTS

A. General: Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
   1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
   1. Continue steel reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
   2. Provide tie bars at sides of pavement strips where indicated.
   3. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

C. Isolation/Expansion Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
   1. Locate expansion joints at intervals of 50 feet, unless otherwise indicated.
   2. Extend joint fillers full width and depth of joint.
   3. Terminate joint filler not less than 1/2 inch or more than 3/4 inch below finished surface if joint sealant is indicated.
   4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
   5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
   6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness.
   1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.

E. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast in. Notify other trades to permit installation of their work.

B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.

C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

D. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.

E. Do not add water to concrete during delivery or at Project site.

F. Do not add water to fresh concrete after testing.

G. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

H. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
   1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.

I. Screed pavement surfaces with a straightedge and strike off.

J. Commence initial floating using bull floats or darbies to impart an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

K. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
   1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 75 deg F at point of placement.
   2. Do not use frozen materials or materials containing ice or snow.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mix designs.

L. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
   1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
   2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
   3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.7 FLOAT FINISHING

A. General: Do not add water to concrete surfaces during finishing operations.

B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
   1. Medium-to-Fine-Textured Broom Finish: Draw a soft bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.

3.8 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Comply with ACI 306.1 for cold-weather protection.

C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
   1. Moist Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
      a. Water.
      b. Continuous water-fog spray.
      c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
   2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
   3. Concrete Sealer: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Maintain continuity of coating and repair damage during curing period.

3.9 PAVEMENT TOLERANCES

A. Comply with tolerances of ACI 117 and as follows:
   1. Elevation: 1/4 inch.
   2. Thickness: Plus 3/8 inch , minus 1/4 inch.
   3. Surface: Gap below 10-foot- long, unleveled straightedge not to exceed 1/4 inch.
   4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
   5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.
   6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 in.
   7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
   8. Joint Spacing: 3 inches.
   9. Contraction Joint Depth: Plus 1/4 inch, no minus.
   10. Joint Width: Plus 1/8 inch, no minus.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
   1. Testing Frequency: Obtain at least 1 composite sample for each **100 cu. Yd.** or fraction thereof of each concrete mix placed each day.

a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C 31; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C 39/C 39M; test 1 specimen at 7 days and 2 specimens at 28 days.
   a. A compressive-strength test shall be the average compressive strength from 2 specimens obtained from same composite sample and tested at 28 days.

C. Strength of each concrete mix will be satisfactory if average of any 3 consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 300 psi.

D. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.

F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer.

G. Remove and replace concrete pavement where test results indicate that it does not comply with specified requirements.

H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.11 REPAIRS AND PROTECTION

A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
   1. Remove and replace concrete that is discolored or non-uniform in color.

B. Drill test cores, where directed by Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy adhesive.

C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 32 13 13

SECTION 32 31 13 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Chain-link fences.
2. Gates: swing.

B. General Scope of Work: Provide all fabrication, labor, materials, and accessories as required to provide the chain-link fences and gates indicated on the Drawings, as described in the Specifications, and as needed for a complete and proper installation including, but not limited to the following:
1. Contact JULIE: Prior to commencing any work including demolition, call 811 and comply with all requirements of the Illinois Underground Utilities Facilities Damage Prevention Act.
a. In addition, review and mark with the Owner's representative any locations of known private underground utilities.
2. Post Footings:
a. Depth: The bottom of all new concrete post footings must be a minimum of 4'-0" below grade.
1) All post footing holes must be inspected by the Construction Manager or Engineer before the Contractor can proceed with the installation of the posts and concrete footings.
b. Diameters: Minimum 12 inches diameter or four times the post diameter, whichever is larger.
c. Top: The top of all post footings to be 2 inches above grade and tooled and sloped to direct water away from posts.
d. Concrete Mix: All new concrete footings to be ready-mix 4,000 PSI air-entrained concrete. Site-mixed concrete is not permitted. Submit mix designs to the Construction Manager for review and approval.
e. Concrete Testing by Owner: Test cylinders must be taken by the Owner's material testing company per the requirements of the concrete specifications.
f. Refer to the Concrete Paving Specification for additional information and requirements.
3. Fencing Requirements:
a. Vinyl Coating: Fence systems shall have fence posts and rails vinyl coated and manufactured in accordance with Federal Specification RR-F-191/3D, Class 1, Grade A or B; or ASTM- F-761. The framework for shall have a 10 to 15 mil coating per ASTM F-1043.
b. Fabric:

1) Fence Material: Fused and bonded vinyl clad coating (color black) over a galvanized or aluminized steel core wire manufactured in accordance with ASTM F-668 class 2a or 2b, minimum 9 gauge (0.148 inch) steel core before coating.
2) Fence Mesh Size: 2 inches.
3) Heights: Where fence heights are indicated on the Drawings or described in the Specifications, the height refers to the fence fabric height.
4) Selvage:
    a) Top Selvage: Knuckle selvage.
    b) Bottom Selvage: Knuckle selvage.
5) Fence Ties:
    a) Material: All fence ties to be galvanized steel. Aluminum ties are not permitted.
    b) Rail Tie Spacing: 18 inches o.c.
    c) Line Post Tie Spacing: 12 inches o.c.

c. Posts & Rails:
1) Post and Rail Material: Fence systems shall have fence rails vinyl coated and manufactured in accordance with Federal Specification RR-F-191/3D, Class 1, Grade A or B; or ASTM- F-761. The framework for shall have a 10 to 15 mil coating per ASTM F-1043.
2) Fence Dome Caps, Splices, Fittings, Etc.: Match the material of the posts and rails.
3) Maximum Post Spacing: 10'-0" unless otherwise indicated in drawings
4) Terminal Posts: 3 inch outside diameter.
    a) Provide brace rails and 3/8 inch diameter adjustable truss rods at all terminal posts on fences 72 inches and higher.
    b) Provide tension bands at 12 inches o.c.
5) Line Posts:
    a) 4’-0” and 6’-0” High Fences: 2.5 inch outside diameter
    b) 8'-0" High Fences: 3 inch outside diameter.
6) Top/Bottom Rails: 1-5/8 inch outside diameter.
7) Mid-Rails:
    a) 8'-0" High Fences: Provide continuous 1-5/8 inch outside diameter mid-rails in addition to brace rails.
8) Brace Rails: 1-5/8 inch outside diameter.
9) Gate Posts:
    a) 4 inches outside diameter.

d. Gates:
1) Types: Single swing and double swing.
    a) Refer to the Drawings for sizes and locations.
2) Swing Gates:
    a) Comply with ASTM F 900 and as specified below.
    b) Frames: 1-7/8 inch outside diameter full perimeter frames.
    c) Diagonal Member: Provide a 1-5/8 outside diameter diagonal member welded to perimeter frame for each gate leaf.
    d) Connections: Fully weld all connections and vinyl coated after welding.
    e) Provide heavy-duty gate hinges allowing 180 degree inward swing.

f) Provide single and double gate latches. Padlocks to be provided by the Owner.
g) At double gates, provide gate stops, and anchor center stops and keepers in concrete, 12 inches in diameter with bottom 4'-0" deep below grade.
h) Materials: Match materials of adjacent fence.

e. Hog Rings:
1) Hog Rings: Provide galvanized steel wire hog rings at maximum 18 inches o.c. Finish to match fence fabric.

C. Related Sections:
1. Section 01 21 00 "Allowances" for Owner's contingency allowance.
2. Section 32 13 13 "Concrete Paving" for cast-in-place concrete post footings.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
1. Fence and gate posts, rails, and fittings.
2. Chain-link fabric, reinforcements, and attachments.
3. Gates and hardware.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation, and operational clearances.

C. Samples for Initial Selection: For components with factory-applied finishes.

D. Samples for Verification: Prepared on Samples of size indicated below:
1. Vinyl Coated Components: In 6-inch (150-mm) lengths for components and on full-sized units for accessories.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of chain-link fence, and gate, from manufacturer.

B. Product Test Reports: For framing strength according to ASTM F 1043.

C. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For the following to include in emergency, operation, and maintenance manuals:
1. Fence finishes.
2. Gate hardware.

1.6 QUALITY ASSURANCE

A. Project Superintendent: The Contractor must provide a dedicated, full-time, superintendent at the project site at all times when workers are at the Project Site.

B. Better Business Bureau Rating: The Contractor must have an "A" rating or better with the Better Business Bureau to be considered a qualified bidder or contractor.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

1.8 WARRANTY

A. Warranty: Written warranty form in which Installer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Faulty operation of gate operators and controls.
      b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   2. Warranty Period: Five (5) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:
   1. Fabric Height: As indicated on Drawings.
   2. Vinyl coated steel Wire Fabric: Wire with a diameter of 0.148 inch (3.76 mm).
      a. Mesh Size: 2 inches (50 mm).
      b. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.
   3. Selvage: Knuckled at both selvages.

2.2 FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 and as listed previously in this Specification.

2.3 SWING GATES

A. General: Comply with ASTM F 900 for gate posts and single and double swing gate types.
   1. Gate Leaf Width: As indicated.

2. Gate Fabric Height: As indicated.

B. Pipe and Tubing:
1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; coating and finish to match fence framing.
2. Gate Posts: Round tubular steel.
a. Single Swing Gates: 4 inches outside diameter.
b. Double Swing Gates: 4 inches outside diameter.
3. Gate Frames and Bracing: Round tubular steel.

C. Frame Corner Construction: Welded.
1. Provide interior diagonal bracing for each leaf.

D. Hardware:
1. Hinges: 180-degree inward swing.
2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
3. Padlock and Chain: Padlocks and chains provided by Owner.

2.4 FITTINGS

A. General: Comply with ASTM F 626.

B. Post Caps: Provide for each post.
1. Provide line post caps with loop to receive top rail.

C. Rail and Brace Ends: For each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:
1. Top Rail Sleeves: Pressed-steel or round-steel tubing not less than 6 inches (152 mm) long.
2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate rails in the fence line-to-line posts.

E. Tension Bars: Steel, length not less than 2 inches (50 mm) shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

F. Truss Rod Assemblies: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.

G. Tie Wires, Clips, and Fasteners: According to ASTM F 626.
1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:
a. Hot-Dip Galvanized Steel: 0.148-inch- (3.76-mm-) diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
1) Aluminum tie wires are not permitted.

H. Finish:

1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. (366 g /sq. m) zinc.
   a. Polymer coating over metallic coating.

2.5 FOOTBALL ENDZONE NETTING SYSTEMS

A. (4) 38’ Long x 8 5/8" OD Black STRYK finished, heavy duty steel poles will be secured in the ground 8’ deep utilizing 24" boring and 3,000 psi concrete.

B. (5/16”) 1 x 7 Extra high tensile strength galvanized steel strand cable will be secured to the top of each pole utilizing galvanized oval eyebolts and strand vises. Vertical face cables will be installed on each pole.

C. (# 36), 1 ¾” Black, weather treated, rope bordered on the square. Netting will be secured to the cables utilizing spring loaded snaps, weather treated twine and heavy duty tie wraps. The bottom of the netting will be secured the 8’ high fence top rail.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
   1. Do not begin installation before final grading is completed unless otherwise permitted by Construction Manager.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 50 feet between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

B. Do not proceed with any new construction work until the Contractor has contacted JULIE and had all underground utilities located and marked.

3.3 INSTALLATION, GENERAL

A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.
   1. Provide gates in sizes, types, and locations indicated on the Drawings.
      a. Notify the Owner and Construction Manager of any potential conflicts between the fence installation and located underground public or private utilities.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
   1. Before setting posts, all post excavations must be reviewed and approved by the Owner or Construction Manager.

B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
   1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
   2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
      a. Exposed Concrete: Extend 2 inches (50 mm) above grade; shape to a crown and smooth to shed water.

C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.

D. Line Posts: Space line posts uniformly at 10 feet (3 m) o.c.

E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.
   1. Locate horizontal braces at midheight of fabric 72 inches (1830 mm) or higher, on fences with top rail and at two-third fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

F. Top/Bottom Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

G. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches (50 mm) between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.

H. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches (380 mm) o.c.

I. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.
   1. Maximum Spacing: Tie fabric to line posts at 12 inches (300 mm) o.c. and to braces at 24 inches (610 mm) o.c.

J. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

3.5 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.6 ADJUSTING

A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain chain-link fences and gates.

END OF SECTION 32 31 13

SECTION 32 92 00 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Seeding.
2. Hydroseeding.
3. Sodding.
4. Turf renovation.
5. Erosion-control material(s).

B. Related Sections:
1. Division 31 Section "Site Clearing" for topsoil stripping and stockpiling.
2. Division 31 Section "Earth Moving" for excavation, filling and backfilling, and rough grading.

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

D. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

E. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.

F. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

G. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.4 SUBMITTALS

A. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
   1. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.

B. Qualification Data: For qualified landscape Installer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful turf establishment.
   1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
   2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
   3. Pesticide Applicator: State licensed, commercial.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws, as applicable.

B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying.

C. Bulk Materials:
   1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
   2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
   3. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

1.7 PROJECT CONDITIONS

A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion.

1. Spring Planting: Early spring (as soon as the soil is free of frost and in a workable condition but no later than June 30.
2. Fall Planting: No earlier than September 1.

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.8 MAINTENANCE SERVICE

A. Initial Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable turf is established but for not less than the following periods:
1. Seeded Turf: 60 days from date of planting completion.
a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established including dormant season, continue maintenance during next planting season.
2. Sodded Turf: 30 days from date of planting completion

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.

B. Seed Species: State-certified seed of grass species as listed in IDOT Standard Specifications and as follows:
1. Class 1, Lawn Mixture
2. Class 3: Northern Illinois Slope Mixture
3. Class 7: Temporary Turf cover Mixture

2.2 TURFGRASS SOD

A. Turfgrass Species: Sod of grass species as follows, with not less than 97 percent germination, not less than 90 percent pure seed, and not more than 0.5 percent weed seed:
1. Full Sun: Kentucky bluegrass (Poa pratensis), a minimum of three cultivars.

2.3 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
1. Organic Matter Content: 50 to 60 percent of dry weight.

B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.4 FERTILIZERS

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
   1. Composition: 270 lbs/acre. Applied at a 1:1:1 ratio of nitrogen, phosphorous, and potassium, by weight as follows:
      a. Nitrogen Fertilizer Nutrients: 90 lbs/acre
      b. Phosphorous Nutrients: 90 lbs/acre
      c. Potassium Fertilizer Nutrients: 90 lbs/acre
   2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.5 TOPSOIL

A. Refer to Division 31 20 00 Section “Earth Moving” for description of topsoil.

2.6 MULCHES

A. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
   1. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.
   1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
   2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
   3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
   4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
   1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
   2. Protect grade stakes set by others until directed to remove them.

3.3 TURF AREA PREPARATION

A. Limit turf subgrade preparation to areas to be planted.

B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
   1. Apply fertilizer directly to subgrade before loosening.
      a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
   2. Spread topsoil to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
      a. Reduce elevation of planting soil to allow for soil thickness of sod.

C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.

D. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

E. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.

B. Sow seed at a total rate of 5 to 6 lb/1000 sq. ft.

C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.

D. Protect seeded areas with erosion-control mats where shown on Drawings; install and anchor according to manufacturer's written instructions.

3.5 HYDROSEEDING

A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
   1. Mix slurry with fiber-mulch or manufacturer's recommended tackifier.
   2. Apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3.6 SODDING

A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
   1. Lay sod across angle of slopes exceeding 1:4.
   2. Anchor sod on slopes exceeding 1:6 with wood pegs spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.

C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.7 TURF RENOVATION

A. Renovate existing turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
   1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
   2. Install new planting soil as required.

B. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.

C. Remove topsoil containing foreign materials such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.

D. Mow, dethatch, core aerate, and rake existing turf.

E. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.

F. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.

G. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.

H. Apply soil amendments and initial fertilizers required for establishing new turf and mix thoroughly into top 4 inches of existing soil. Install new planting soil to fill low spots and meet finish grades.

I. Apply seed and protect with straw mulch / sod as required for new turf.

J. Water newly planted areas and keep moist until new turf is established.

3.8 TURF MAINTENANCE

A. Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
   1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
   2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
   3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
   1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
   2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

3.9 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Architect:
   1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 95 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
   2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

B. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

3.10 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents in accordance with requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

3.11 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

C. Remove nondegradable temporary erosion-control measures after grass establishment period.

END OF SECTION 32 92 00

SECTION 33 41 00 - STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes gravity-flow, non-pressure storm drainage outside the building.

B. Related Sections include the following:
   1. Division 15 Sections.

1.3 DEFINITIONS

A. HDPE: High Density Polyethylene.

B. RCP: Reinforce Concrete Sewer Pipe

1.4 PERFORMANCE REQUIREMENTS

A. Gravity-Flow, Nonpressure, Drainage-Piping Pressure Ratings: At least equal to system test pressure.

1.5 SUBMITTALS

A. Product Data: For the following:
   1. Piping materials.

B. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not store plastic structures, pipe, and fittings in direct sunlight.

B. Protect pipe, pipe fittings, and seals from dirt and damage.

C. Handle precast concrete manholes and other structures according to manufacturer's written rigging instructions.

1.7 PROJECT CONDITIONS

A. Site Information: Perform site survey and verify existing utility locations.

B. Locate existing structures and piping to be closed and abandoned.

C. Existing Storm Drainage Service: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Engineer no fewer than two days in advance of proposed interruption of service.
   2. Do not proceed with utility interruptions without Engineer's written permission.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with the requirements of the Drawings and Authorities Having Jurisdiction.

2.2 PIPES AND FITTINGS

A. Corrugated HDPE Pipe and Fittings: AASHTO M 294, Type S, with smooth waterway for coupling
   1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings to form silttight joints.

B. Reinforced-Concrete (RCP) Sewer Pipe and Fittings: ASTM C 76, Class III, with gasketed joints.
   1. Gaskets: ASTM C 443, rubber.

2.3 PERFORATED-WALL PIPES AND FITTINGS

A. Perforated PE Pipe and Fittings:
   1. 8-inch and Larger: ASTM F 667; AASHTO M 252, Type CP; or AASHTO M 294, Type CP; corrugated; for coupled joints.
   2. Couplings: Manufacturer's standard, band type.

2.4 SPECIAL PIPE COUPLINGS AND FITTINGS

A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.

B. Sleeve Materials: ASTM C 1173, rubber or elastomeric sleeve and band assembly fabricated to mate with OD of pipes to be joined, for nonpressure joints.
   1. Sleeve Material for Concrete Pipe: ASTM C 443, rubber.
   2. Sleeve Material for Plastic Pipe: ASTM F 477, elastomeric seal.
   3. Sleeve Material for Dissimilar Pipe: Compatible with pipe materials being joined.
   4. Bands: Stainless steel, at least one at each pipe insert.

C. Shielded Couplings: ASTM C 1277 assembly of metal shield or housing, corrosion-resistant fasteners, and rubber sleeve with integral, center pipe stop.
   1. Heavy-Duty, Shielded, Stainless-Steel Couplings, 24-inch With ASTM A 666, Type 301 or Type 304, stainless-steel shield; stainless-steel bands and tightening devices; and ASTM C 564, rubber sleeve.

D. Unshielded Flexible Couplings: Elastomeric sleeve with stainless steel tension band and tightening mechanism on each end.

2.5 CATCH BASINS

A. Normal-Traffic, Precast Concrete Catch Basins: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for rubber gasketed joints.
   1. Gaskets: ASTM C 443, rubber.

B. Steps: Steel Reinforced Plastic individual steps. Wide enough to allow worker to place both feet on one step and is designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from invert to finished grade is less than 60 inches

C. Frames and Covers: ASTM A 48, Class 35 gray -iron castings designed for heavy-duty service.

D. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and diameter matching manhole frame and cover. Include sealant recommended by ring manufacturer.

2.6 CONCRETE

A. General: Cast-in-place concrete according to ACI 318, ACI 350R, and the following:
   1. Cement: ASTM C 150, Type II.
   2. Fine Aggregate: ASTM C 33, sand.
   3. Coarse Aggregate: ASTM C 33, crushed gravel.
   4. Water: Potable.

B. Portland Cement Design Mix: 4000 psi minimum, with 0.45 maximum water-cementitious ratio.
   1. Reinforcement Fabric: ASTM A 185, steel, welded wire fabric, plain.
   2. Reinforcement Bars: ASTM A 615/A 615M, Grade 60, deformed steel.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

3.2 PIPING APPLICATIONS

A. Refer to Part 2 of this Section for detailed specifications for pipe and fitting products listed below. Use pipe, fittings, and joining methods according to applications indicated.

3.3 INSTALLATION, GENERAL

A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take design considerations into account. Install piping as indicated, to extent practical.

B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Maintain swab or drag in line, and pull past each joint as it is completed.

C. Use manholes for changes in direction, unless fittings are indicated. Use fittings for branch connections, unless direct tap into existing sewer is indicated.

D. Use proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.

E. Install gravity-flow piping and connect to building's storm drains, of sizes and in locations indicated. Terminate piping as indicated.

F. Extend storm drainage piping and connect to building's storm drains, of sizes and in locations indicated. Terminate piping as indicated.

3.4 PIPE JOINT CONSTRUCTION AND INSTALLATION

A. General: Join and install pipe and fittings according to installations indicated.

B. PE Pipe and Fittings:
1. Install according to ASTM D 2321 and manufacturer's written instructions.

C. Concrete Pipe and Fittings: Install according to ACPA's "Concrete Pipe Installation Manual." Use the following seals:
1. Round Pipe and Fittings: ASTM C 443, rubber gaskets.

D. Join piping made of different materials or dimensions with couplings made for this application. Use couplings that are compatible with and that fit both systems' materials and dimensions.

3.5 CATCH-BASIN INSTALLATION

A. Construct catch basins to sizes and shapes indicated.

B. Set frames and grates to elevations indicated.

3.6 CONCRETE PLACEMENT

A. Place cast-in-place concrete according to ACI 318 and ACI 350R.

3.7 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
1. Close open ends of piping with at least 8-inch- thick, brick masonry bulkheads.

B. Abandoned Structures: Excavate around structure as required and use one procedure below:

1. Remove structure and close open ends of remaining piping.

3.8 FIELD QUALITY CONTROL

A. Clear interior of piping and structures of dirt and superfluous material as work progresses. Maintain swab or drag in piping, and pull past each joint as it is completed.
   1. In large, accessible piping, brushes and brooms may be used for cleaning.
   2. Place plug in end of incomplete piping at end of day and when work stops.
   3. Flush piping between manholes and other structures to remove collected debris, if required by authorities having jurisdiction.

B. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
   1. Submit separate reports for each system inspection.
   2. Defects requiring correction include the following:
      a. Alignment: Less than full diameter of inside of pipe is visible between structures.
      b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
      c. Crushed, broken, cracked, or otherwise damaged piping.
      d. Infiltration: Water leakage into piping.
      e. Exfiltration: Water leakage from or around piping.
   3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
   4. Reinspect and repeat procedure until results are satisfactory.

C. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
   1. Do not enclose, cover, or put into service before inspection and approval.
   2. Test completed piping systems according to authorities having jurisdiction.
   3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
   4. Submit separate reports for each test.
   5. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

3.9 CLEANING

A. Clean interior of piping of dirt and superfluous materials.

END OF SECTION 33 41 00

Report of Soils Exploration

Synthetic Turf Field

Synthetic Turf Field

Newton Park

DuPage Boulevard

Glen Ellyn, IL

Glen Ellyn Park District

TESTING SERVICE CORPORATION

Local Office:

457 E. Gundersen Drive, Carol Stream, IL 60188-2492
630.653.3920 ● Fax 630.653.2726

Corporate Office:

360 S. Main Place, Carol Stream, IL 60188-2404
630.462.2600 ● Fax 630.653.2988

Local Office
June 9, 2014

Mr. Dan Hopkins
Glen Ellyn Park District
185 Spring Avenue
Glen Ellyn, IL 60137

Re: L-81,569
Synthetic Turf Field
Newton Park
DuPage Boulevard
Glen Ellyn, IL

Dear Mr. Hopkins:

This report presents results of a soils exploration performed in connection with a proposed synthetic turf field at Newton Park in Glen Ellyn, Illinois. These geotechnical engineering services are being provided in accordance with TSC Proposal No. 52,358 revised April 22, 2014 and the attached General Conditions, incorporated herein by reference.

Newton Park is located on the north side of DuPage Boulevard, lying approximately one-quarter mile west of Illinois Route 53. Current plans call for construction of a new synthetic turf field approximately 360' x 160' in size. It is understood that the synthetic turf field will replace the existing natural grass football field. Grades are to presumably remain about the same, with a subsurface drainage system also likely to be installed in connection with the synthetic field. Plans also include new light standards on the northeast and southwest sides of the field.

Field Investigation and Laboratory Testing

A total of fifteen (15) soil borings were performed as a part of this soils exploration. Borings 1 and 2 were extended to 20 feet below existing grade for the light standards, with Borings 3 - 15 made 8 feet deep for the synthetic turf sports field. Reference is made to the Boring Location Plan included with this report.

The borings were drilled using a GeoProbe rig mounted on a rubber-tracked skid steer type carrier, being best to minimize damage to the grass field. Continuous macro-core push samples (1.5 inch diameter) are taken with this equipment (no N-values obtained). Soil sampling was performed continuously to boring completion depths, with representative test specimens obtained at approximate 2-foot intervals. Water level readings were taken during and following completion of drilling operations, with the boreholes then immediately backfilled to preclude possible hazards to the public.

Soil samples were examined in the laboratory to verify field descriptions and to classify them in accordance with the Unified Soil Classification System. Laboratory testing included moisture content determinations for all cohesive and intermediate (silt or loamy) soil types along with dry unit weight determinations on cohesive fill. An estimate of unconfined compressive strength was obtained for all cohesive soils using a calibrated pocket penetrometer, with actual measurements of unconfined compressive strength performed on representative samples of native clay.

Reference is made to the attached boring logs included with this report indicating subsurface stratigraphy and soil descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between soil layers will probably be more gradual.

Discussion of Test Data

Surficial topsoil (native and/or fill) was typically 8 to 13 inches thick at the boring locations, being up to 3 feet deep at Borings 7 and 8. The topsoil layer was absent at Boring 10 (on baseball diamond), with 8 inches silty sand infield mix present. Silty clay fill was found underlying the silty sand fill and/or topsoil layer in most of the borings. The cohesive fill typically extended 2 to 6 feet below existing grade, being up to 10 feet deep at Boring 2. Samples of the clay fill had dry unit weights ranging from 100 to 115 pounds per cubic foot (pcf) at moisture contents varying from 14 to 25 percent.

Tough to hard native silty clay, very silty clay and sandy clay soils otherwise predominated in the borings, extending to completion depths in most cases. They had unconfined compressive strengths ranging from 1.0 to 4.5+ tons per square foot (tsf) at moisture contents usually varying from 13 to 25 percent, being up to 30 percent in Borings 7 and 13. Sand, clayey sand and clayey silt deposits were found directly below the cohesive fill materials in Borings 1 and 4 - 6, extending 4 to 6 feet below existing grade, also occurring as an interbedded layer in Boring 3.

Free water was initially revealed at between 2 and 6 feet below existing grade in Borings 1 and 3 - 7 (6 total). Upon completion of drilling operations, the water levels had generally remained within 2 feet of initial readings. The remaining borings were "dry" both during and upon completion of drilling operations.

Analysis and Recommendations

Synthetic Turf Field

Borings 1 - 15 were drilled in the area of a new synthetic turf field. It is recommended that surficial topsoil (as well as root zone materials) be stripped as part of subgrade preparation. In this regard, clayey topsoil materials were generally on the order of 1 foot thick at the boring locations, being up to 3 feet deep at Borings 7 and 8 where a minimum 2-foot undercut is recommended.

Uppermost subgrade soils typically consisted of silty clay soils (native and/or fill) in a tough to very tough condition. The cohesive materials had unconfined compressive strengths / pocket penetrometer readings in the range of 1.0 to 3.0 tsf at water contents typically exceeding 20 percent.

It is our opinion that the anticipated subgrade soils will provide a marginally stable base for installation of the synthetic turf field. In this regard, most of the soils would not be expected to pass a standard pavement proof-roll. The cohesive soils will need to be reduced in moisture content and recompacted in order to improve their stability. Compaction to at least 95 percent of maximum dry density as determined by the Modified Proctor test (ASTM D1557) is recommended. New fill (if required) should also be compacted to the 95 percent Modified Proctor criteria.

Clayey sand materials were found in the upper 2 feet at Borings 1 and 4. These intermediate materials are considered moisture sensitive, i.e. can experience a loss of stability when subjected to groundwater seepage or rainfall as well as being prone to instability under the traffic of heavy construction equipment. The associated soft and spongy condition of exposed soils is commonly referred to as "pumping" in this area. This condition is likely to require placement of a bridging lift of coarse granular material such as IDOT gradation CA-1, on the order of 12 to 24 inches thick.

Depending on the weather and the time of year as well as taking into account the construction schedule, discing and drying of the subgrade soils may not be practicable. In this regard, lime modification can be used and has the advantage of working in less ideal weather conditions. Lime modification typically consists of adding 4 to 6 percent hydrated lime or lime kiln dust to the upper 16 inches of the subgrade soils. After they are thoroughly mixed and recompacted, the treated soils will set-up in a hard condition. Little or no deflection would be anticipated on subsequent proof-rolling, as typically required by the turf installers. Please note that the addition of lime will create a swell factor, i.e. the final subgrade may be 1 to 2 inches higher.

The cohesive soils which predominate at the site are practically impervious, having coefficients of permeability estimated to be in the range of 10^{-6} to 10^{-8} cm/sec. Therefore, a subsurface drainage system is required to remove any water which may collect under the synthetic turf field.

Groundwater was encountered at 2 to 6 feet below existing grade in Borings 1 and 3 - 7 (6 total). It should be noted that where groundwater was encountered at relatively shallow depths, it likely represents a perched condition, i.e. trapped within the uppermost granular/intermediate materials. Given the predominantly cohesive nature of the subsurface soils, serious groundwater problems are not anticipated. However, the accumulation of run-off water or seepage may still occur at the base of excavations during site work. The Contractor should therefore be prepared to remove any accumulations by as a minimum pumping from strategically placed sumps.

New Light Standards

Borings 1 and 2 were drilled on the northeast and southwest sides of the proposed synthetic turf field for the new light standards. The foundations will likely either consist of helical and/or concrete piers which would be expected to bear at approximately 6 to 10 feet below existing grade.

Very tough native silty clay soils were encountered below a depth of 4 feet in Boring 1, considered capable of supporting a net allowable bearing pressure of at least 5000 pounds per square foot (psf). They exhibited unconfined compressive strengths of 2.0 tsf or greater.

Silty clay fill materials were encountered at Boring 2 extending approximately 10 feet deep. Samples of the cohesive fill typically exhibited relatively high moisture contents exceeding 20 percent and relatively low dry unit weights of 110 pcf or less. This information points to the fill not meeting 95 percent compaction based on a Modified Proctor test. It is therefore recommended that light standard foundations extend through the existing fill to bear on the very tough to hard native silty clay soils found below a depth 10 feet, also suitable for at least 5000 psf bearing.

An undrained shear strength (Su) or cohesion value (C) of at least 3000 psf is recommended for helical pier design, assuming that the lead section is completely embedded into the very tough to hard native silty clay soils that were found below a depth of 4 and 10 feet in Borings 1 and 2, respectively.

Closure

The analyses and recommendations submitted in this report are based upon the data obtained from the fifteen (15) soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings or elsewhere on the site, the nature and extent of which may not become evident until during the course of construction. If variations are then identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

Please call if there are any questions in regard to this matter or if we may be of further service.

Respectfully submitted,

TESTING SERVICE CORPORATION

Timothy R. Peceniak, P.E.
Project Engineer
Illinois No. 062-061269

Michael V. Machalinski, P.E.
Vice President

TRP:MVM:trp

GENERAL CONDITIONS

Geotechnical and Construction Services

TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Client shall communicate these General Conditions to each and every third party to whom the Client transmits any report prepared by TSC. Unless otherwise expressly assumed in writing, TSC shall have no duty to any third party, and in no event shall TSC have any duty or obligation other than those duties and obligations expressly set forth in this Agreement. Ordering services from TSC shall constitute acceptance of these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this agreement.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et, seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. SAMPLE DISPOSAL: Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: This Agreement may be terminated by either party upon seven days prior written notice. In the event of termination, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses.

9. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Should litigation be necessary, the parties consent to jurisdiction and venue in an appropriate Illinois State Court in and for the County of DuPage, Wheaton, Illinois or the Federal District Court for the Northern District of Illinois. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

REV 06/05

APPENDIX

UNIFIED CLASSIFICATION CHART

LEGEND FOR BORING LOGS

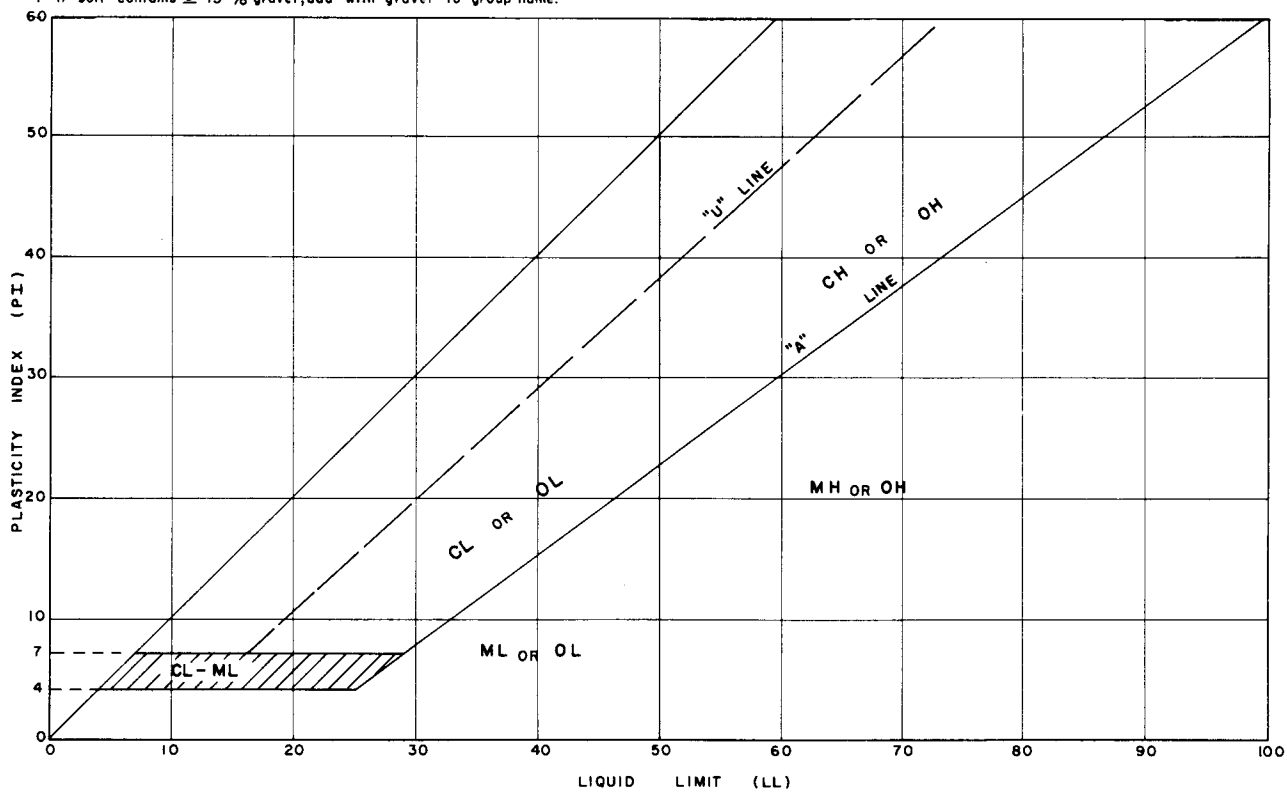
BORING LOGS

BORING LOCATION PLAN

TESTING SERVICE CORPORATION
UNIFIED CLASSIFICATION CHART

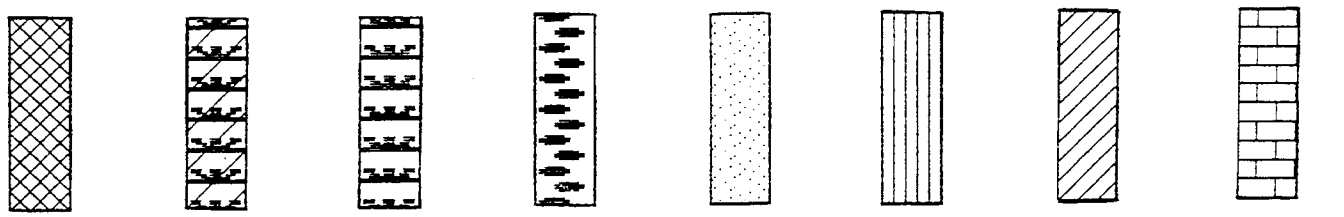
CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS [a]				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME [b]
COARSE-GRAINED SOILS more than 50 % retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5 % fines [c]	$C_u \geq 4$ and $1 \leq C_c \leq 3$ [e]	GW	Well graded gravel [f]
			$C_u < 4$ and/or $1 > C_c > 3$ [e]	GP	Poorly graded gravel [f]
		GRAVELS WITH FINES More than 12 % fines [c]	Fines classify as ML or MH	GM	Silty gravel f,g,h
			Fines classify as CL or CH	GC	Clayey gravel f,g,h
	SANDS 50 % or more of coarse fraction passes No. 4 sieve	CLEAN SANDS Less than 5 % fines [d]	$C_u \geq 6$ and $1 \leq C_c \leq 3$ [e]	SW	Well-graded sand [i]
			$C_u < 6$ and/or $1 > C_c > 3$ [e]	SP	Poorly graded sand [i]
		SANDS WITH FINES More than 12 % fines [d]	Fines classify as ML or MH	SM	Silty sand g,h,f
			Fines classify as CL or CH	SC	Clayey sand g,h,f
FINE-GRAINED SOILS 50 % or more passed the No. 200 sieve	SILTS & CLAYS Liquid limit less than 50 %	Inorganic	PI > 7 and plots on or above "A" line [j]	CL	Lean clay k,l,m
			PI < 4 or plots below "A" line [j]	ML	Silt k,l,m
		Organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OL	Organic clay k,l,m,n Organic silt k,l,m,o
	SILTS & CLAYS Liquid limit 50 % or more	Inorganic	PI plots on or above "A" line	CH	Fat clay k,l,m
			PI plots below "A" line	MH	Elastic silt k,l,m
		Organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OH	Organic clay k,l,m,p Organic silt k,l,m,q
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

a. Based on the material passing the 3-in (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name.
c. Gravels with 5 to 12 % fines require duol symbols
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
d. Sands with 5 % to 12 % fines require dual symbols
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
f. If soil contains ≥ 15 % sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM.
h. If fines are organic, add "with organic fines" to group name.
i. If soil contains ≥ 15 % gravel, add "with gravel" to group name.
j. If Atterberg Limits plot in hatched area, soil is a CL-ML, silty clay.
k. If soil contains 15 to 29 % plus No. 200, add "with sand" or "with gravel" whichever is predominant.
l. If soil contains ≥ 30 % plus No. 200, predominantly sand, add "sandy" to group name.
m. If soil contains ≥ 30 % plus No. 200, predominantly gravel, add "gravelly" to group name.
n. PI ≥ 4 and plots on or above "A" line.
o. PI ≥ 4 or plots below "A" line.
p. PI plots on or above "A" line.
q. PI plots below "A" line.



TESTING SERVICE CORPORATION

LEGEND FOR BORING LOGS



FILL TOPSOIL PEAT GRAVEL SAND SILT CLAY DOLOMITE

SAMPLE TYPE:

SS = Split Spoon
ST = Thin-Walled Tube
A = Auger

FIELD AND LABORATORY TEST DATA:

N = Standard Penetration Resistance in Blows per Foot
Wc = In-Situ Water Content
Qu = Unconfined Compressive Strength in Tons per Square Foot
* Pocket Penetrometer Measurement; Maximum Reading = 4.5 tsf
γD = Dry Unit Weight in Pounds per Cubic Foot

WATER LEVELS:

▼ While Drilling
▽ End of Boring
▼ 24 Hours

SOIL DESCRIPTION:

MATERIAL	PARTICLE SIZE RANGE
BOULDER	Over 12 inches
COBBLE	12 inches to 3 inches
Coarse GRAVEL	3 inches to ¾ inch
Small GRAVEL	¾ inch to No. 4 Sieve
Coarse SAND	No. 4 Sieve to No. 10 Sieve
Medium SAND	No. 10 Sieve to No. 40 Sieve
Fine SAND	No. 40 Sieve to No. 200 Sieve
SILT and CLAY	Passing No. 200 Sieve

COHESIVE SOILS

CONSISTENCY	Qu
Very Soft	Less than 0.3
Soft	0.3 to 0.6
Stiff	0.6 to 1.0
Tough	1.0 to 2.0
Very Tough	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

RELATIVE DENSITY	N
Very Loose	0 - 4
Loose	4 - 10
Firm	10 - 30
Dense	30 - 50
Very Dense	50 and over

MODIFYING TERM	PERCENT BY WEIGHT
Trace	1 - 10
Little	10 - 20
Some	20 - 35

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **1** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

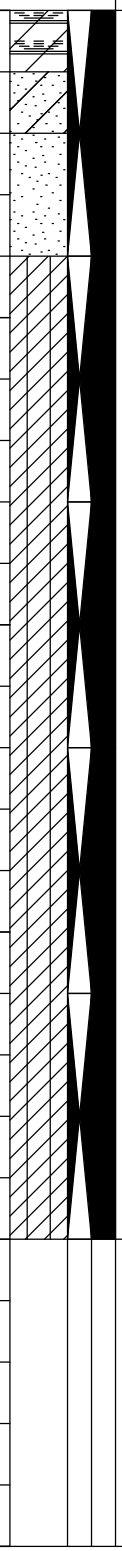
END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **2.0 '**

▽ AT END OF BORING **4.0 '**

▼ 24 HOURS



SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
1A			31.3					Black clayey TOPSOIL, very moist (OL)
						1.0		
1B			14.1					Brown clayey SAND, numerous silt seams, moist to very moist (SC)
	MC					2.0		
1C			15.9					Brown SAND, trace gravel, saturated (SP)
						4.0		
2A			13.9	2.25*				
	MC							
2B			14.6	2.65 2.75*				
3A			16.5	2.0*				
	MC							
3B			13.8	2.77 2.5*				Very tough gray silty CLAY, little sand and gravel, moist (CL)
4A			15.1	2.0*				
	MC							
4B			15.0	2.94 2.75*				
5A			15.1	2.5*				
	MC							
5B			14.0	2.39 2.0*				
								End of Boring at 20.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **2** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			32.3		89	0.8		FILL - Black clayey TOPSOIL, very moist (OL)
	1B	MC		18.8	1.0*	109			FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist to very moist (CL)
	1C			14.1	2.0*	110			
	2A			24.7	1.0*	100			
	2B	MC		23.2	1.5*	104			
	3A			20.4	1.0*	109			
	3B	MC		16.4	3.75*		10.0		Very tough brown and gray silty CLAY, little sand and gravel, moist (CL)
	4A			16.0	4.5+*				
	4B	MC		16.7	3.0*				
	5A			14.6	2.75*		16.0		Very tough brown and gray sandy CLAY, trace gravel, occasional sand seams, moist (CL-ML)
	5B	MC		13.7	2.0*				
									End of Boring at 20.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **3** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **6.0 '**

▽ AT END OF BORING **6.0 '**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			29.9	2.0*	90			FILL - Black clayey TOPSOIL (OL)
							1.0		
	1B			21.9	2.0*	104			FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist (CL)
		MC					2.0		
	1C			23.6	1.0*				Tough brown silty CLAY, little sand, trace gravel, very moist (CL)
	2A			21.8	1.5*				
		MC					6.0		▼
	2B			28.1					Brown and gray clayey SILT, trace sand, wet (ML)

End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **4** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

WHILE DRILLING **2.0 '**

AT END OF BORING **4.0 '**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			35.8		86			FILL - Black clayey TOPSOIL, very moist (OL)
							1.0		
	1B			19.0	2.0*	106			FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist (CL)
		MC					2.0		
	1C			22.9					Brown clayey SAND, trace gravel, very moist (SC)
							4.0		
	2A			21.7	2.5*				Very tough brown silty CLAY, little sand, trace gravel, moist (CL)
		MC					6.0		
	2B			17.8	1.5*				Tough gray silty CLAY, little to some sand and gravel, occasional silt seams, very moist (CL)

End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **5** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **4.0 '**

▽ AT END OF BORING **4.0 '**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			34.3		87			FILL - Black clayey TOPSOIL, very moist (OL)
							1.0		
	1B			16.1	1.5*	113			FILL - Brown and black silty CLAY, little sand and gravel, trace organic, very moist to moist (CL)
		MC							
	1C			15.5	2.25*	112			
							4.0		Brown med. to coarse SAND, Loose gray saturated (SP)
	2A			14.1					
		MC					6.0		
	2B			19.0	2.0*				Very tough gray silty CLAY, little sand, trace gravel, moist (CL)
									End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **6** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **4.0 '**

▽ AT END OF BORING **4.0 '**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			28.4	1.75*	90			FILL - Black clayey TOPSOIL, very moist (OL)
							1.0		
	1B			21.3	2.5*	104			FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist (CL)
		MC					2.0		
	1C			18.4	3.5*	111			FILL - Brown silty CLAY, little sand and gravel, moist (CL)
									▼
							4.0		
	2A			20.6					Brown clayey SAND, little gravel, very moist (SC)
		MC							
	2B			18.8					
									End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **7** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

WHILE DRILLING **4.0 '**

AT END OF BORING **6.0 '**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			30.6		90			FILL - Black clayey TOPSOIL, very moist (OL)
	1B	MC		30.5		91			
							3.0		
	1C			26.6	1.25 1.5*				Tough brown and gray silty CLAY, trace sand, occasional sand seams, very moist (CL/CH)
	2A			29.9	1.5*				
		MC					6.0		
	2B			22.5	1.5*				Tough brown and gray silty CLAY, little sand, trace gravel, very moist (CL)

End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **8** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			26.7		94			FILL - Black clayey TOPSOIL, very moist (OL)
		MC					2.0		
	1B			19.4	1.5*	110			FILL - Brown silty CLAY, little sand, trace gravel, very moist (CL)
							4.0		
	2A			20.4	1.0*				Tough brown silty CLAY, little sand, trace gravel, very moist (CL)
		MC					6.0		
	2B			13.3	1.0*				Tough gray very silty CLAY, little sand and gravel, very moist (CL-ML)
									End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **9** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			27.5		92			FILL - Black clayey TOPSOIL, very moist (OL)
							1.1		
	1B			17.1	2.0*	112			FILL - Brown silty CLAY, little sand and gravel, moist (CL)
		MC					2.0		
	1C			23.2	4.5+*	100			FILL - Black and brown silty CLAY, little sand, trace gravel, trace organic, moist (CL)
							4.0		
	2A			16.9	2.75*				Very tough brown silty CLAY, little sand and gravel, moist (CL)
		MC							
	2B			15.2	3.0*				
									End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **10** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
	1A			13.2			0.7		FILL - Brown silty SAND, trace gravel, moist (SM) [Baseball Infield]
	1B	MC		20.2	3.0*	108			FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist (CL)
	1C			20.1	2.5*	108			
							4.0		
	2A			25.2	1.75*				Tough dark brown silty CLAY, little sand, moist (CL/CH)
		MC					6.0		
	2B			16.5	4.5+*				Hard brown and gray silty CLAY, little sand and gravel, moist (CL)
									End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **11** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			25.3	1.5*	100			FILL - Black clayey TOPSOIL, very moist (OL)
							1.0		
	1B			20.2	2.5*	107			FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist (CL)
		MC					2.0		
	1C			15.6	4.5+*				Hard brown silty CLAY, little sand and gravel, moist (CL)
	2A			16.3	4.5+*				
		MC					6.0		
	2B			16.8	3.0*				Very tough brown and gray silty CLAY, little sand and gravel, moist (CL)

End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **12** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			25.5		96	0.7		FILL - Black clayey TOPSOIL, very moist (OL)
	1B	MC		18.2	2.5*	110			FILL - Brown and black silty CLAY, little sand and gravel, trace organic, moist (CL)
	1C			14.3	2.5*	115	4.0		
	2A	MC		20.2	2.0*	108	6.0		FILL - Brown silty CLAY, little sand, trace gravel, moist (CL)
	2B			24.3	2.25*				Very tough brown silty CLAY, little sand, trace gravel, moist (CL)
									End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

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TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **13** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			24.4		96	1.0		FILL - Black clayey TOPSOIL, very moist (OL)
	1B	MC		19.1	3.0*	107	2.0		FILL - Brown silty CLAY, little sand and gravel, moist (CL)
	1C			27.9	2.5*		4.0		Very tough dark brown silty CLAY, trace sand, trace organic, very moist (CL/CH)
	2A	MC		27.4	1.5*		6.0		Tough brown and gray silty CLAY, trace sand, very moist (CL/CH)
	2B			16.5	3.0*				Very tough brown and gray silty CLAY, little sand and gravel, moist (CL)

End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **14** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			26.3	1.5*	97			FILL - Black clayey TOPSOIL, very moist (OL)
	1B	MC		21.2	2.75*	107	1.1		FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, moist (CL)
	1C			18.1	4.5+*	112			
	2A	MC		21.5	2.0*	105	6.0		Tough brown silty CLAY, little sand and gravel, very moist (CL)
	2B			16.1	1.5*				End of Boring at 8.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **294**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 81569.GPJ TSC_ALL.GDT 6/9/14

PROJECT **Newton Park Synthetic Turf Field, DuPage Boulevard, Glen Ellyn, IL**

CLIENT **Glen Ellyn Park District, 185 Spring Avenue, Glen Ellyn, IL**

BORING **15** DATE STARTED **5-19-14** DATE COMPLETED **5-19-14** JOB **L-81,569**

ELEVATIONS

GROUND SURFACE

END OF BORING

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1A			30.8		86			FILL - Black clayey TOPSOIL, very moist (OL)
							1.0		
	1B			23.5	2.0*	103			FILL - Brown and black silty CLAY, little sand, trace gravel, moist (CL)
		MC							
	1C			20.0	3.0*	107			
	2A			21.1	2.0*	107			
		MC					6.0		
	2B			23.2	2.25*				Very tough dark brown silty CLAY, little sand, trace gravel, trace organic, moist (CL)

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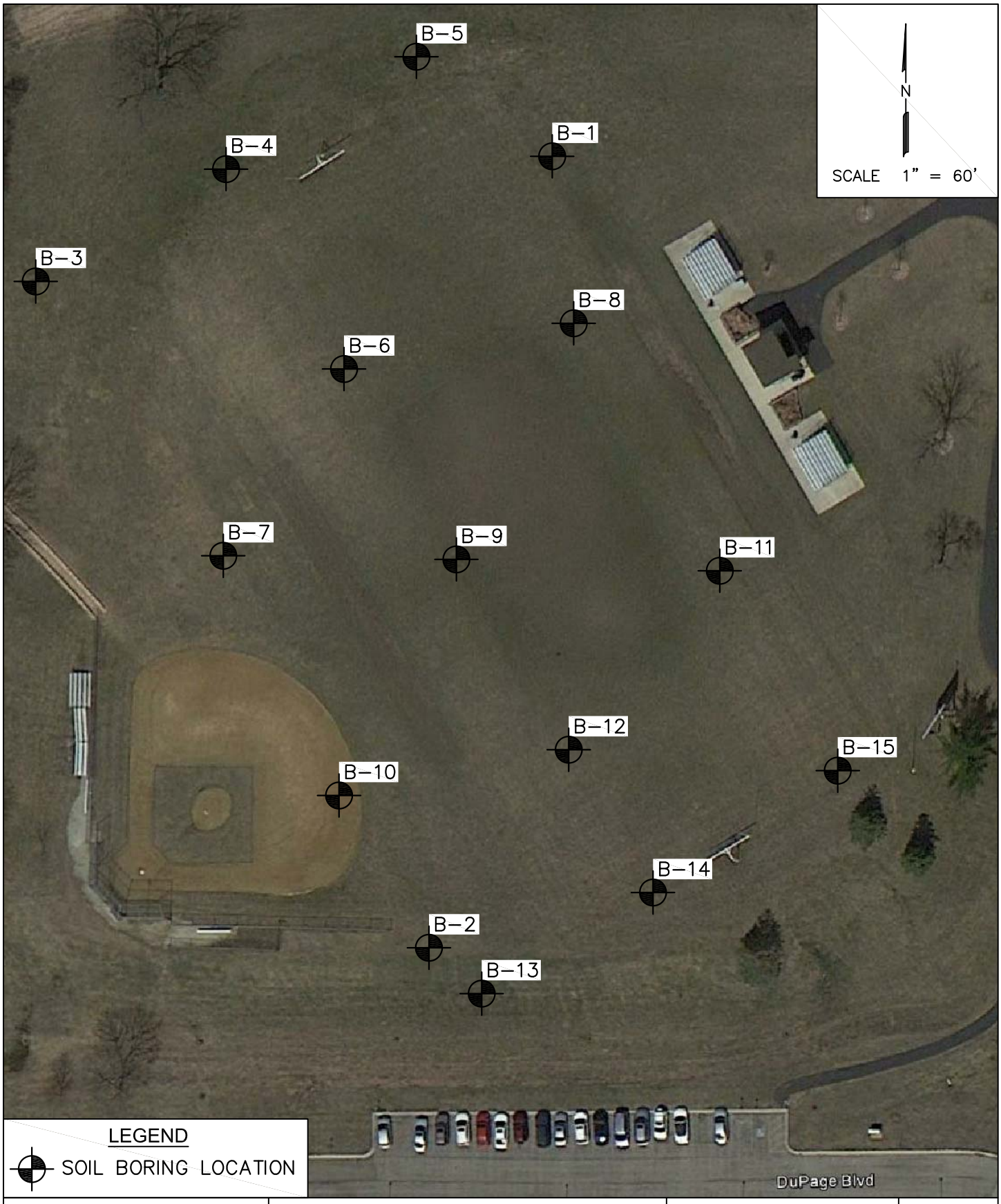

LEGEND

SOIL BORING LOCATION

BORING LOCATION PLAN
SYNTHETIC TURF FIELD
NEWTON PARK
DuPAGE BOULEVARD
GLEN ELLYN, ILLINOIS

TSC

TESTING SERVICE CORP.
457 EAST GUNDERSEN DRIVE
CAROL STREAM, ILLINOIS 60188

DRAWN BY:	TRP
CHECKED BY:	MVM
JOB NO. :	L–81,569
DATE:	05–29–14

PAGE NO.

1 OF 1

Glen Ellyn Park District
Newton Park
Synthetic Turf Athletic Field
707 Fairview Avenue
Glen Ellyn, Illinois

N

INDEX OF SHEETS

SURVEY PROVIDED BY:

Plat of Survey and Topography Provided By RE Allen and Associates, LTD For Eriksson Engineering Associates, LTD on May 6, 2014. File Number 73-14

PROJECT BENCHMARKS

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Site Benchmark: "Control Point Cut Cross" on Concrete Curb at Southwest Corner of Project Site. Elevation = 760.40'

J.U.L.I.E.

Note: The exact location of all utilities shall be verified by the contractor prior to construction activities. For utility locations call: J.U.L.I.E. 1 (800) 892-0123

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PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003220
EXPIRES: 04/30/2015

GLEN ELLYN PARK DISTRICT
NEWTON PARK
SYNTHETIC TURF ATHLETIC FIELD
707 Fairview Avenue,
Glen Ellyn, Illinois

Reserved for Seal:

NOT FOR CONSTRUCTION

Expiration Date: _____

No.	Date	Description
	01/22/15	Issued For Permit
	02/11/15	Issued For Bid

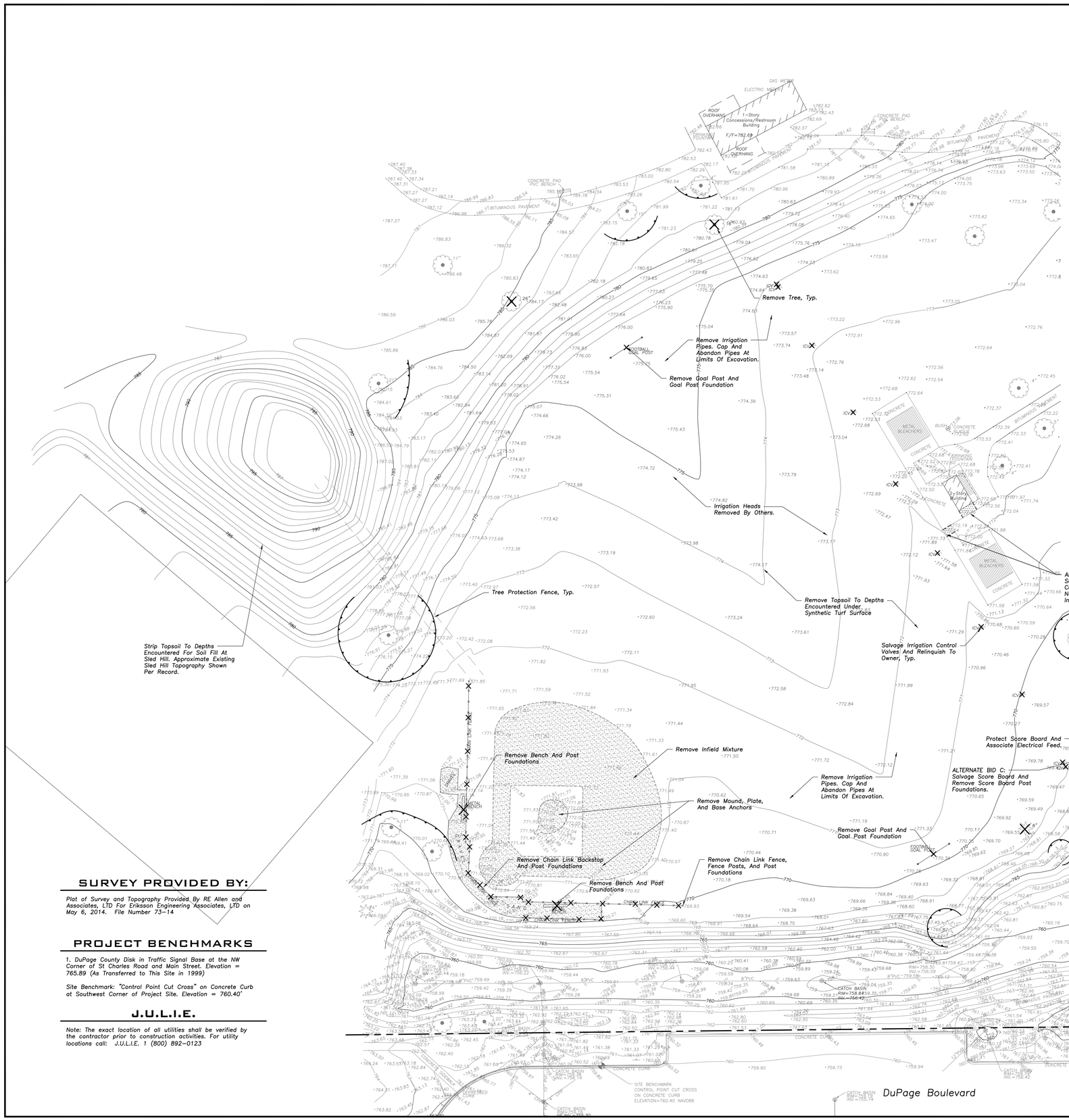
Design By:	Date:
PD	01/21/15
Approved By: KC	**Project No.**

Sheet Title:

COVER SHEET

Sheet No:

C0.10



DEMOLITION NOTES

Keep All Village Streets Free and Clear of Construction Related Dirt/Dust/Debris.

The Existing Building is to Remain Operational During Construction. Therefore, the Temporary Relocation of All Necessary Utilities Serving the Existing Building Shall Be Coordinated Prior to the Commencement of Construction Operations.

All Sawcutting Shall be Full Depth to Provide a Clean Edge to Match New Construction. Match Existing Elevations at Points of Connection for New and Existing Pavement, Curb, Sidewalks, etc. All Sawcut Locations Shown Are Approximate and May Be Field Adjusted to Accommodate Conditions, Joints, Material Type, etc. Remove Minimum Amount Necessary for Installation of Proposed Improvements.

Provide and Maintain All Necessary Traffic Control and Safety Measures Required During Demolition and Construction Operations Within or Near the Public Roadway.

Perform Tree Pruning In All Locations Where Proposed Pavement And/Or Utility Installation Encroach Within The Existing Drip Line Of Trees To Remain. All Trenching Within The Drip Line Of Existing Trees To Remain Shall Be Done Radially Away From Trunk If Roots In Excess Of 1" Diameter Are Exposed. Roots Must Be Cut By Reputable Tree Pruning Service Prior To Any Transverse Trenching. Obtain Approval Of The Architect Prior To Operations For A Variance From This Procedure.

Coordinate Tree Removal with Owner. All Trees To Be Removed Shall Be Removed In Their Entirety and Stumps Shall Be Ground to Proposed Subgrade. Use As Mulch for Proposed Landscaping Where Applicable and Acceptable to Owner.

Provide Tree Protection Fencing Prior To Construction Operations. Maintain Throughout Construction.

DEMOLITION LEGEND

- Utility Line Removal
- Bituminous Pavement Removal (Full Depth)
- Concrete Sidewalk Removal (Full Depth)
- Gravel/Sand/Softball Field Infill Removal (Full Depth)
- Pavement Sawcut
- Structure Removal
- Tree Removal

N

30 0 30 60 90

Scale: 1"=30'

LEGEND

EXISTING		PROPOSED
	Manhole	
	Catch Basin	
	Area Drain	
C.O.	Clean Out	C.O.
	Flared End Section	
	Storm Sewer	S
	Sanitary Sewer	S
W	Water Main	W
G	Gas Line	G
OH	Overhead Wires	OH
E	Electrical Cable (Buried)	E
T	Telephone Line	T
	Fire Hydrant	
	Valve Vault	
B	Buffalo Box	B
DS	Downspout	DS
	Gas Valve	
CE	ComEd Manhole	
	Hand Hole	
	Light Pole	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Sign	
x x	Fence	x x
	Accessible Parking Stall	
	Curb & Gutter	
	Depressed Curb	
C 782.50	Curb Elevation	C 782.50
G 782.00	Gutter Elevation	G 782.00
P 783.25	Pavement Elevation	P 783.25
W 782.10	Sidewalk Elevation	W 782.10
784.0	Ground Elevation	x 784.0
T/W 785.20	Top of Retaining Wall Elevation	T/W 785.20
	Swale	
781	Contour Line	781
	Tree	
	Tree Protection Fencing at Drip Line	

GENERAL NOTES

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Notify The Engineer Without Delay of Any Discrepancies Between the Drawings and Existing Field Conditions.

Notify The Owner, Engineer and J.U.L.I.E. A Minimum of 48 Hours In Advance of Performing Any Work.

All Areas, On or Off Site, Disturbed During Construction Operations and Not Part of the Work As Shown Hereon Shall Be Restored To Original Condition to the Satisfaction of the Owner at No Additional Cost to the Owner. It is Incumbent Upon Contractor to Show That Damaged Areas Were Not Disturbed By Construction Operations.

These Drawings Assume That The Contractor Will Utilize An Electronic Drawing File (DWG) and Stake All Site Improvements Accordingly.

No Person May Utilize The Information Contained Within These Drawings Without Written Approval From Eriksson Engineering Associates, Ltd.

The Engineer Is Furnishing These Drawings For Construction Purposes As A Convenience To The Owner, Architect, Surveyor, or Contractor. Prior To The Use Of These Drawings For Construction Purposes, The User Of This Media Shall Verify All Dimensions And Locations Of Buildings With The Foundation Drawings And Architectural Site Plan, and Coordinate All Dimensions and Locations of All Site Items. If Conflicts Exist The User Of This Information Shall Contact The Engineer Immediately.

Provide An As-built Survey Prepared By A Licensed Professional Land Surveyor In Accordance With The Authorities Having Jurisdiction To Include All Detention Basins, Storm Sewers and Structure Locations, Sizes, Rim and Invert Elevations, Final Detention Volume Calculations For The Basin(s) and Watermain and Valve and Appurtenance Locations.

The Illinois Department Of Transportation Standard Specifications For Road And Bridge Construction Latest Edition, And All Addenda Thereto, Shall Govern The Earthwork And Paving Work Under This Contract Unless Noted Otherwise.

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LICENSE NO. 184-003220
EXPIRES: 04/30/2015

GLEN ELLYN PARK DISTRICT

NEWTON PARK SYNTHETIC TURF ATHLETIC FIELD

707 Fairview Avenue, Glen Ellyn, Illinois

Reserved for Seal:

NOT FOR CONSTRUCTION

Expiration Date: _____

No.	Date	Description
	01/22/15	Issued For Permit
	02/11/15	Issued For Bid

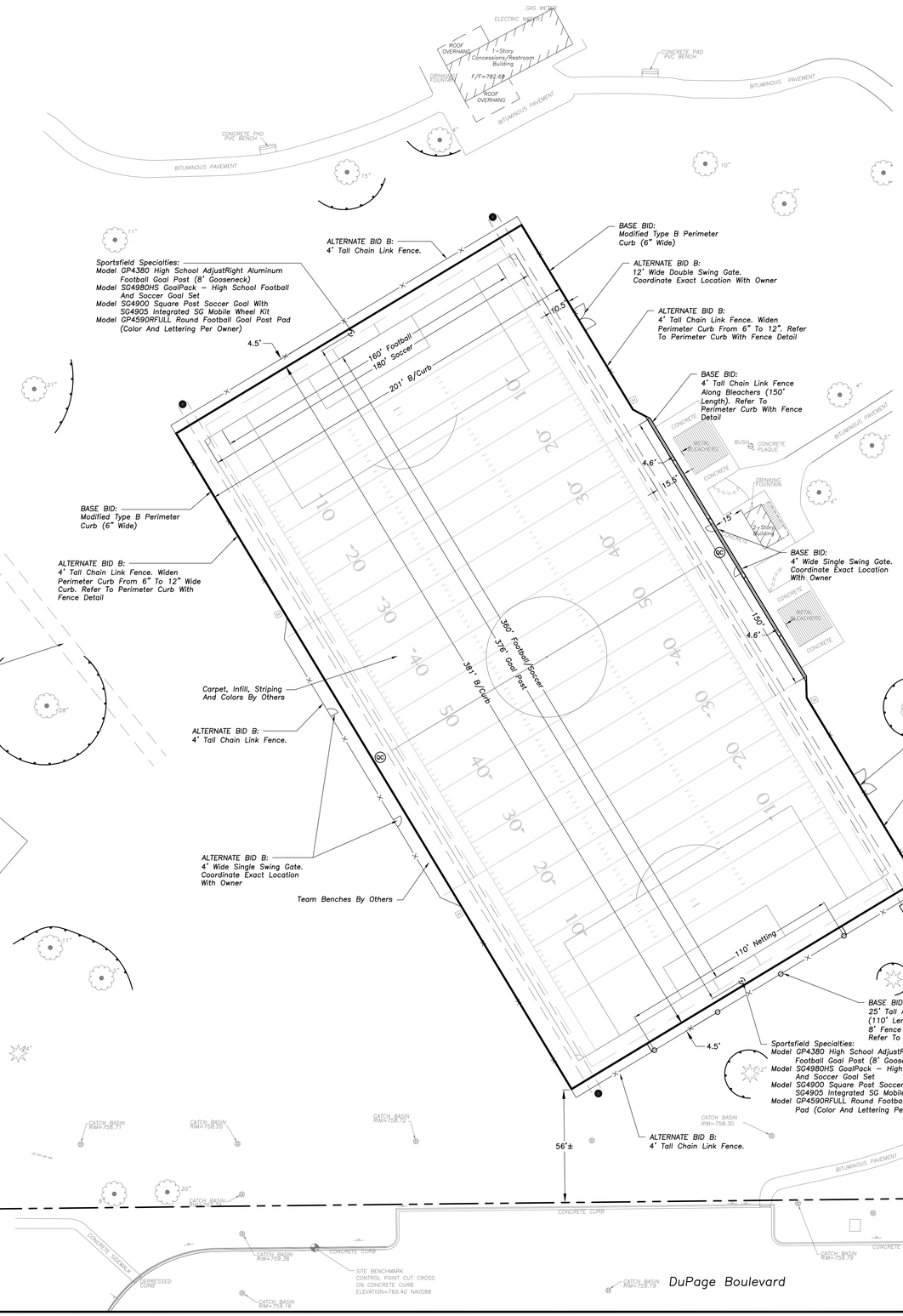
Design By:	Date:
PD	01/21/15
Approved By:	**Project No.**
KC	

Sheet Title:

SITE DEMOLITION PLAN

Sheet No:

C1.10



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N

30 0 30 60 90

Scale: 1"=30'

LEGEND

EXISTING		PROPOSED
	Manhole	
	Catch Basin	
	Area Drain	
C.O.	Clean Out	C.O.
	Flared End Section	
	Storm Sewer	
	Sanitary Sewer	
W	Water Main	W
G	Gas Line	G
OH	Overhead Wires	OH
E	Electrical Cable (Buried)	E
T	Telephone Line	T
	Fire Hydrant	
	Valve Vault	
B	Buffalo Box	B
DS	Downspout	DS
	Gas Valve	
CE	ComEd Manhole	
	Hand Hole	
	Light Pole	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Sign	
	Fence	
	Accessible Parking Stall	
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W 782.10	Sidewalk Elevation	W 782.10
784.0	Ground Elevation	x 784.0
T/W 785.20	Top of Retaining Wall Elevation	T/W 785.20
	Swale	
781	Contour Line	781
	Tree	
	Tree Protection Fencing at Drip Line	

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GEOMETRY NOTES

All Dimensions Contained Herein Reference Back Of Curb, Edge Of Pavement, And Center of Structure Unless Otherwise Noted.

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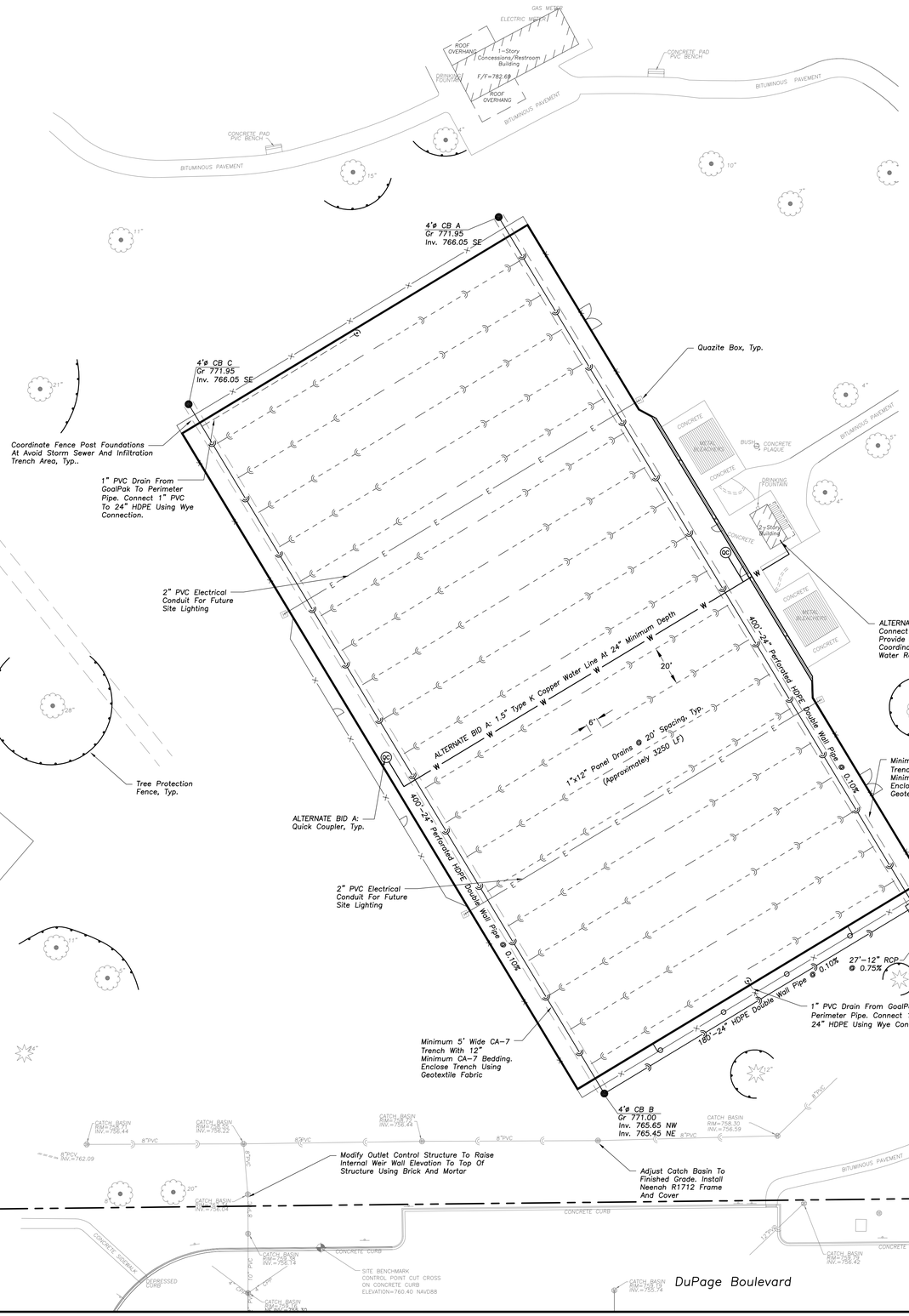
PD	01/21/15
Approved By:	Project No.
KC	

Sheet Title:

SITE GEOMETRY PLAN

Sheet No:

C2.10



UTILITY NOTES

Utility Service Lines as Shown Hereon are Approximate. Coordinate The Exact Locations With The Plumbing Drawings. Coordinate The Locations With The Plumbing Contractor and/or the Owner's Construction Representative Prior to Installation of Any New Utilities.

Field Verify Invert & Locations of Existing Utility Mains Prior to Installing Any On-Site Utilities or Structures. All Elevations and Inverts Referencing Said Utility Shall Be Field Verified Prior To Installation Of Any New Structures Or Utilities, and Adjustments Shall Be Made as Necessary. Contact Engineer Prior to Installation if Discrepancy Exists With These Drawings.

Coordinate the Relocation Of Any Utilities Encountered And Replacement Of Any Utilities Damaged Within Influence Zone Of New Construction. Contact Engineer If The Existing Utilities Vary Appreciably From The Plans.

Protection of Water Supplies Shall Be As Described in Section 370.350 of the Illinois Recommended Standards for Sewage Works or Section 41-2.01 of the Standard Specifications for Water and Sewer Main Construction in Illinois, Latest Edition.

Clean Out All Existing and Proposed Catch Basins and Storm Sewers at the Completion of Construction.

The "Standard Specifications for Water and Sewer Main Construction in Illinois", Current Edition Shall Govern Work Where Applicable.

STRUCTURE NOTES

All Catch Basins to Be Installed in Landscaped Areas Shall Have Neenah R4340-B Frame & Grate or Approved Equal, Unless Noted Otherwise. For Cone Sections Install a Minimum of 4" Grade Rings For Topsoil Respread. For Flat Slab Tops Install the Following Minimum Height of Grade Rings:

4' Diameter Structure- 4"
5' Diameter Structure- 6"
6' Diameter Structure- 8"

N

30 0 30 60 90

Scale: 1"=30'

LEGEND

EXISTING		PROPOSED
	Manhole	
	Catch Basin	
	Area Drain	
C.O.	Clean Out	C.O.
	Flared End Section	
	Storm Sewer	
	Sanitary Sewer	
W	Water Main	W
G	Gas Line	G
OH	Overhead Wires	OH
E	Electrical Cable (Buried)	E
T	Telephone Line	T
	Fire Hydrant	
	Valve Vault	
B	Buffalo Box	B
DS	Downspout	DS
GE	Gas Valve	
CE	ComEd Manhole	
	Hand Hole	
	Light Pole	
	Utility Pole	
	Telephone Pedestal	
T	Telephone Manhole	
	Sign	
X	Fence	X
	Accessible Parking Stall	
	Curb & Gutter	
	Depressed Curb	
C 782.50	Curb Elevation	C 782.50
G 782.00	Gutter Elevation	G 782.00
P 783.25	Pavement Elevation	P 783.25
W 782.10	Sidewalk Elevation	W 782.10
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T/W 785.20	Top of Retaining Wall Elevation	T/W 785.20
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781	Contour Line	781
	Tree	
	Tree Protection Fencing at Drip Line	

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Plat of Survey and Topography Provided By RE Allen and Associates, LTD For Eriksson Engineering Associates, LTD on May 6, 2014. File Number 73-14

PROJECT BENCHMARKS

1. DuPage County Disk in Traffic Signal Base at the NW Corner of St Charles Road and Main Street. Elevation = 765.89 (As Transferred to This Site in 1999)

Site Benchmark: "Control Point Cut Cross" on Concrete Curb at Southwest Corner of Project Site. Elevation = 760.40'

J.U.L.I.E.

Note: The exact location of all utilities shall be verified by the contractor prior to construction activities. For utility locations call: J.U.L.I.E. 1 (800) 892-0123

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003220
EXPIRES: 04/30/2015

GLEN ELLYN PARK DISTRICT

NEWTON PARK

SYNTHETIC TURF ATHLETIC FIELD

707 Fairview Avenue,
Glen Ellyn, Illinois

Reserved for Seal:

NOT FOR CONSTRUCTION

Expiration Date: _____

No.	Date	Description
	01/22/15	Issued For Permit
	02/11/15	Issued For Bid

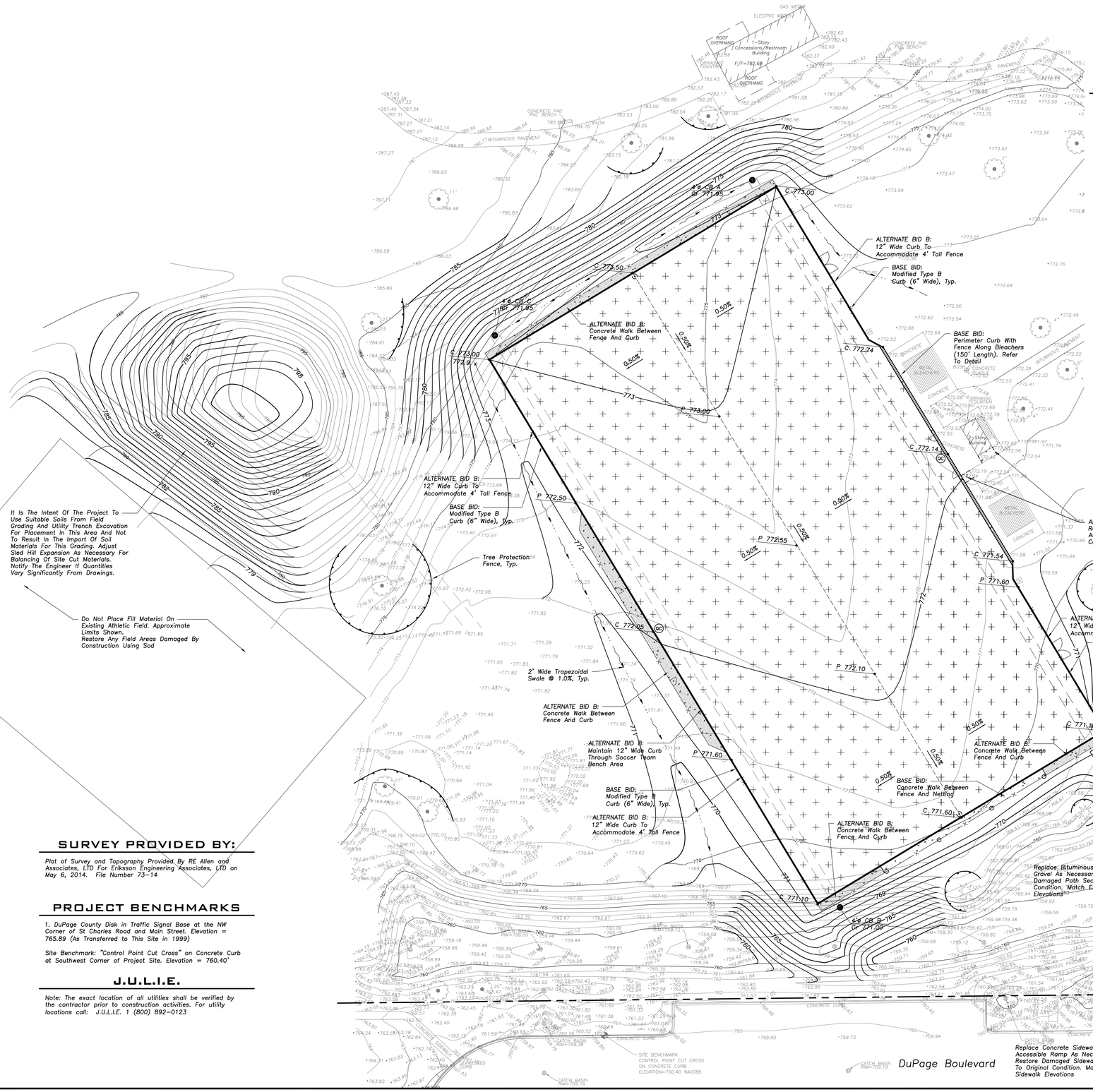
Design By:	Date:
PD	01/21/15
Approved By: KC	Project No.

Sheet Title:

SITE UTILITY PLAN

Sheet No:

C2.20



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PAVING & SURFACE LEGEND

Synthetic Turf Surface
2 1/2" Pile Synthetic Turf With 1 3/4" Infill (By Others)
6" Minimum Aggregate Base
(Refer To Detail)

Light-Duty Asphalt Pavement Section
2" Hot Mix Asphalt,Mix D, IL-9.5, N50
6" Aggregate Base Course, Type B, Crushed

Concrete Sidewalk Section
5" Portland Cement Concrete
6"x6" W1.4xW1.4 Welded Wire Fabric
2" Aggregate Base Course, Type B, Crushed

Concrete Sidewalk Section (Alternate Bid B)
5" Portland Cement Concrete
6"x6" W1.4xW1.4 Welded Wire Fabric
2" Aggregate Base Course, Type B, Crushed

Gravel Path Section
6" CA-6 Aggregate
Geotextile Fabric

N

30 0 30 60 90

Scale: 1"=30'

LEGEND

EXISTING		PROPOSED
	Manhole	
	Catch Basin	
	Area Drain	
C.O.	Clean Out	C.O.
	Flared End Section	
	Storm Sewer	
	Sanitary Sewer	
W	Water Main	W
G	Gas Line	G
OH	Overhead Wires	OH
E	Electrical Cable (Buried)	E
T	Telephone Line	T
	Fire Hydrant	
	Valve Vault	
B	Buffalo Box	B
DS	Downspout	DS
	Gas Valve	
CE	ComEd Manhole	
	Hand Hole	
	Light Pole	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Sign	
X	Fence	X
	Accessible Parking Stall	
	Curb & Gutter	
	Depressed Curb	
C 782.50	Curb Elevation	C 782.50
G 782.00	Gutter Elevation	G 782.00
P 783.25	Pavement Elevation	P 783.25
W 782.10	Sidewalk Elevation	W 782.10
784.0	Ground Elevation	x 784.0
T/W 785.20	Top of Retaining Wall Elevation	T/W 785.20
781	Swale	781
	Contour Line	
	Tree	
	Tree Protection Fencing at Drip Line	

GENERAL NOTES

The Location of Existing Underground Utilities, Such As Watermains, Sewers, Gas Lines, Etc., As Shown On The Plans, Has Been Determined From The Best Available Information and Is Given For The Convenience of The Contractor. However, The Owner and The Engineer Do Not Assume Responsibility In The Event That During Construction, Utilities Other Than Those Shown May Be Encountered, and That The Actual Location of Those Which Are Shown May Be Different From The Location As Shown On The Drawings. Contact Engineer Immediately If Surface and/or Subsurface Features Are Different Than Shown On The Drawings.

Notify The Engineer Without Delay of Any Discrepancies Between the Drawings and Existing Field Conditions.

Notify The Owner, Engineer and J.U.L.I.E. A Minimum of 48 Hours In Advance of Performing Any Work.

All Areas, On or Off Site, Disturbed During Construction Operations and Not Part of the Work As Shown Hereon Shall Be Restored To Original Condition to the Satisfaction of the Owner at No Additional Cost to the Owner. It is Incumbent Upon Contractor to Show That Damaged Areas Were Not Disturbed By Construction Operations.

These Drawings Assume That The Contractor Will Utilize An Electronic Drawing File (DWG) and Stake All Site Improvements Accordingly.

No Person May Utilize The Information Contained Within These Drawings Without Written Approval From Eriksson Engineering Associates, Ltd.

The Engineer Is Furnishing These Drawings For Construction Purposes As A Convenience To The Owner, Architect, Surveyor, or Contractor. Prior To The Use Of These Drawings For Construction Purposes, The User Of This Media Shall Verify All Dimensions And Locations Of Buildings With The Foundation Drawings And Architectural Site Plan, and Coordinate All Dimensions and Locations of All Site Items. If Conflicts Exist The User Of This Information Shall Contact The Engineer Immediately.

Provide An As-built Survey Prepared By A Licensed Professional Land Surveyor In Accordance With The Authorities Having Jurisdiction To Include All Detention Basins, Storm Sewers and Structure Locations, Sizes, Rim and Invert Elevations, Final Detention Volume Calculations For The Basin(s) and Watermain and Valve and Appurtenance Locations.

The Illinois Department Of Transportation Standard Specifications For Road And Bridge Construction Latest Edition, And All Addenda Thereto, Shall Govern The Earthwork And Paving Work Under This Contract Unless Noted Otherwise.

GRADING NOTES

The Grading and Construction of Proposed Improvements Shall Be Done In A Manner Which Will Allow For Positive Drainage, and Not Cause Ponding of Stormwater on the Surface of Proposed Improvements.

All Landscaped Areas Disturbed By Construction Shall Be Respread With 6 Inches (Min.) to 12 Inches (Max.) Topsoil and Hydroseeded Unless Noted Otherwise On The Drawings.

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GLEN ELLYN PARK DISTRICT

NEWTON PARK

SYNTHETIC TURF ATHLETIC FIELD

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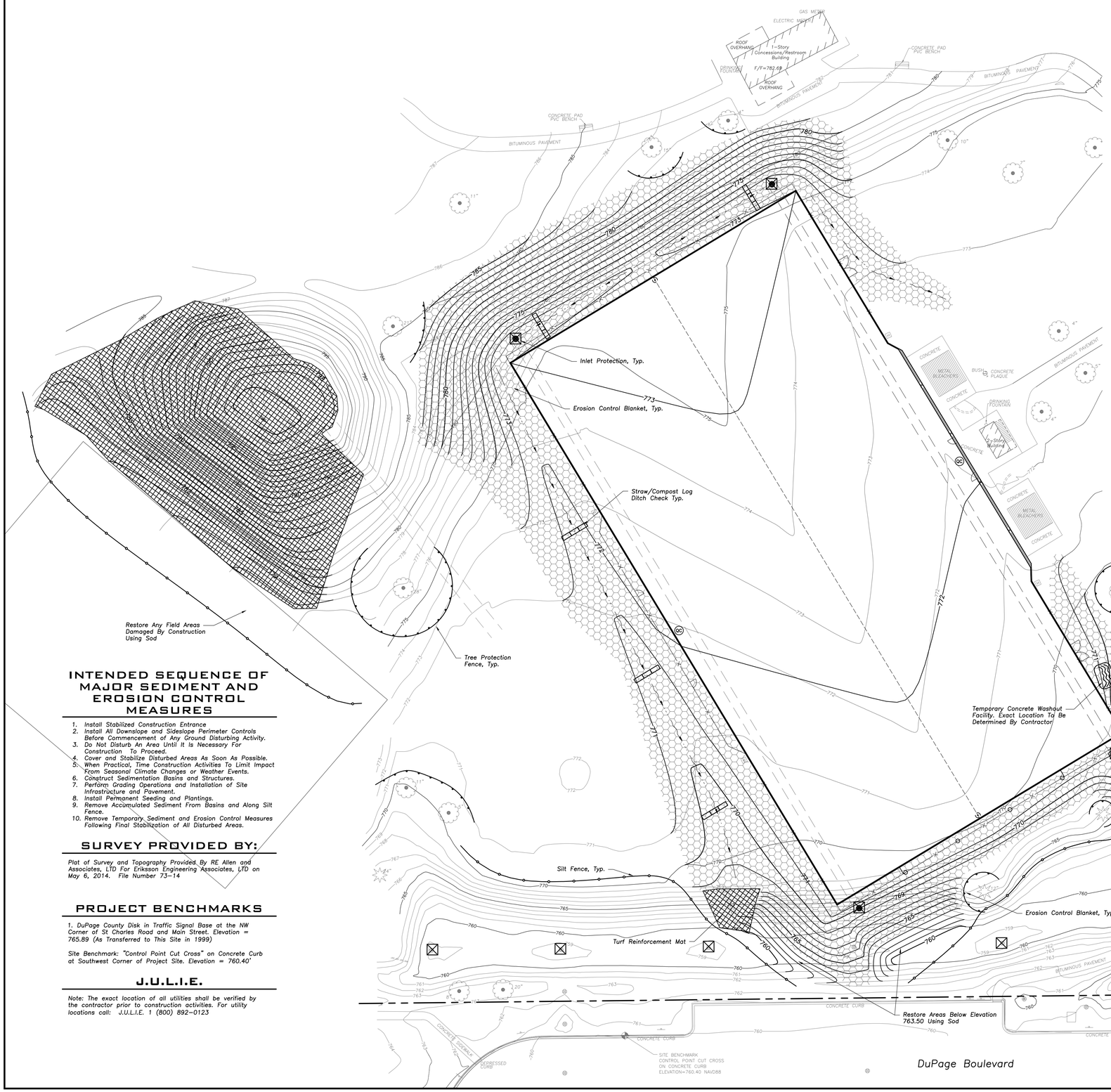
Design By:	Date:
PD	01/21/15
Approved By:	**Project No.**
KC	

Sheet Title:

GRADING AND PAVING PLAN

Sheet No:

C3.10



INTENDED SEQUENCE OF MAJOR SEDIMENT AND EROSION CONTROL MEASURES

1. Install Stabilized Construction Entrance
2. Install All Downslope and Sideslope Perimeter Controls Before Commencement of Any Ground Disturbing Activity.
3. Do Not Disturb An Area Until It Is Necessary For Construction To Proceed.
4. Cover and Stabilize Disturbed Areas As Soon As Possible.
5. When Practical, Time Construction Activities To Limit Impact From Seasonal Climate Changes or Weather Events.
6. Construct Sedimentation Basins and Structures.
7. Perform Grading Operations and Installation of Site Infrastructure and Pavement.
8. Install Permanent Seeding and Plantings.
9. Remove Accumulated Sediment From Basins and Along Silt Fence.
10. Remove Temporary Sediment and Erosion Control Measures Following Final Stabilization of All Disturbed Areas.

SURVEY PROVIDED BY:

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SOIL EROSION & SEDIMENTATION CONTROL NOTES

Soil Disturbance Shall Be Conducted in Such a Manner as To Minimize Erosion. Soil Stabilization Measures Shall Consider the Time of Year, Site Conditions, and the Use of Temporary or Permanent Measures.

Soil Erosion and Sediment Control Features Shall Be Constructed Prior to the Commencement of Upland Disturbance.

Temporary Soil Stabilization Shall Be Applied to Topsoil Stockpiles and Disturbed Areas, Where Construction Activity Will Not Occur For A Period of More Than 14 Calendar Days. Temporary Measures Shall Be Applied Within 7 Calendar Days of the End of Active Hydrologic Disturbance. The Sediment Control Measures Shall Be Maintained On A Continuing Basis Until The Site Is Permanently Stabilized And All Inspections Are Complete. Permanent Stabilization Shall Be Completed Within 14 Days after Completion of Final Grading of Soil.

All Temporary And Permanent Erosion Control Measures Shall Be Removed Within 30 Days After Final Site Stabilization Is Achieved Or After The Temporary Measures Are No Longer Needed, Trapped Sediment And Other Disturbed Soil Areas Shall Be Permanently Stabilized.

Final Site Stabilization Is Defined By The EPA General Permit As Meaning That All Soil Disturbing Activities At The Site Have Been Completed, And That A Uniform Perennial Vegetative Cover With A Density Of 70 Percent Of The Cover For Unpaved Areas Not Covered By Permanent Structures Has Been Established Or Equivalent Permanent Stabilization Measures (Such As The Use Of Riprap, Gabions, Or Geotextiles) Have Been Employed.

All Storm Sewer Structures That Are, Or Will Be, Functioning During Construction Shall Be Protected, Filtered, Or Otherwise Treated To Remove Sediment. The General Contractor Shall Use "Dandy Pop" Inlet Protectors (Or Approved Equal) In Landscaped Areas And "Dandy Bag" Inlet Protectors (or Approved Equal) In Paved Areas To Prevent Siltation.

All Temporary And Permanent Sediment And Erosion Control Measures Must Be Maintained, Repaired, And Inspected In Conformance With All Applicable IEPA-NPDES Phase II Requirements.

Following The Termination Of Construction Activities And Issuance Of The Required "Notice Of Termination", The Permittees Must Keep A Copy Of The Storm Water Pollution Prevention Plan, Inspection Reports, And Records Of All The Data Used To Complete The Notice Of Intent For A Period Of At Least Three Years Following Final Stabilization.

Install And Maintain Silt Fence At The Perimeter Of The Construction Zone And Wetland Areas And As Shown On The Plans. Maintain Silt Fence Throughout Construction And Until Vegetation Has Been Fully Established.

The Erosion Control Measures Indicated On The Drawings Are The Minimum Requirements. Additional Measures May Be Required As Directed By The Engineer Or Governing Agency.

Unless Otherwise Indicated on the Drawings, Stabilize All Disturbed Ground Areas Where Slopes Exceed 6:1 or Within Swales with North American Green BioNet SC150BN Erosion Control Blanket, or Approved Equal.

Report Releases of Reportable Quantities of Oil or Hazardous Materials If They Occur In Accordance with IEPA NPDES Requirements.

All Concrete Washout Shall Conform To The "Temporary Concrete Washout Facility" Standards (Code 954) of the Illinois Urban Manual, Latest Edition

If Necessary, The SWPPP Shall Be Modified To Reflect Changes Required During The Effective Period Of The IEPA NPDES General Permit No ILR10 and Local and County Permits.

N

30 0 30 60 90

Scale: 1"=30'

LEGEND

EXISTING		PROPOSED
	Manhole	
	Catch Basin	
	Area Drain	
C.O.	Clean Out	C.O.
	Flared End Section	
	Storm Sewer	
	Sanitary Sewer	
W	Water Main	W
G	Gas Line	G
OH	Overhead Wires	OH
E	Electrical Cable (Buried)	E
T	Telephone Line	T
	Fire Hydrant	
	Valve Vault	
B	Buffalo Box	B
DS	Downspout	DS
	Gas Valve	
CE	ComEd Manhole	
	Hand Hole	
	Light Pole	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Sign	
x	Fence	x
	Accessible Parking Stall	
	Curb & Gutter	
	Depressed Curb	
C 782.50	Curb Elevation	C 782.50
G 782.00	Gutter Elevation	G 782.00
P 783.25	Pavement Elevation	P 783.25
W 782.10	Sidewalk Elevation	W 782.10
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781	Contour Line	781
	Tree	
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SOIL EROSION & SEDIMENTATION CONTROL LEGEND

- Silt Fence
- Inlet Protection
- Erosion Control Blanket North American Green DS75 Or Approved Equal
- Permanent Turf Reinforcement Mat North American Green C350 Or Approved Equal
- Erosion Control Ditch Check

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PD	01/21/15
Approved By:	**Project No.**
KC	

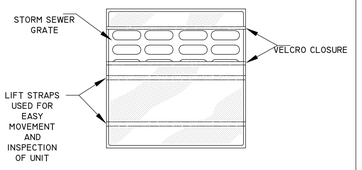
Sheet Title:

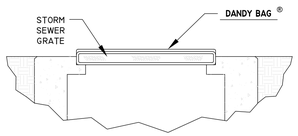
SOIL EROSION AND SEDIMENT CONTROL PLAN

Sheet No:

C3.20

DANDY BAG ®





DETAIL OF INLET SEDIMENT CONTROL DEVICE

PROJECT:		**DR. BY:**
CITY/STATE:	**DATE:**	**DR. NO:**

DANDY BAG®
SPECIFICATIONS

NOTE: THE DANDY BAG® WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

HI-FLOW DANDY BAG® (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m²(gal/min/ft²)	5907 (145)
Permitivity	ASTM D 4491	Sec⁻¹	2.1

*Note: All Dandy Bags® can be ordered with our optional oil absorbent pillows

DANDY POP®
SPECIFICATIONS

NOTE: THE DANDY SACK™ WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

DANDY POP® (BLACK & SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
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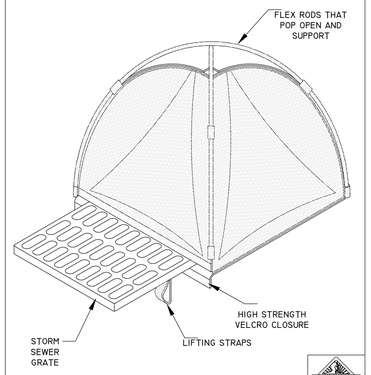
Permitivity	ASTM D 4491	Sec⁻¹	2.1

*Note: All Dandy Pops® can be ordered with our optional oil absorbent pillows

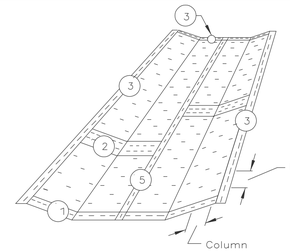
DANDY POP ®

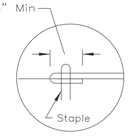


DETAIL OF INLET SEDIMENT CONTROL DEVICE

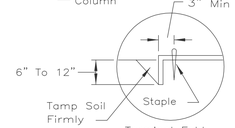
PROJECT:		**DR. BY:**
CITY/STATE:	**DATE:**	**DR. NO:**

EROSION BLANKET PLAN



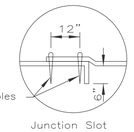


Terminal Fold
Jute Mesh Only

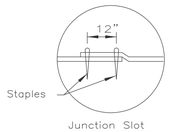


Terminal Fold
Excelsior Blanket
Erosion Control Paper

DETAIL 1



Junction Slot
Jute Mesh
Erosion Control Paper



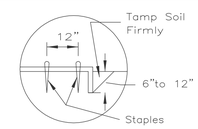
Junction Slot
Excelsior Blanket

DETAIL 2

REFFERENCE		STANDARD DWG. NO.	
Project		IL-530	
Designed	Date	SEEET 1 OF 2	
Checked	Date	DATE 5-24-94	
Approved	Date		

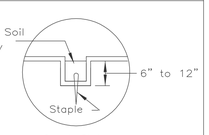
NRCS Natural Resources Conservation Service

EROSION BLANKET PLAN



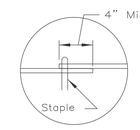
Anchor Slot
Jute Mesh
Excelsior Blanket
Erosion Control Paper

DETAIL 3



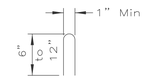
Check Slot
Erosion Control Paper

DETAIL 4



Lap Joint
Jute Mesh
Erosion Control Paper
Excelsior Blanket Shall Be Butted Together.

DETAIL 5

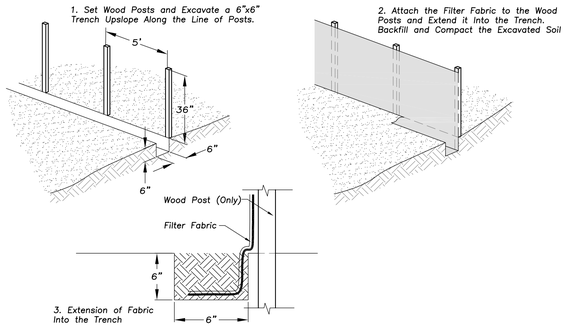


STAPLE DETAIL

NOTES:
1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

REFFERENCE		STANDARD DWG. NO.	
Project		IL-530	
Designed	Date	SHEET 2 OF 2	
Checked	Date	DATE 3-1-95	
Approved	Date		

NRCS Natural Resources Conservation Service



SILT FENCE CONSTRUCTION (AASHTO 288-00)

GENERAL NOTES

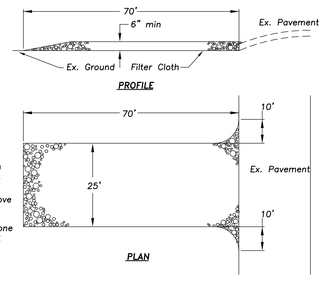
STONE SIZE – Use IDOT gradation CA-1 aggregate stone.

MAINTENANCE – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or clean-out of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public rights-of-way must be removed immediately.

FILTER CLOTH – Will be placed over the entire area prior to placing stone. Conform to Illinois Urban Manual Section 592, Type I, II, or IV.

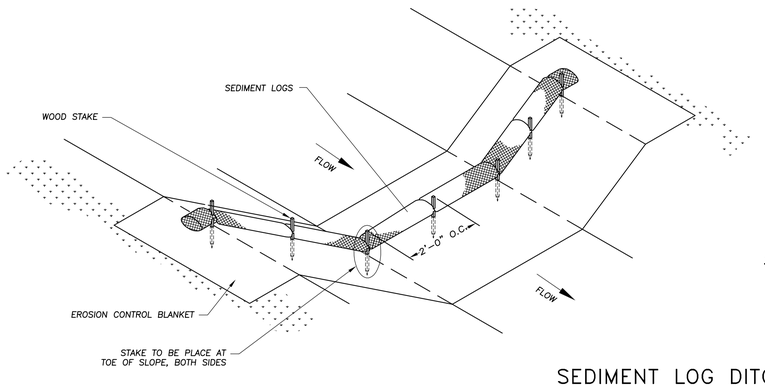
WASHING – Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.

Periodic inspection and needed maintenance shall be provided after each rain.

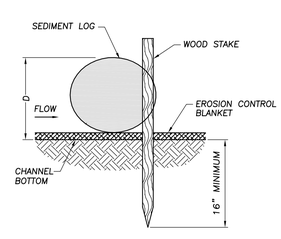


STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

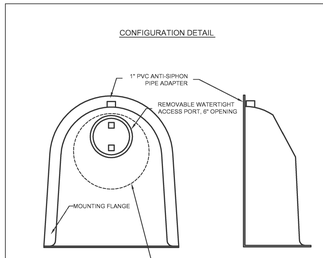


SEDIMENT LOG DITCH CHECK



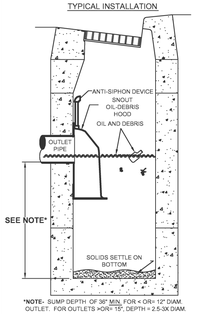
STAKE DETAILS

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION

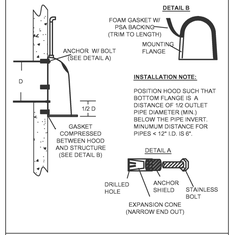


*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

INSTALLATION DETAIL



INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	SP-SN

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003220
EXPIRES: 04/30/2015

GLEN ELLYN PARK DISTRICT

NEWTON PARK

SYNTHETIC TURF ATHLETIC FIELD

707 Fairview Avenue,
Glen Ellyn, Illinois

Reserved for Seal:

NOT FOR CONSTRUCTION

Expiration Date:_____

No.	Date	Description
	01/22/15	Issued For Permit
	02/11/15	Issued For Bid

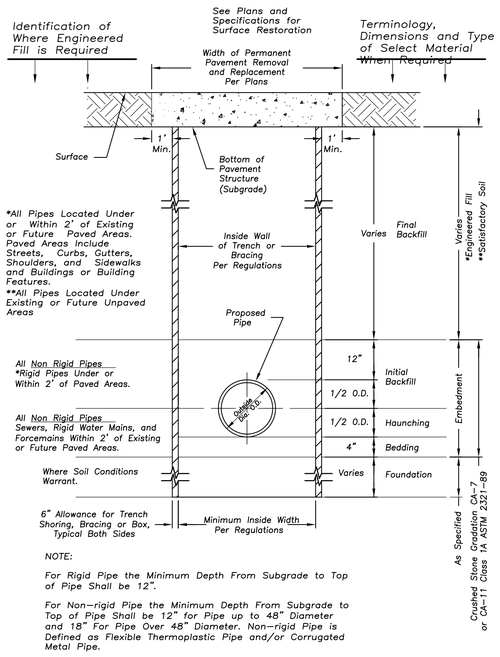
Design By:	Date:
PD	01/21/15
Approved By: KC	**Project No.**

Sheet Title:

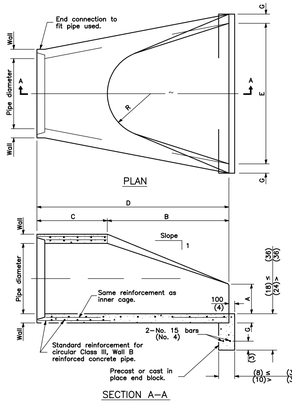
SITE WORK DETAILS

Sheet No:

C4.10



STANDARD SEWER AND WATER TRENCH SECTION



PIPE DIA.	APPROX. QTY., kg lbs	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
12	530	2	4	24	4'-0 7/8 "	6'-0 7/8 "	24	2	9	1:2.4
15	740	2 1/4	6	27	3'-10"	6'-1"	30	2 1/4	11	1:2.4
18	990	2 1/2	9	27	3'-10"	6'-1"	36	2 1/2	12	1:2.4
21	1280	2 3/4	9	35	38	6'-1"	3'-6"	2 3/4	13	1:2.4
24	1520	3	9 1/2	3'-7 1/2 "	30	6'-1 1/2 "	4'-0"	3	14	1:2.5
30	2190	3 1/2	12	4'-6"	19 3/4	6'-1 3/4 "	5'-0"	3 1/2	15	1:2.5
36	4100	4	15	5'-3"	34 3/4	8'-1 3/4 "	6'-0"	4	20	1:2.5
42	5380	4 1/2	21	5'-3"	35	8'-2"	6'-6"	4 1/2	22	1:2.5
48	6550	5	24	6'-0"	26	8'-2"	7'-0"	5	22	1:2.5
60	8730	6	35	5'-0"	39	8'-3"	8'-0"	5	*	1:1.9

*Radius as furnished by manufacturer

GENERAL NOTES

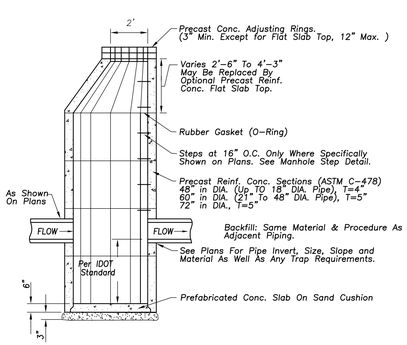
All dimensions are in inches unless otherwise shown.

All flared end sections 12" and larger shall include an IDOT standard grate.

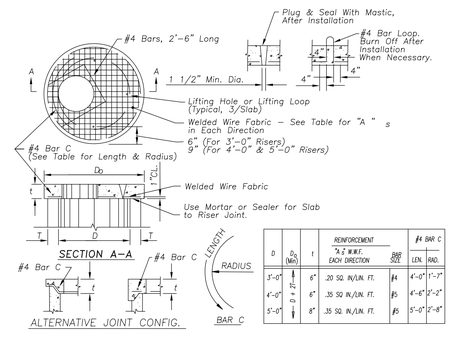
Contractor Shall Provide Adequate Coupling Device and/or Oversized Flared-End Section to Accommodate HDPE Storm Sewer Called for in Drawings.

PRECAST REINFORCED CONCRETE FLARED END SECTION

TOPSOIL STOCKPILE LOCATION

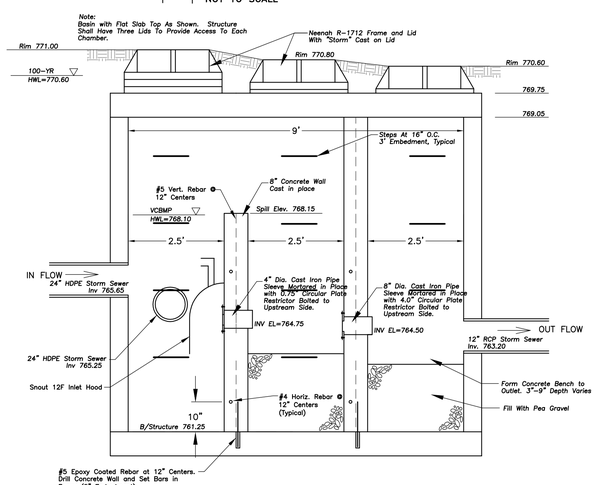


CATCH BASIN

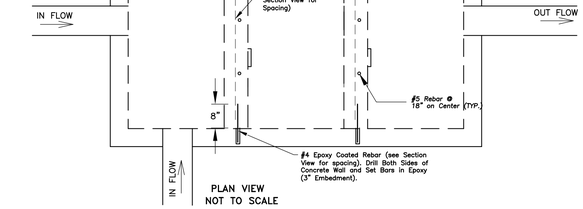


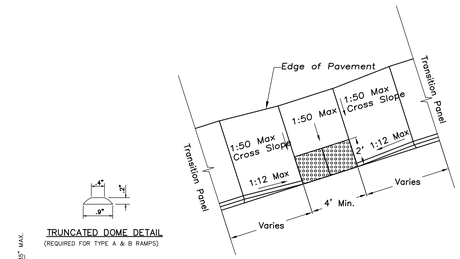
D	D_o (MIN)	t	REINFORCEMENT "A" W.W.F. EACH DIRECTION	BAR SIZE	#4 BAR C LEN.	#4 BAR C RAD.
3'-0"	D + 2T"	6"	.20 SQ. IN/LIN. FT.	#4	4'-0"	1'-7"
4'-0"	D + 2T"	6"	.35 SQ. IN./LIN. FT.	#5	4'-6"	2'-2"
5'-0"	D + 2T"	8"	.35 SQ. IN./LIN. FT.	#5	5'-0"	2'-8"

PRECAST REINF. CONC. FLAT SLAB TOP

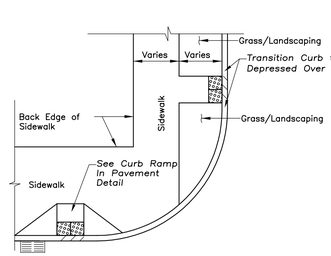


RESTRICTOR STRUCTURE

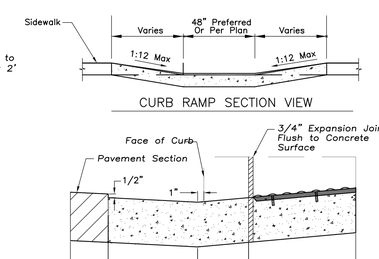




PARALLEL CURB RAMP DETAIL
N.T.S

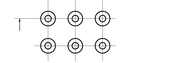


PERPENDICULAR CURB RAMP GEOMETRY
N.T.S



CURB RAMP SECTION VIEW

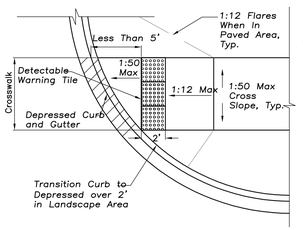
DEPRESSED CURB AND GUTTER AT CURB RAMP



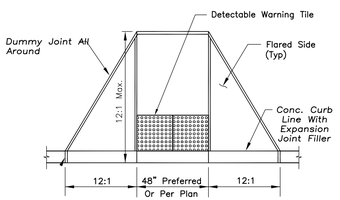
TRUNCATED DOME DETAIL
(REQUIRED FOR TYPE A & B RAMPS)

SQUARE PATTERN
(PARALLEL ALIGNMENT)

DETECTABLE WARNINGS DETAIL



CURB RAMP AT RADIUS SKEWED INTERFACE DETAIL
N.T.S



CURB RAMP IN PAVEMENT
N.T.S

GENERAL NOTES

Description:
This work shall consist of constructing sidewalk curb ramps with detectable warnings in compliance with the Americans with Disabilities Act, Accessibility Guidelines (ADAAG). The detectable warnings shall consist of an area of truncated domes that provide both visual and tactile cues to pedestrians who are about to enter into traffic.

The detectable warnings shall present a contrast in color from the adjacent sidewalk.

Construction Requirements:

1. Ramps Shall Be Located As Shown On Plans In Alignment With Normal Sidewalk And/or Crosswalk And Shall Have Sufficient Curb Length At Corner Radius To Prevent Vehicular Encroachment.

2. Curb Ramps At Marked Crossings Shall Be Wholly Contained Within The Markings Excluding Flared Sides.

3. In No Case Shall Expansion Joints That Are Constructed In Curbs And Gutters At Or Near Corner Radiuses Be Located Within The Accessible Ramp Areas.

4. Where Preformed Joint Filler (p.j.f) Is Installed Against A Curved Surface, The Contractor Shall Use A Flexible Filler In Accordance With The Illinois Department Of Transportation (IDOT) Standard Specifications.

Equipment: Equipment for the detectable warning area of the curb ramps shall meet the requirements of the Authorities having Jurisdiction.

DETECTABLE WARNING SURFACE TILES

Provide Surface Applied Detectable/Tactile Warning Surface Tiles which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title III Regulations, 28 CFR Part 36 ADA STANDARDS FOR ACCESSIBLE DESIGN, Appendix A, Section 4.29.2

Dimensions: Cast In Place Detectable/Tactile Warning Surface Tiles shall be held within the following dimensions and tolerances: Length and Width in One of the Following as Necessary for the Dimensions of the Surface In Which the Detectable Warning is Proposed: 12x12 24x24 24x36 24x48 24x60 36x48 36x60 nominal. No Cutting of Tiles is Allowed.

Installation of Detectable/Tactile Warning Surface Tiles Per Manufacturer's Instructions.

Verify With the Local Authorities Having Jurisdiction that Detectable/Tactile Warning Surface Tiles are an Acceptable Method of Providing for the Detectable Warning Surface.

Verify With the Local Authorities Having Jurisdiction that the Manufacturer's Products are Acceptable for the Detectable Warning Surface.

ACCESSIBLE RAMPS FOR SIDEWALKS

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003220
EXPIRES: 04/30/2015

GLEN ELLYN PARK DISTRICT
NEWTON PARK
SYNTHETIC TURF ATHLETIC FIELD
707 Fairview Avenue,
Glen Ellyn, Illinois

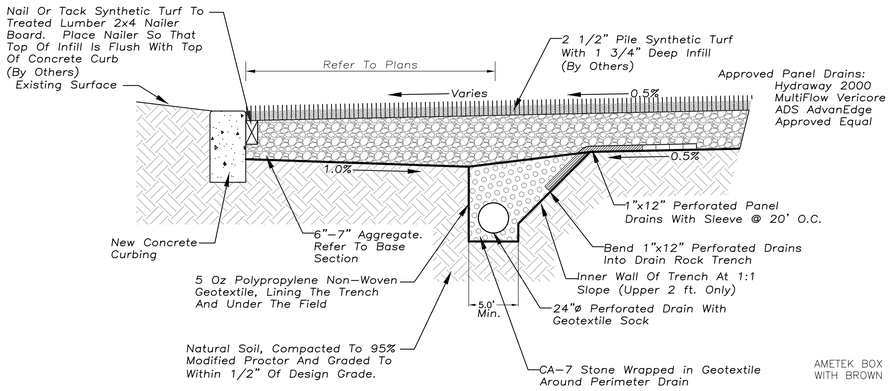
Reserved for Seal:
NOT FOR CONSTRUCTION
Expiration Date: _____

No.	Date	Description
	01/22/15	Issued For Permit
	02/11/15	Issued For Bid

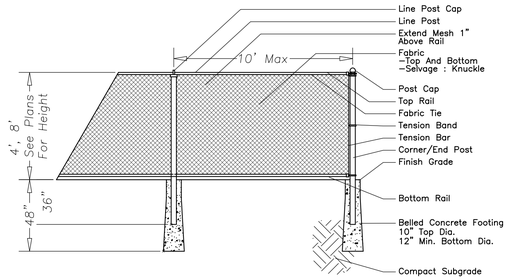
Design By:	Date:
PD	01/21/15
Approved By: KC	Project No.

Sheet Title:
SITE WORK DETAILS

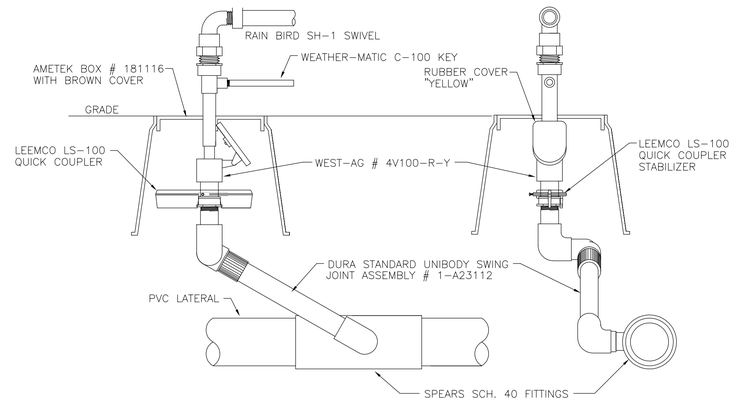
Sheet No:
C4.20



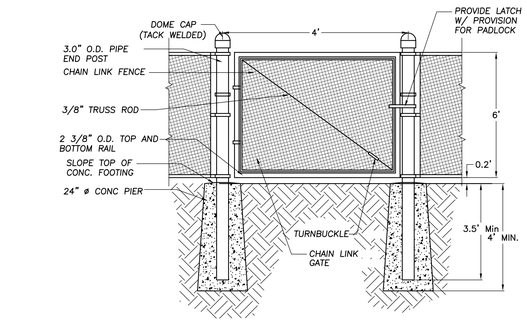
PERIMETER DRAIN AND EDGE DETAIL ALONG "D" AREAS



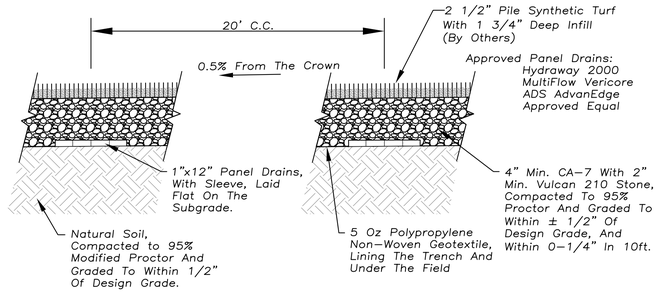
Typical Chain Link Fence



1" N.P.T. QUICK COUPLER VALVE

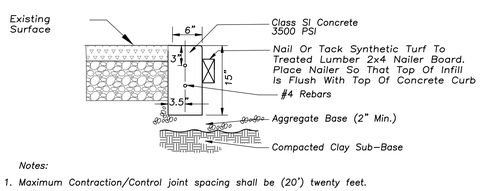


4' WIDE ONE LEAF CHAIN LINK GATE



BASE SECTION DETAIL

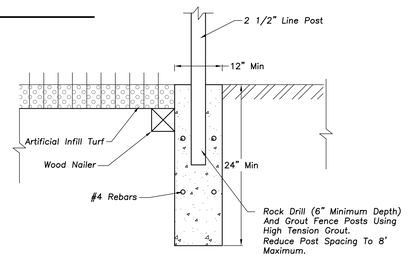
12' WIDE TWO LEAF CHAIN LINK GATE



Notes:

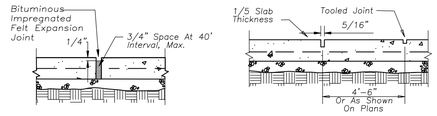
1. Maximum Contraction/Control joint spacing shall be (20') twenty feet.

MODIFIED TYPE B CURB



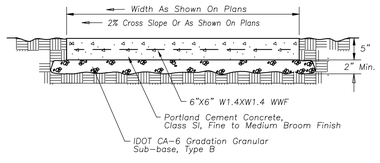
PERIMETER CURB WITH FENCE

NTS

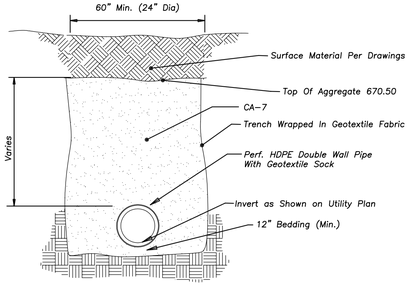


EXPANSION JOINT

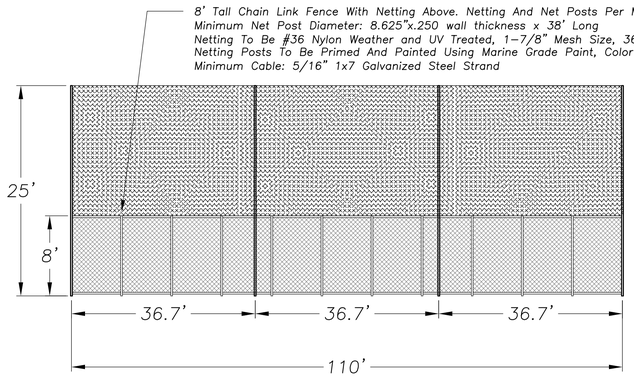
CONTRACTION JOINT



PORTLAND CEMENT CONC. SIDEWALK



PERFORATED HDPE TRENCH SECTION



1. Provide And Install Round Tapered STRYK (Rust Preventive) Coated Steel Poles. Poles To Be Min. 11'6" Into The Ground And Set In 3,000 PSI Concrete Full Depth.
2. Netting System To Be Designed To Have Wind Resistance 80 MPH and 1.3 Gust Rate
3. Netting To Be 1-3/4" Openings Knotted Weather And UV Treated Netting That Is Completely Rope Bordered On The Square. One Section Of Netting Between Every Two Poles,
4. Provide Pre-Drilled Holes At the Top Of Each Pole And At Top Of Fence And Install 5/8" Oval Galvanized Steel Eyebolts. Run 1/4" Galvanized Steel Cable Both Horizontally At Top Of Fence And Top Of Net Posts As Well As Vertically Along Each Pole Face.
5. Site Work To Include Casing And Drilling.
6. Provide Attic Stock For Touch Up Paint Coating To Be Provided.
7. Coordinate All New Netting And Fencing With Site Conditions. Fencing Contractor To Coordinate With Net Pole Locations, Fencing To Be Installed As Close As Possible To Net Poles.

ATHLETIC FIELD PROTECTION

ERIKSSON ENGINEERING ASSOCIATES, LTD.
145 COMMERCE DRIVE, SUITE A
GRAYSLAKE, ILLINOIS 60030
PHONE (847) 223-4804
FAX (847) 223-4864
EMAIL INFO@EEA-LTD.COM
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003220
EXPIRES: 04/30/2015

GLEN ELLYN PARK DISTRICT

NEWTON PARK

SYNTHETIC TURF ATHLETIC FIELD

707 Fairview Avenue,
Glen Ellyn, Illinois

Reserved for Seal:

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Expiration Date:_____

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Design By:	Date:
PD	01/21/15
Approved By: KC	Project No.

Sheet Title:

SITE WORK DETAILS

Sheet No:

C4.30

ADDENDUM NO. 1

DATE: February 24, 2015

Project: Newton Park
Synthetic Turf Athletic Field

Engineer: Eriksson Engineering Associates, Ltd.
145 Commerce Drive, Suite A
Grayslake, IL 60030

1.01 SUMMARY

A. The Bidding Documents, Project Manual and Contract Drawings dated February 11, 2015, for the above referenced project are hereby modified and revised as follows:

B. The information contained within this Addendum modifies, supplements or replaces information contained in the Project Manual and the Contract Drawings and is hereby made a part of the Contract Documents.

C. Acknowledge receipt of this Addendum on the Bid Form. FAILURE TO DO SO MAY SUBJECT THE BIDDER TO DISQUALIFICATION.

D. The Bidding Documents include the Project Manual and the Contract Drawings dated 02/11/15, and Addenda issued prior to the receipt of bids.

1.02 DRAWINGS

A. Sheet C4.10 – Site Work Details. Clarification of snout oil-water-debris separator:

The snout shall be provided in one location-in the restrictor structure shown on C4.20.

B. Sheet C4.20 – Site Work Details. Dimensional clarification of Restrictor Structure:

The width of the structure shall be 4.0’ interior and 5.0’ exterior. The length remains 9.0’ interior and 10’ exterior.

C. Sheet C3.10 – Grading and Paving Plan. Earthwork clarification:

All earthwork material is to remain on site-no export off site is necessary. Any excess material will be used for sled hill grading and the topsoil stockpile shown on sheet C4.20.

1.03 MISCELLANEOUS

A. Fine grading of the stone beneath the synthetic turf shall be included in this bid package – it will not be included in the synthetic turf manufacturer's contract. The Contractor may choose to have FieldTurf perform this task by contracting directly with FieldTurf.

END OF ADDENDUM NUMBER ONE