A PROJECT OF THE
PEORIA PARK DISTRICT
PEORIA, ILLINOIS

GOLF COURSE STORAGE BUILDINGS
NEWMAN & KELLOGG GOLF COURSES

NEWMAN GOLF COURSE
2021 W. NEBRASKA AVE.
PEORIA, ILLINOIS

KELLOGG GOLF COURSE
7716 RADNOR ROAD
PEORIA, ILLINOIS

PROJECT # 17-012
MARCH 19, 2019

PROJECT MANUAL

PACKAGE #_____

PROJECT MANUAL INCLUDING SPECIFICATIONS FOR:

GOLF COURSE STORAGE BUILDINGS
NEWMAN & KELLOGG GOLF COURSES
PEORIA, ILLINOIS

ARCHITECT: APACE DESIGN ARCHITECTS & ENGINEERS
ATTN: DAVE VOORHEES
2112 E. WAR MEMORIAL DR.
PEORIA, ILLINOIS 61614
TELEPHONE: (309) 685-4722

OWNER: PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, PEORIA, ILLINOIS

TRUSTEES:
TIMOTHY J. CASSIDY, PRESIDENT
ROBERT L. JOHNSON, SR.
JACQUELINE J. PETTY
WARREN E. RAYFORD
JOYCE HARANT
MATTHEW P. RYAN
NANCY L. SNOWDEN

PROJECT MANAGER:
BECKY FREDRICKSON
PLANNING, DESIGN & CONSTRUCTION DIVISION
BRADLEY PARK EQUIPMENT SERVICE
1314 N. PARK ROAD
PEORIA, ILLINOIS 61604
TELEPHONE: (309) 686-3386

ADMINISTRATIVE STAFF:
EMILY CAHILL, EXECUTIVE DIRECTOR
BRENT WHEELER, DEPUTY DIRECTOR
MATT FREEMAN, SUPERINTENDENT OF PARKS
KARRIE ROSS, SUPERINTENDENT OF FINANCE AND ADMINISTRATIVE SERVICES
BECKY FREDRICKSON, SUPERINTENDENT OF PLANNING, DESIGN AND CONSTRUCTION
SHALESSE PIE, SUPERINTENDENT OF HUMAN RESOURCES

****

Address all communications regarding this work to the project manager listed above.

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Peoria Park District, Peoria, Illinois, hereinafter known as the Owner, for the following project:

GOLF COURSE STORAGE BUILDINGS
NEWMAN & KELLOGG GOLF COURSES
PEORIA, ILLINOIS

It is the intent of the Owner to receive Base Bids for the project listed above.

Sealed bids will be received until 1:15 p.m., Tuesday, April 2, 2019 prevailing time, by the Owner, at the Peoria Park District Administrative Office, 1125 W. Lake Ave., Peoria, Illinois 61614. (The Board Room clock shall be the official time keeping device in respect to the bid submission deadline.)

An electronic file including Bid Documents is available at www.peoriaparks-planning.org at no charge. Bid Documents, including Plans, Specifications and Interpretations for this project may be obtained at the Planning, Design & Construction Department, Bradley Park Equipment Service, 1314 N. Park Road, Peoria, IL 61604. Telephone (309) 686-3386. A non-refundable plan deposit of $75.00 will be charged for each printed set of Bid Documents.

A list of planholders can be obtained upon request. This information will be available up to twenty-four (24) hours prior to the scheduled bid opening time. **After that deadline, no information pertaining to the project will be given.**

A 10% Bid Bond is required, and is to be included with the Bid Proposal. The successful Bidder will be required to furnish a 100% Performance Bond and a 100% Labor and Materials Payment Bond within ten (10) days of formal Award of Contract.

The general prevailing rate of wage for the Peoria area shall be paid for each craft or type of worker needed to execute this contract or perform this work as required by the State of Illinois Department of Labor. Additionally, it is required that provisions of the Illinois Preference Act, the Illinois Drug Free Workplace Act, and the Substance Abuse Prevention on Public Works Act must be adhered to. Bidders are also advised that contract documents for this project include the non-discrimination, equal opportunity and affirmative action provisions in the Human Rights Act and rules and regulations of the Department of Human Rights. The Peoria Park District is an AA/EEO organization and encourages participation by minority and female-owned firms.

The Peoria Park District reserves the right to reject any or all bids, waive technical deficiencies, informalities or irregularities or rebid any project.

PLEASURE DRIVEWAY AND PARK DISTRICT
OF PEORIA, ILLINOIS

BY: TIMOTHY J. CASSIDY, President

BY: CARLEY ALLENSWORTH, Secretary

TABLE OF CONTENTS

083613 SECTIONAL DOORS
087100 DOOR HARDWARE

DIVISION 09 – FINISHES
099113 EXTERIOR PAINTING

DIVISION 13 – SPECIAL CONSTRUCTION
133420 POST-FRAME BUILDING

DIVISION 22 – PLUMBING
220529 SUPPORTS AND ANCHORS FOR PLUMBING
221100 WATER PIPING
221119 DOMESTIC WATER PIPING SPECIALTIES

DIVISION 23 – HEATING, VENTILATION, AND AIR CONDITIONING
230529 SUPPORTS AND ANCHORS FOR HVAC
230593 TESTING, ADJUSTING AND BALANCING FOR HVAC
230900 TEMPERATURE CONTROLS
233100 DUCTWORK
233300 AIR DUCT ACCESSORIES
233423 FANS
233713 DIFFUSERS, REGISTERS AND GRILLES

DIVISION 26 – ELECTRICAL
260500 COMMON WIRE RESULTS FOR ELECTRICAL
260519 LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
260526 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
260533 RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
290553 IDENTIFICATION FOR ELECTRICAL SYSTEMS
262416 PANELBOARDS
262726 WIRING DEVICES
265100 INTERIOR LIGHTING
265600 EXTERIOR LIGHTING

DIVISION 31 – EARTHWORK
312000 EARTH MOVING

DIVISION 32 – EXTERIOR IMPROVEMENTS
321216 ASPHALT PAVING

DRAWINGS:

G000	TITLE SHEET
C1	NEWMAN - GRADING & STORM WATER PREV. PLAN
C2	KELLOGG – GRADING & STORM WATER PREV. PLAN
C3	NEWMAN – STORM WATER PREV. PLAN DETAILS
A100	KELLOGG – PLANS, ELEVATIONS, SCHEDULE
A101	NEWMAN – PLANS, ELEVATIONS, SCHEDULE
A102	NEWMAN/KELLOGG – SECTION
A103	NEWMAN – PARTIAL SECTION
A104	TYPICAL DETAILS
M100	KELLOGG – PLANS & DETAILS
M101	NEWMAN – PLANS, SECTIONS, DETAILS
E001	KELLOGG – SITE PLAN ELECTRICAL
E002	NEWMAN – SITE PLAN ELECTRICAL
E100	KELLOGG – FLOOR PLAN ELECTRICAL
E101	NEWMAN – FLOOR PLAN ELECTRICAL
E200	KELLOGG – ELECTR. PANEL SCHED. & SERV. DIAGRAM
E201	NEWMAN – ELECTR. PANEL SCHED. & SERV. DIAGRAM
E300	ELECTRICAL DETAILS
E500	LUMINAIRE & MATERIAL SCHED. & GEN. NOTES

END OF TABLE OF CONTENTS

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. INSTRUCTIONS TO BIDDERS

A. "Instructions to Bidders", AIA Document A701, 1997 Editions, published by the American Institute of Architects, including revisions adopted before date of this Project Manual, is hereby made part of these specifications with same force and effect as though set forth in full.

B. The following modifies, changes, deletes from or adds to the **Instructions to Bidders** (AIA Document A701, 1997 Edition). Where any Article of the Instructions to Bidders is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

C. Parenthesis ( ) indicates the appropriate section and Subparagraph of the Instructions to Bidders which each paragraph of the Supplementary Instructions to Bidders modifies or refers to.

2. PROJECT DESCRIPTION

A. The Project description generally is as follows:

1. BASE BID #1 (Newman Building only):
Provide and install new pre-engineered post frame wood and metal building, excavation and fill as needed below all slabs and aprons, new concrete footings, electrical work, ventilation, plumbing work, and grading.
Demolition of existing structure by Owner. New concrete aprons, stoops, and floor slab by Owner. Final grading, topsoil, and seeding by Owner. Existing fuel tank relocation by Owner.

2. BASE BID #2 (Kellogg Building only):
Provide and install new pre-engineered post frame wood and metal building, new concrete footings, electrical work, ventilation, and grading.
New concrete apron, stoop, and floor slab by Owner. Final grading, topsoil, and seeding by Owner.

3. BASE BID #3 (Both Newman & Kellogg Buildings):
Provide and install new pre-engineered post framed wood and metal buildings, excavation and fill below all slabs and aprons, new concrete footings, electrical work, ventilation, plumbing work, and grading for both sites.
Demolition of existing structure at Newman by Owner. New concrete aprons, stoops, and floor slabs by Owner. Final grading, topsoil, and seeding by Owner. Existing fuel tank relocation by Owner.

The project may be awarded to two differing contractors or one contractor for both sites.

B. PRE-BID MEETING:

1. A pre-bid meeting will be held at Newman Golf Course on Tuesday, March 26, 2019 at 1 :00 p.m..

4. CODES AND PERMITS

A. COSTS ASSOCIATED WITH REGULATORY COMPLIANCE. All Work performed in connection with this Project shall be in compliance with the requirements of all applicable local, state, and federal laws, regulations, and rules, as well as the requirements of the Construction Documents. The Bid Price shall reflect all costs of compliance to those requirements, whether or not specifically stated in the Construction Documents or specific sections of the Project Manual.

B. PERMITS/FEES. Work shall not commence until all required building (and/or other) permits have been secured by the Contractor and copies of these permits submitted to the Owner's Representative. Cost of permits is to be included in the Bid Price.

5. BID GUARANTY

The bid must be accompanied by a Bid Guaranty which shall not be less than 10% of the amount of the Bid. At the option of the Bidder, the 10% Guaranty may be a Certified Check, Cashier's Check, or a Bid Bond. The Bid Bond shall be secured by a Guaranty or a Surety Company acceptable to the Owner. No bid will be considered unless it is accompanied by the required Guaranty. Funds must be made payable to the order of the Owner. Cash deposits will not be accepted. The Bid Guaranty shall ensure the execution of the Agreement and the furnishing of the Surety Bond or Bonds by the successful Bidder, all as required by the Contract Documents.

6. AWARD OF CONTRACT/REJECTION OF BIDS:

The Contracts will be awarded on the basis of Paragraph 5.3 of the Instructions to Bidders. The Bidders to whom the awards are made will be notified at the earliest possible date. The Owner, however, reserves the right to reject any and all Bids, to accept any combination of base bids and alternates and to waive any technical deficiencies, informalities, or irregularities in Bids received whenever such rejection or waiver is in its interest.

No bid shall be withdrawn for a period of sixty (60) days after the opening of bids without the consent of the Owner. The failure of the Bidder to submit a Bid Bond, Certified Check or Cashier's Check in the full amount to cover all proposals bid upon shall be sufficient cause for rejection of his bid. The award will be made contingent upon submittal and evaluation of Contractor's Qualification Statement, Bonds,

Certificate of Insurance, Contractor Certification(s), including Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors, etc.

7. EXECUTION OF AGREEMENT:

Subsequent to the award and within ten (10) days after the prescribed forms are prepared and presented for signature by the Owner's Representative, the successful Bidder shall execute and return to the Owner's Representative an Agreement in the form included in the Contract Documents in such number of copies as the Owner may require. The President of the Board of Trustees will complete execution of Agreement after all bonds and any other required documents have been received by the Park District. One fully executed copy of Agreement will then be returned to Contractor.

8. PERFORMANCE BOND/LABOR AND MATERIAL PAYMENT BOND & INSURANCE

A. **BONDS REQUIRED**. Having satisfied all conditions of award as set forth elsewhere in these Documents, the successful Bidder shall, within ten (10) calendar days after award of contract, furnish Surety Bonds in penal sums, each not less than the amount of the Contract as awarded as security for the faithful performance of the Contract (Performance Bond), and for the payment (Labor and Materials Payment Bond) of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment or services employed or used by him in performing the work.

B. **FORM OF BONDS**. **Such bonds shall be in the same form as the samples included in the Project Manual** and shall bear the same date as or a date subsequent to that of the Agreement. The current Power of Attorney for the person who signs for any Surety Company shall be attached to such Bonds. Bonds shall be signed by a Guaranty or Surety Company acceptable to the Owner.

C. **COST OF PERFORMANCE BOND/LABOR AND MATERIAL PAYMENT BOND**. All costs for the Performance Bond/Labor and Material Payment Bond shall be included in the submitted Bid Price.

D. **INSURANCE.** Insurance requirements for this project are addressed both in the Supplementary General Conditions and in "Attachment A.6", in the "Exhibits" section of this Project Manual.

a) In respect to the property ("builders risk") insurance coverages referenced in the Supplementary General Conditions: the successful Bidder will be required to provide such coverages as the work of the Project will be accomplished by general contractors.

E. **TIME FRAMES.** The successful Bidder shall, within ten (10) days after award of contract by the Board of Trustees, submit Proof of Insurance coverages/Bonds in the form and amounts required to the Owner's Representative. Should the Bidder be unable to provide the required Proof of Insurance(s)/Bonds within the specified ten day period the Owner reserves the right, at its sole discretion, to withdraw its award of contract from that Bidder.

9. DEFAULT

A. The failure of the successful Bidders to execute the Agreement, supply the required Bonds or proof of required insurance coverage(s) within (ten) 10 days after award of contract, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Owner, may constitute a default. In such case, award of contract will be transferred to the second lowest bidder.

10. CONTRACTOR'S QUALIFICATION STATEMENT

A. Contractor's Qualification Statement (AIA Document 305) shall be submitted by low bidder for evaluation prior to award of contract if so requested by the Owner or his representatives.

11. LIST OF SUBCONTRACTORS/PRODUCT & EQUIPMENT SUBSTITUTIONS

A. Each Bidder shall submit a "MAJOR SUBCONTRACTORS LIST" proposed to be used in the execution of the Work. If there will be no subcontractors, the Bidder shall state "No Subcontractors" on this form. The completed form is due with the Bid Proposal.

1) Identify the trade name, address, telephone number, and category of work of each subcontractor.

2) Failure to submit the "Major Subcontractors List" with the Bid Proposal may result in the rejection of the Bid.

3) Delete Subparagraphs (6.3.1.1) and (6.3.1.2) from AIA A701.

B. The Bidder, by submission of a signed bid form, agrees to install all products and equipment by brand name or names specified in the Technical Specifications sections of this Project Manual. "Or equal" substitutions will be allowed only if approved in writing prior to the bid opening and listed in the "Substitutions" section of the Bid Form.

12. CONTRACT ADMINISTRATION FORMS/COSTS OF FORMS

A. **REQUIRED FORMS**. The following AIA forms will be used (AIA forms will be supplied by the Owner if requested, and charged to the Contractor at cost) in the administration of the project:

1) **AIA Document A310**: "Bid Bond", February 1970 edition

2) **AIA Document A305**: "Contractor's Qualification Statement", 1986 edition

3) **AIA Document G702**: "Application and Certificate of Payment", May 1992 edition

4) **AIA Document G703**: "Continuation Sheet", May 1992 edition

B. **OTHER FORMS**. Other contract administration forms (to be provided by the Owner unless otherwise noted) required for use in the Project are:

1) **Major Subcontractors List**

2) **Contractor's Affidavit**

3) **Individual Contractor Form**

4) **Corporate or Partnership Form**

5) **Performance Bond**

6) **Labor and Material Payment Bond**

7) **Lien Waiver Forms**

8) **Weekly Workforce Report**

9) **Certified Payroll Form** (Contractor may use own form)

10) **Insurance Forms: As required in Attachment A (at end of Project Manual)** (will not be provided by Owner)

11) **Agreement Between Owner and Contractor**

Examples of these forms are included in the Project Manual.

13. CONSTRUCTION TIME AND LIQUIDATED DAMAGES CLAUSE:

2.5.1 **PROJECT COMPLETION**. The Agreement will include the following paragraph(s) or language substantially the same, regarding construction time and liquidated damages:

1) LIQUIDATED DAMAGES: Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not Substantially Complete within the time specified below, plus any extensions thereof allowed in accordance with Article 8 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time.

2) Accordingly, instead of requiring any such proof, Owner and Contractor agree that as Liquidated Damages for delay (but not as a penalty) Contractor shall pay Owner ONE HUNDRED DOLLARS ($100.00) for each calendar day that expires after one hundred thirteen (113) calendar days from Notice of Award until Substantial Completion is attained. The work is tentatively scheduled to begin on April 11, 2019 and be at Substantial Completion by August 1, 2019.

3) After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work necessary to achieve Final Completion within fourteen (14) calendar days or any proper extension thereof granted by Owner, Contractor shall pay Owner ONE HUNDRED DOLLARS ($100.00) for each day that expires after the time specified.

4) Owner and Contractor agree that the per day liquidated damage amounts set forth in subparagraphs "2" and "3" of this section constitute a reasonable forecast of the financial losses, actual costs and increased expenses the Owner may incur as a result of delayed Substantial or Final Completion of the Project.

14. PROJECT MANUAL/PLANS & SITE VISITATION

A. A set of Bid Documents may be examined, at no charge, at the office of the Owner's Representative.

B. **PLAN DEPOSIT**. An electronic file including Bid Documents is available at www.peoriaparks-planning.org at no charge. A printed set of Bid Documents, including Plans, Specifications and Interpretations for this project may be obtained at the Planning, Design & Construction Department, Bradley Park Equipment Service, 1314 N. Park Road, Peoria, IL 61604. Telephone (309)686-3386. A non-refundable plan deposit of $75.00 will be charged for each printed set of Bid Documents.

C. **FAMILIARITY WITH BID DOCUMENTS & SITE VISITATION**. Bidders, by submission of their Bids, represent that they have visited the site to acquaint themselves with the local conditions in which the Work is to occur, and that they are familiar with all the requirements of the Project, as defined in the Project Manual and the Plan(s).

15. OTHER MODIFICATIONS TO AIA-701/OTHER CONDITIONS

A. Add the following sentence to **(4.1.7)**: "Bidder shall submit two (2) completed copies of Bid Form and retain one (1) copy for his files."

B. Delete Section **(6.2)** - "Owner's Financial Capability"; and last sentence of Paragraph **(4.2.1.)**

C. In reference to (**7.2.1**), the Peoria Park District reserves the right of final approval of bonding companies.

D. Delete paragraph **(7.1.3).**

16. EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION/SEXUAL HARASSMENT

A. The "Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors Form" and "Workforce Profile" and "Sexual Harassment Policy" shall be filled out and returned with the Bid. Failure to submit a completed "Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors Form" and "Workforce Profile" and "Sexual Harassment Policy" may result in rejection of the bid.

B. Effective July 1, 1993, every party to a public contract and every party bidding on public contracts is required to have a written **"Sexual Harassment Policy"** that contains:

1) A definition of sexual harassment under state law;

2) A description of sexual harassment utilizing examples;

3) A formalized complaint procedure;

4) A statement of victim's rights;

5) Directions on how to contact the Illinois Department of Human Rights **- Illinois companies**. Out-of-State companies must include directions on how to contact the enforcement agency within their state. Companies that issue a standard policy for all business locations must prepare an addendum providing directions on how to contact the appropriate enforcement agency.

6) A recitation that there cannot be any retaliation against employees who elect to file charges.

Recommendation: Your **"Sexual Harassment Policy"** should be drafted in language easy to understand and any revisions should be reviewed by legal counsel. A copy of your policy should be posted in a prominent and accessible location to assure all employees will be notified of the company's position.

In order to conduct business with the Peoria Park District, you must have a written "Sexual Harassment Policy" that conforms to the new Act.

FAILURE TO DO SO WILL DISQUALIFY YOU AS AN ELIGIBLE VENDOR.

C. Lowest responsible bidder not meeting the Park District's goal of 12% for minority/women participation, must provide proof of efforts made in contacting an adequate number of minority and women owned firms and/or labor.

17. BID SUBMISSION

A. **DATE, TIME & PLACE OF RECEIVING BIDS**. Bids will be received until the date and time listed in the "Advertisement for Bids", at which time they will be publicly opened, read aloud and recorded. The Bid Opening will be held at the place listed in the "Advertisement for Bids".

B. **REQUIRED ITEMS**. The following items must be included as part of the "BID":

1) Two (2) signed copies of the **BID FORM**. (Retain the third copy for your files.)

2) The **PEORIA PARK DISTRICT CERTIFICATE OF EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE FOR CONTRACTORS AND VENDORS FORM** and **SEXUAL HARASSMENT POLICY.**

3) The **WORKFORCE PROFILE.**

4) The **ILLINOIS DRUG FREE WORKPLACE CERTIFICATION**.

5) The **CONTRACTOR CERTIFICATION** (individual or corporate/partnership).

6) The **LIST OF SUBCONTRACTORS**. (Submit form and state "No Subcontractors" on the form, if none will be used.)

7) The **BID GUARANTY.**

8) The **CERTIFICATION OF SAFETY COMPLIANCE.**

9) **SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION**

C. **BID SUBMISSION**. The "BID" shall be enclosed in envelopes (outer and inner), both of which shall be sealed and clearly labeled with the following information, in order to prevent premature opening of the bid:

- "PROPOSAL"
- NAME OF PROJECT
- NAME OF BIDDER
- DATE/TIME OF BID OPENING

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Bid From: _____

PROJECT NO. 17-012
BID FOR: GOLF STORAGE BUILDINGS
LOCATION: NEWMAN & KELLOGG GOLF

BID FORM

BID TO: PEORIA PARK DISTRICT

UNDERSIGNED:

1. Acknowledges receipt of:

   A. Project Manual and Drawings for:

   _____

   B. Addenda: No. _____ through No. _____

2. Has examined facility and the bid documents and shall be responsible for performing work specifically required of him by all parts of bidding documents including specifications for entire project, even though such work may be included as related requirements specified in other divisions or sections.

3. And agrees to enter into and execute Contract with Owner, if awarded on basis of this bid, and to:

   A. Furnish Bonds and Insurance required by the Bidding & Contract Documents.

   B. Accomplish work in accord with Contract.

   C. Complete work within specified Contract time.

4. **CONTRACT TIME**: Contractor agrees to Substantially Complete ALL WORK as required by the Contract Documents per the Supplementary General Conditions and Supplementary Instructions to Bidders.

5. **BASE BIDS**:

   A. Base Bid #1 (Newman Building only):
   Bidder agrees to perform all building and site work, as set forth in the Project Manual and Drawings for the sum of:

   _____ Dollars ($_____._____)

   B. Base Bid #2 (Kellogg Building only):
   Bidder agrees to perform all building and site work, as set forth in the Project Manual and Drawings for the sum of:

   _____ Dollars ($_____._____)

   C. Base Bid #3 (Both Newman & Kellogg Buildings):
   Bidder agrees to perform all building and site work, as set forth in the Project Manual and Drawings for the sum of:

   _____ Dollars ($_____._____)

6. **PROPOSED SUBSTITUTION LIST:**

Base Bid(s) and Alternates are understood to include only those product brands, items, and elements which are specified in the Bid Documents. The following is a list of substitute products, equipment or methods of construction which the Bidder proposes to furnish on this project, with difference in price being added or deducted from Base Bid(s).

Bidder understands that acceptance of any proposed substitution which has not been approved as an "equal" to the product brand, item, or element specified prior to bid opening is at Owner's option. Approval or rejection of any substitutions listed below will be indicated before executing Contract.

ITEM	ADD	DEDUCT
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____

7. **BIDDERS CHECKLIST:**

Did you visit the site?	Yes	No
Is Bid Security enclosed? (If applicable)	Yes	No
Is Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors and Sexual Harassment Policy enclosed?	Yes	No
Is Workforce Profile enclosed?	Yes	No
Is List of Subcontractors enclosed?	Yes	No
Is Contractor Certification enclosed?	Yes	No
Is Ill. Drug Free Workplace Certification enclosed?	Yes	No
Is Certificate of Safety Compliance enclosed?	Yes	No
Is Substance Abuse Prevention Program Certification enclosed?	Yes	No

8. **BIDDER INFORMATION**:

NAME OF BIDDER:_____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NO.: _____

BY: _____
(Signature of Authorized Official)

TITLE: _____

BIDDER'S SEAL

WITNESS: _____

END OF BID FORM

Peoria Park District

Certificate of Equal Employment Opportunity Compliance
for
Contractors and Vendors

Disclosure of the information requested in this form is required by the Peoria Park District. Failure to properly complete and sign this form will result in it being returned unprocessed thereby resulting in a delay or denial of eligibility to bid.

As part of the Company's commitment to equal employment opportunity practices, this company does the following:

- Recruits, trains, upgrades, promotes and disciplines persons without regard to race, color, sex, religion, national origin, veteran status, age, mental or physical ability.
- Notifies all recruitment sources that all qualified applicants will be considered for employment without regard to race, color, sex, religion, national origin, veteran status, age, mental or physical ability.
- When advertising is used, specifies that all qualified applicants will be considered for employment without regard to race, color, sex, religion, national origin, veteran status, age, mental or physical ability.
- Notifies all labor organizations which furnish this company with any skilled or non-skilled labor of the Company's responsibility to comply with the equal employment opportunity requirements required in all contracts by the Peoria Park District.
- Notifies all of its sub-contractors of their obligation to comply with the equal employment opportunity requirements required in all contracts by the Peoria Park District.
- Has an affirmative action program that assures the company's fair employment practices are understood and carried out by all of its managerial, administrative and supervisory personnel.

Is the Company a minority/woman owned business (MBE/WBE)? ___NO ___ YES, if yes ___MBE or ___WBE?

The Company does not discriminate against any employees or applicants for employment because of race, color, religion, sex, national origin, veteran status, age, mental or physical ability.

The Company does not maintain segregated facilities for any of its employees on the basis of race, religion, color, national origin, because of habit, local custom, or otherwise.

The Company has a written sexual harassment policy meeting the Illinois Department of Human Rights requirements.

By signing this form, the Company attests that it complies with all statements listed above as part of the Company's commitment to equal employment opportunity practices. The Company further agrees that it has completed the attached Workforce Profile Sheet truthfully, to the best of its knowledge.

_____	_____
Company Name	Company Address
_____	_____
Signature of Company Official	Name / Title
_____	_____
Telephone Number & Fax Number	Email Address

Rev. 9/2017

WORKFORCE PROFILE

Job Classifications	Black Employees		White Employees		Hispanic Employees		Native American Employees		Asian Employees		Other Employees		TOTAL EMPLOYEES	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1. Officials, Managers, Supervisors														
2. Professionals														
3. Technicians														
4. Sales														
5. Office/Clerical														
6. White Collar Trainees:														
7. Skilled Crafts:														
8. Apprentices:														
9. On-the-job Trainees:														
10. Semi-skilled														
11. Service Workers														
12. Unskilled														
TOTALS														

Company Name: _____

WORKFORCE PROFILE INSTRUCTIONS

RACE/ETHNIC IDENTIFICATION

WHITE (not of Hispanic origin): All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

BLACK (not of Hispanic origin): All persons having origins in any of the Black racial groups of Africa.

HISPANIC: All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

ASIAN or PACIFIC ISLANDER: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

NATIVE AMERICAN or ALASKAN NATIVE: All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

DESCRIPTION OF JOB CLASSIFICATIONS

OFFICIALS, MANAGERS, AND SUPERVISORS - Occupations requiring administrative personnel who set broad policies, and exercise over-all responsibility for the execution of these policies, and direct individual departments or special phases of a firm's operations. Includes: officials, executives, middle management, plant managers, department managers/superintendents, salaried foremen who are members of management, purchasing agents and buyers, and kindred workers.

PROFESSIONALS - Occupations requiring either college graduation or experience of such kind and amount as to provide a comparable background. Includes: accountants/auditors, airplane pilots and navigators, architects, artists, chemists, designers, dietitians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, personnel and labor relations workers, physical scientists, physicians, social scientists, teachers, and kindred workers.

TECHNICIANS - Occupations requiring combination of basic scientific knowledge and manual skill which can be obtained through about 2 years of post high school education, such as is offered in many technical institutes and junior colleges, or through equivalent on-the-job training. Includes: drafters, engineering aids, junior engineers, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronic physical sciences), and kindred workers.

SALES WORKERS - Occupations engaging wholly or primarily in direct selling. Includes: advertising agents/salespersons, insurance agents/brokers, real estate agents/brokers, stock and bond salespersons, demonstrators, salespersons and sales clerks, and kindred workers.

OFFICE AND CLERICAL WORKERS - Includes all clerical type work regardless of level of difficulty, where the activities are predominantly non-manual though some manual work not directly involved with altering or transporting the products is included. Includes: bookkeepers, cashiers, collectors (bills and accounts), messengers and office couriers, office machine operators, shipping and receiving clerks, stenographers, typist and secretaries, telegraph and telephone operators, and kindred workers.

WHITE COLLAR TRAINEES - Persons engaged in formal training for official, managerial, professional, technical, sales, office and clerical occupations.

SKILLED CRAFTS - Manual worker of relatively high skill level having a thorough and comprehensive knowledge of the processes involved in their work. Exercise considerable independent judgment and usually receive an extensive period of training. Includes: the building trades hourly paid foremen and leadmen who are not members of management, mechanics and repairmen, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors and tailoresses, and kindred workers.

APPRENTICES - Persons employed in a program including work training and related instruction to learn a trade or craft which is traditionally considered an apprenticeship, regardless of whether the program is registered with a Federal or State agency.

ON-THE-JOB TRAINEES - Persons engaged in formal training for craftsmen when not trained under apprentice programs; semi-skilled, unskilled and service occupations.

SEMI-SKILLED WORKERS - Workers who operate machine or processing equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require only limited training.

SERVICE WORKERS - Workers in both protective and non-protective service occupations. Includes: attendants (hospital and other institution, professional and personal service), barbers, charwomen and cleaners, cooks (except household), counter and fountain workers, elevator operators, fire fighters, guards, watchmen and doorkeepers, stewards, janitors, police officers and detectives, porters, waiters and waitresses, and kindred workers.

UNSKILLED WORKERS - Workers in manual occupations which generally require no special training. Perform elementary duties that may be learned in a few days and require the application of little or no independent judgement. Includes: garage laborers, car washers and greasers, gardeners (except farm) and groundskeepers, longshoremen and stevedores, lumbermen, craftsmen and wood choppers, laborers performing lifting, digging, mixing loading and pulling operations, and kindred workers.

P L E A S E B E A D V I S E D !

Every party to a public contract and every party bidding on public contracts are required to have a written sexual harassment policy that contains:

(1) a definition of sexual harassment under state law:

(2) a description of sexual harassment utilizing examples;

(3) a formalized complaint procedure;

(4) a statement of victims rights;

(5) directions on how to contact the Illinois Department of Human Rights – **Illinois companies. Out-of-State** companies must include directions on how to contact the enforcement agency within their state. Companies that issue a standard policy for all business locations must prepare an addendum providing directions on how to contact the appropriate enforcement agency.

(6) a recitation that there cannot be any retaliation against employees who elect to file charges.

Recommendation: Your sexual harassment policy should be drafted in language easy to understand and any revisions should be reviewed by legal counsel. A copy of your policy should be posted in a prominent and accessible location to assure all employees will be notified of the company's position.

In order to conduct business with the PEORIA PARK DISTRICT, you must have a written sexual harassment policy that conforms to the new ACT.

FAILURE TO DO SO
WILL DISQUALIFY YOU AS AN ELIGIBLE VENDOR!!!

Please be advised, effective July 1, 1993, Governor Jim Edgar established under Executive Order Number 7 (Public Act 87-1257) that every party to a public contract and every party bidding on a public contract within the State of Illinois must have a written policy statement prohibiting sexual harassment. The following model policy statement is a draft copy provided for use in formulating your company's policy statement

SEXUAL HARASSMENT POLICY STATEMENT

It is the responsibility of each individual employee to refrain from sexual harassment and it is the right of each individual employee to work in an environment free from sexual harassment.

DEFINITION OF SEXUAL HARASSMENT
According to the Illinois Human Rights Act, sexual harassment is defined as:

Any unwelcome sexual advances or requests for sexual favors or any conduct of a sexual nature when

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment;
2. submission to or rejection of such conduct by an individual is used as the basis for employment decision(s) affecting such individual; or
3. such conduct has the purpose or effect of substantially interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment.

The courts have determined that sexual harassment is a form of discrimination under Title VII of the U.S. Civil Rights act of 1964, as amended in 1991. One such example is a case where a qualified individual is denied employment opportunities and benefits that are, instead, awarded to an individual who submits (voluntarily or under coercion) to sexual advances or sexual favors. Another example is where an individual must submit to unwelcome sexual conduct in order to receive an employment opportunity.

Other conduct commonly considered to be sexual harassment includes:

⇒ Verbal: Sexual innuendoes, suggestive comments, insults, humor and jokes about sex, anatomy or gender-specific traits, sexual propositions, threats, repeated requests for dates, or statement about other employees, even outside of their presence, of a sexual nature.

⇒ Non-Verbal: Suggestive or insulting sounds (whistling), leering, obscene gestures, sexually suggestive bodily gestures, "catcalls", "smacking" or "kissing" noises.

⇒ Visual: Posters, signs, pin-ups, slogans of a sexual nature.

⇒ Physical: Touching, unwelcome hugging or kissing, pinching, brushing the body, coerced sexual intercourse or actual assault.

Sexual harassment most frequently involves a man harassing a woman. However, it can also involve a woman harassing a man or harassment between members of the same gender.

The most severe and overt forms of sexual harassment are easier to determine; however, some sexual harassment is more subtle and depends to some extent on individual perception and interpretation. The trend in the courts is to assess sexual harassment by a standard of what would offend a "reasonable woman" or a "reasonable man", depending upon the gender of the alleged victim.

An example of the most subtle form of sexual harassment is the use of endearments. The use of terms such as "honey", "darling", and "sweetheart" is objectionable to many women who believe that these terms undermine their authority and their ability to deal with men on an equal and professional level.

Another example is the use of a compliment that could potentially be interpreted as sexual in nature. Below are three statements that might be made about the appearance of a woman in the workplace:

- ⇒ "That's an attractive dress you have on."
- ⇒ "That's an attractive dress. It really looks good on you."
- ⇒ "That's an attractive dress. You really fill it out well."

The first statement appears to be simply a compliment. The last is most likely to be perceived as sexual harassment depending on individual perceptions and values. To avoid the possibility of offending an employee, it is best to follow a course of conduct above reproach, or to err on the side of caution.

RESPONSIBILITY OF INDIVIDUAL EMPLOYEES

Each individual employee has the responsibility to refrain from sexual harassment in the workplace. An individual employee who harasses a fellow worker is, of course, liable for his or her individual conduct. The harassing employee will be subject to disciplinary action up to and including discharge in accordance with company/organization policy or a collective bargaining agreement, as appropriate.

RESPONSIBILITY OF SUPERVISORY PERSONNEL

Each supervisor is responsible for maintaining a workplace free of sexual harassment. This is accomplished by promoting a professional environment and by dealing with sexual harassment as with all other forms of employee misconduct.

The courts have found companies/organizations as well as supervisors can be held liable for damages related to sexual harassment by a manager, supervisor, employee, or third party (an individual who is not an employee but does business with a company/organization, such as a contractor, customer, sales representative, or repair person).

Liability is based either on a company/organization's responsibility to maintain a certain level of control and discipline, or on the supervisor acting as an agent of the company/organization. As such, supervisors must act quickly and responsibly, not only to minimize their own liability, but also that of the company/organization.

RESOLUTION OUTSIDE THE COMPANY/ORGANIZATION

It is hoped that most sexual harassment complaints and incidents can be resolved within a company/organization. However, an employee has the right to contact the Illinois Department of Human Rights (IDHR) or the U.S. Equal Employment Opportunity Commission (EEOC) about filing a formal complaint. An IDHR complaint must be filed within 180 days of the alleged incident(s) unless it is a continuing offense. A complaint with EEOC must be filed within 300 days.

Illinois Department of Human Rights
(217) 785-5100 – Springfield
(217) 785-5125 – TDD Springfield
(312) 814-6200 – Chicago
(312) 263-1579 – TDD Chicago

Illinois Human Rights Commission
(217) 785-4350 – Springfield
(217) 785-5125 – TDD Springfield
(312) 814-6269 – Chicago
(312) 814-4760 – TDD Chicago

U.S. Equal Employment Opportunity Commission
(312) 353-2613 – Chicago District Office
(800) 669-4000 – Toll Free Within State of Illinois
(800) 669-6820 – TDD Chicago

An employee who is suddenly transferred to a lower paying job or passed for promotion, after filing a complaint with IDHR or EEOC, may file a retaliation charge, also due 180 days (IDHR) or 300 days (EEOC) from the alleged retaliation.

An employee who has been physically harassed or threatened while on the job may also have grounds for criminal charges of assault and battery.

FALSE AND FRIVOLOUS COMPLAINTS

False and frivolous charges refer to cases where the accuser is using a sexual complaint to accomplish some end other than stopping sexual harassment. It does not refer to charges made in good faith which cannot be proven. Given the seriousness of the consequences for the accused, a false and frivolous charge is a severe offense that can itself result in disciplinary action.

ILLINOIS DRUG FREE WORKPLACE CERTIFICATION

The undersigned Contractor/Vendor hereby certifies that it will comply with all provisions of the Illinois Drug Free Workplace Act of 1991.

Dated this _____ day of _____, 20 _____

Contractor/Vendor

_____

By: _____

SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION

Project Name:_____

Location:_____

The Substance Abuse Prevention on Public Works Act Public Act 95-0635, prohibits the use of drugs and alcohol, as defined in the Act, by employees of the Contractor and by employees of all approved Subcontractors while performing work on a public works project. The Contractor/Subcontractor herewith certifies that it has a superseding collective bargaining agreement or makes the public filing of its written substance abuse prevention program for the prevention of substance abuse among its employees who are not covered by a collective bargaining agreement dealing with the subject as mandated by the Act.

A.The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has signed collective bargaining agreements that are in effect for all of its employees, and that deal with the subject matter of Public Act 95-0635.

_____
Contractor/Subcontractor

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____
Signature of Authorized RepresentativeDate

B.The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has in place, for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act, the attached substance abuse prevention program that meets or exceeds the requirements of Public Act 95-0635.

_____
Contractor/Subcontractor

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____
Signature of Authorized RepresentativeDate

CERTIFICATION OF SAFETY COMPLIANCE

The undersigned Contractor/Vendor hereby certify that they and their sub-contractors will comply with any and all prevailing occupational safety and health standards including, but not limited to the following: hazard communication, hearing conservation, respirator use, permit required confined space entry, scaffolding, personal protective equipment, ladder usage, ventilation, flammable and combustible liquids handling and storage and lockout/tagout. Such compliance may include a training component or require a written program of compliance.

Dated this day of _____, 20 _____.

CONTRACTOR/VENDOR: _____

By: _____

PLEASURE DRIVEWAY AND PARK DISTRICT

OF PEORIA, ILLINOIS

Individual Contractor Form

CONTRACTOR CERTIFICATION

I, _____, do hereby certify that I am a contractor who has not been barred from bidding on a public contract as a result of a violation of either Section 33E-3 (bid-rigging) or Section 33E-4(bid rotating) of the Illinois Criminal Code, Illinois Compiled Statutes 720 ILCS 5/33E-3 and 5/33E-4.

_____
Contractor

By: _____

Subscribed and Sworn before me this _____ day of _____, 20____

_____
Notary Public

My Commission Expires _____, 20_____

PLEASURE DRIVEWAY AND PARK DISTRICT

OF PEORIA, ILLINOIS

Corporate or Partnership Contractor Form

CONTRACTOR CERTIFICATION

I, _____, a duly authorized agent of
(Agent)

_____, do hereby certify that neither
(Contractor)

_____, nor any individual presently
(Contractor)

affiliated with _____, has been barred from
(Contractor)

bidding on a public contract as a result of a violation of either Section 33E-3 (bid-rigging) or Section 33E-4 (bid rotating) of the Illinois Criminal Code, Illinois Compiled Statutes, 720 ILCS 5/33E-3 and 5/33E-4.

_____
Contractor

By: _____

Subscribed and Sworn before me this _____ day of _____, 20____

_____
Notary Public

My Commission Expires _____, 20_____

MAJOR SUBCONTRACTORS LIST

The following tabulation of Major Subcontractors shall be attached and made a condition of the Bid. The Bidder expressly understands and agrees to the following provisions:

A. If awarded a Contract as a result of this Bid, the major subcontractors used in the prosecution of the work will be those listed below.
B. The following list includes all subcontractors who will perform work representing 5% (five percent) or more of the total Base Bid.
C. The subcontractors listed below are financially responsible and are qualified to perform the work required.
D. The subcontractors listed below comply with the requirements of the Contract Documents.
E. Any substitutions in the subcontractors listed below shall be requested in writing by the Contractor and must be approved in writing by the Owner. No sub-subcontractors will be allowed unless specifically stated on the form. All pertinent financial, performance, insurance and other applicable information shall be submitted with the request for substitution(s). Owner shall respond to such requests within 14 calendar days following the submission of all necessary information to the full satisfaction of the Owner.
F. Failure to submit the list of Major Subcontractors as stated herein shall constitute a material variation from the Invitation to Bid; and any such Bid may be rejected by the Owner.

Subcontractor Name	Address	Telephone	Area of Work	Minority/Women Owned Business (Yes/No)

(Attach additional sheets if required)

END OF MAJOR SUBCONTRACTORS FORM

Directory of Minority & Women Owned Business Enterprises
Peoria Park District

Revised 1/2019

Absolute Risk Management Strategies Kelly Peterson	MBE Construction Safety, Job Site Safety Plan Development, Job Site Risk Assessment, Construction OSHA Training 416 Main St., Suite 533, Peoria, IL 61602	309-256-8471 309-222-4050 Cell
Adams Septic & Sewer Services, Inc. Michelle Adams	WBE Septic and Sewer Contractor 1641 N. Tiber Ridge Ct., East Peoria, IL 61611	309-691-6113
AFE Construction, Inc. Tommy and Monica Arbuckle	WBE General Contractor WBE P.O. Box 199, Mackinaw, IL 61755	309-303-7065 866- 491-2209 Fax Tommy.afeinc@hotmail.com
A & L Salvage, Inc. Archie Brown	MBE Clean Up, Tree Cutting & Removal, Truck Salvaging 824 W. Brons Peoria, IL 61604	309-682-4412
Alexander Brothers Construction Co. Allester Alexander	MBE Concrete, Demolition, Excavation, Landscaping P.O. Box 1508, Peoria, IL 61605	309-673-6768 abrosconst@aol.com
A. Lucas & Sons Steel Margaret Hanley	WBE Structural Steel Fabrication 1328 SW Washington, Peoria, IL 61602	309-673-8547 309-673-7213 Fax Margaret@alucasiron.com
Ambri Inc. Robert J. Hunt. Jr.	MBE Drywall, Flooring, Painting, Cabinetry 9101 S. Nashville Ave., Oak Lawn, IL 60453	708-233-0217 Ph/ Fax
A Unique Maintenance Service Andrea McKnight	MBE Commercial and Industrial Construction Cleanup 2101 N. North St., Peoria, IL 61604	309-685-7197 309-685-4472 Fax
BMI Contractors & Assoc. Sammy Hobson	MBE Excavation, Concrete 1123 MacQueen., Peoria, IL 61604	309-657-4469 Ph 309-713-1569 Fax
Braun Excavating, Inc. Teresa Braun	WBE Demolition, Digging of Footings, Excavation, Pipe Laying 24 Gulf Stream, Bartonville, IL 61607	309-697-5454 309-697-6567 Fax
Brown, Leo Trucking, Inc. Leo Brown	MBE Trucking/Hauling P. O. Box 9057, Peoria, IL 61612	309-685-6710 309-685-0759 Fax
Buddy's Landscaping Dexter Davis	MBE Landscaping P. O. Box 1836, Bloomington, IL 61702	309-824-9211 309-454-3342 Fax Dexterdavis2@aol.com
Central IL Construction Inc. Jessica Youngman	WBE Land Surveying 416 Germantown Rd., Germantown, IL 61548	309-383-3156
Central IL Consulting Jessica Youngman	WBE Land Surveying 416 Germantown Rd., Germantown, IL 61548	309-383-3156 youngman@mtco.com
Central IL Rebar Insulators Roger Fleming	MBE Structural Steel and Rebar Replacement 4719 Ridgelawn, Peoria, IL 61615	309-258-1379 888-387-5716 Fax
Central Landscaping Donna Brandenburg	WBE Landscaping 12512 Mendell Rd., Princeville, IL 61559	309-385-4832 309-385-2644 Fax
CJL Landscaping, Inc. Rebecca J. Kelch	WBE Landscaping 10902 W. U. S. Highway 150, Brimfield, IL 61517	309-691-9200 309-691-5131 Fax Meinders_81@yahoo.com
Clevenger Contractors Inc. Verlee Clevenger	WBE Guardrail, Bridge Rail, Seeding, Fencing 355 Naples Rd., P.O. Box 19, Bluffs, IL 62621	217-754-3411 217-754-3537 Fax clever@irte.net

CNS Forestry & Landscaping LLC Christine Schilling	WBE Landscaping, Seeding, Sodding, Tree Removal 1813 1000th St., Lincoln, IL 62656	217-792-3808 217-792-3808 Fax
Concrete to Perfection Elonda Whitfield	WBE/MBE Designs on Concrete concretetoperfection@gmail.com	309-681-9508
Cordova Construction Tina Christopher	WBE Concrete Removal, Curb & Gutter Removal, Sidewalk Removal 2424 N. Ellory Road, Peoria, IL 61615	309-674-8810
Cornerstone Builders & Developers Ron Touilly	WBE 6129 W. Southport Rd., Peoria, IL 61615	309-674-9000 309-673-7783 Fax
Creative Touch Painting Chris Ridge	MBE Painting Exterior/Interior 3318 N. Isabell Ave., Peoria, IL 61604	309-229-1253 309-643-7400 Cell info@creativetouchpnt.com
CSS (Construction Specialties & Services) Dave Suzuki	MBE Building Specialties, Design, Engineering, Estimating P. O. Box 120703 Peoria, IL 61614	309-685-8453
CWG Inc. Teresa Gustafson	WBE Demolition, Excavation, Trucking 24635 Cooper Rd., Morton, IL 61550	309-208-5461 Cell 309-208-8899 Cell tgusdesigns@yahoo.com
Davis Brothers Construction Company Russell Davis	MBE Trucking/Hauling 1522 W. Kettelle St. Peoria, IL 61605	309-683-6931
DECA Realty Eddie J. Washington	MBE Real Estate Broker, Appraiser 417 W. Main, Peoria, IL 61606	309-637-3322 309-682-3922 Fax
Design Air Inc. Courtney Eston	MBE Commercial Air Duct Cleaning 3806 W. Hearthwood Dr., Dunlap, IL 61525	309-693-8632 309-243-2102 Fax
Dunbar Transfer	WBE Trucking P.O. Box 315, Chillicothe, IL 61523-0315	309-303-5122
E & D Trucking and Hauling, Inc. Eddie Proctor	MBE Trucking/Hauling 1913 N. Idaho, Peoria, IL 61604	309-682-4336 309-251-6736 Cell
E. Davis Trucking Company Eric Davis	MBE Trucking edavistrucking@gmail.com	309-648-1450
Fire & Ice Heating and Air J.T. Toombs	MBE HVAC Maintenance, Installment 922 W. Smith St., Peoria, IL 61605	309-219-3708
Foster-Jacob Electric Emily Rudesill	WBE Electrical 826 W. Main St., Peoria, IL 61606	309-674-8129
Fuhrmann Engineering Inc. Kathy Shelter	WBE Civil Engineers / Land Surveyors 456 Fulton St., Suite 146	309-713-3498 Ext. 5
Flessner Electric	WBE Electrical 3600 S. Cameron Ln., Mapleton, IL 61547	309-697-2484
Foster-Jacob Electric Emily Rudesill	WBE Electrical 826 W. Main St., Peoria, IL 61606	309-674-8129
Garza Heating & Cooling	MBE HVAC 1304 S. Western Ave., Peoria, IL 61605	309-645-6294
Get Current Electrical Serv. Richard Rhodes	MBE Electrical 4210 N. Northbrook Ct. Richard_rhodes2001@yahoo.com	309-989-7931
Ronald A. Givens & Associates Ronald A. Givens	MBE Insurance & Investments 2616 N. Lehman, Peoria, IL 61602	309-685-4588 309-676-3152 Fax
GIVSCO Construction Ronald Givens	MBE General Contractor 2321 Lakeshore Dr., Pekin, IL 61554	309-620-9127
Gutters & More	WBE	309-694-4000

	157 Thunderbird Ln., East Peoria, IL 61611	309-694-3356 Fax
Hancock Trucking, Inc. Nancy Hancock	WBE Trucking/Hauling 30570 Hancock Road Mackinaw, IL 61755	309-447-6733
Hanley Steel, Inc. Jill Hanley	WBE Fabricated Structural and Miscellaneous Steel 8811 N. Industrial Rd., Peoria, IL 61615	309-692-5250 309-692-5251 Fax
Heart Technologies Jim Bainter, Brad Armstrong	WBE Data and Telephone, Communication and Construction 3105 N. Main Street, Peoria, IL 61611	309-427-7000 309-427-7007 Fax
Hermann & Associates Alisha Hermann	WBE Consultant Engineering 5835 N. Galena Rd., Peoria, IL 61614	309-687-5566 309-687-0571 Fax
Horan Construction, Inc. Susan Arnholt	WBE Carpentry, Concrete, Demolition, General, Wrecking 1720 W. Chanute Road Peoria, IL 61615	309-691-3133 309-691-1841 Fax
Infrastructure Engineering Thu Truitt	MBE Civil Engineering 456 Fulton St., Suite 104, Peoria, IL 61602	309-637-9200 309-637-9210
Intech Innovations John McCrary	WBE Audio/Video Design and Integration Washington, IL 61571	309-370-6676 309-745-9691 Fax
JC Construction Frank Coates	MBE General 1810 Stever, Peoria, IL 61605	309-303-3919 Cell
J & K Construction James Tillman	MBE General 4003 N. Rochelle, Peoria, IL 61615	309-685-8554 309-685-8554 Fax
JM Industrial Supply Ron Given	MBE Maintenance Items, Tools, Soaps 2323 Lakeshore, Pekin, IL 61554	309-346-5796 309-347-5100 Fax
Kahbeah Contracting & Trucking Larry Kahbeah	MBE Trucking/Hauling 510 N. Yates, P. O. Box 56, Tallula, IL 62688	217-634-4157 217-634-4157 Fax
Kreiling Roofing Co.	WBE Slate, Wood Shakes, Tile, Thatch, Custom Fabricated Copper and Steel, Residential and Commercial 2335 W. Altorfer Dr., Peoria, IL 61615	309-673-3649
LNR Construction & Trucking Demonte Davis	MBE Concrete, Trucking 2200 Linsley St., Peoria, IL 61604	309-682-6331
LV Enterprise John L. Palmer	MBE Trucking/Hauling 303 E. Archer Avenue, Peoria, IL 61603	309-657-2420 309-682-8872 Fax
M & A Plumbing Michael Abner	MBE Plumbing 6216 N. Devonshire Avenue, Peoria, IL 61615	309-689-0133 309-689-0133 Fax
M&K Heating & Cooling Reggie Williams	MBE HVAC 2406 W. Newman Parkway, Peoria, IL 61604	309-256-6129
M & L Plumbing Manzell Lawson	MBE Plumbing 1309 W. Lincoln, Peoria, IL 61605	309-674-8466
Mid-Illinois Companies, Corp.	WBE Metal Framing, Insulation, Drywall, Plaster and Exterior Insulation, Acoustical Ceilings and Wall Panels, Painting and Wall Covering, Access Flooring 905 NE Adams St., Peoria, IL 61603	309-674-0717 309-674-5802 Fax
Midwest Construction Services Sheila Shover	M/WBE Traffic Control Products, Trucking/Hauling P. O. Box 4185, Bartonville, IL 61607	309-697-1000 309-697-1004 Fax
Millennia Professional Services of IL Paul Moreno	MBE Civil Engineering, Erosion Control, Landscaping, Sewer Construction, Surveying, Retaining Walls 850 N. Main St., Morton, IL 61550	309-321-8141 309-321-8142
Molleck Electric	WBE Electrical 14926 W. Winchester Dr., Brimfield, IL 61517	309-446-3483
Ordaz Construction Co. Inc.	WBE Concrete	309-693-3338

Elizabeth Ordaz Mercer	8010 N. Sommer St., Peoria, IL 61615	309-693-5505 Fax
Porter, V. L. Vincent Porter	MBE Concrete, General 500 W. North, Suite 10, Springfield, IL 62704	217-744-8050
Reign Construction Bridget Booker	WBE/MBE Iron Worker 801 W. Main St., Suite A118, Peoria, IL 61606	309-495-7982 bridget@reignconstructioninc.com
RNS Electric Inc. Regina Slonneger	WBE Electrical 28558 Irish Lane, Washington, IL 61571	309-444-5200 309-444-5201 Fax
Rudd Trucking Nanette Jenkins-Rudd	WBE Trucking/Hauling P.O. Box 14, 107 Washington St., Kingston Mines, IL 61539	309-389-4150 309-389-2849 Fax
Rufus Construction Company Rufus Nelson	MBE Painting, Roofing, Remodeling 1819 S. Idaho Street, Peoria, IL 61605	309-673-6776 309-497-9453 Cell
Searle Trucking, Inc. Debbie Searle	WBE Trucking/Hauling P. O. Box 1084, Peoria, IL 61653	309-686-0708 309-688-5365 Fax
Tabitha Ventures, Inc. Edward O. Taiwo	MBE Asphalt, Concrete, Demolition, Earthwork, Electrical, Excavation, General, HVAC, Landscaping, Painting, Plumbing, Resurfacing, Roofing, Trucking/Hauling 2000 W. Pioneer Parkway, Suite 7B, Peoria, IL 61615	309-692-1473 309-692-1564 Fax
TEMCO Heating & AC Ellen Robinson	WBE Heating & AC 913 Laramie St. Peoria, IL 61605	309-637-7746
The Communication Connection Jennifer Stone	WBE Communication, Wire and Cable, Electrical and Telephone Prod. 604 Filmore Street Harrisburg, PA 17104	717-561-7267
Three Cross Development J. T. Donelson	MBE Concrete, General, Sidewalk 1519 W. Millman Peoria, IL 61605	309-637-1238
Thompson Brothers Inc. Todd Thompson	MBE General Carpentry and Construction, Interior Finish Work, Millwork 221 Court St., Pekin, IL 61554	309-613-0254
Thornton Rave dba Illini Concrete Co. of Illinois	MBE Precast and Prestressed Concrete, Demolition, Excavating and Grading, Drainage, Aggregate Bases and Surfaces, Pavement Patching 929 E. Grove St., Suite A, Bloomington, IL 61701	309-585-2376 309-585-2472 Fax
Tillman Electric James Tillman	MBE Electrical 4003 N. Rochelle, Peoria, IL 61615	309-685-8554 309-264-3903 Cell
Willie Veneble Construction Willie Venable	MBE Construction, Concrete Removal, Demolition 1000 E. Wilcox, Peoria, IL 61605	309-686-1429 309-360-0757 Cell
Willis Electric Phyllis Willis	WBE Electrical P.O. Box 545, Chillicothe, IL 61523	309-579-2926

IDOL Peoria Count Prevailing Wage

https://data.illinois.gov/dataset/idol-2018-prevailing-wage-rates/resource/0c95f063-aed9-4db7-adc3-c224acee8fc2

Effective Date	County	Trade Title	Region	Type	Class	Base Wage	Foreman Wage	OT M-F	OT Sa	OT Su	OT Hol	H/W	Pension	Vacation	Training	Other Fringe Benefit
8/15/2018	Peoria	ASBESTOS ABT-GEN	All	BLD		26.89	28.39	1.5	1.5	2	2	7.8	18.85	0	0.8	0
8/15/2018	Peoria	ASBESTOS ABT-GEN	All	HWY		30.53	32.03	1.5	1.5	2	2	8.2	21.45	0	0.85	0
11/5/2018	Peoria	ASBESTOS ABT-MEC	All	BLD		32.78	35.28	1.5	1.5	2	2	12.92	11.82	0	0.72	0
11/23/2018	Peoria	BOILERMAKER	All	BLD		40	43	2	2	2	2	7.07	18.19	0	0.4	0
8/15/2018	Peoria	BRICK MASON	All	BLD		34.1	35.6	1.5	1.5	2	2	10.35	11.32	0	0.82	0
8/15/2018	Peoria	CARPENTER	All	BLD		32.46		1.5	1.5	1.5	1.5	8.55	18	0	0.54	0
8/15/2018	Peoria	CARPENTER	All	HWY		34.66	36.91	1.5	1.5	2	2	8.55	18.6	0	0.52	0.13
8/15/2018	Peoria	CEMENT MASON	All	BLD		31.03		1.5	1.5	2	2	8.25	16.4	0	0.74	0
8/15/2018	Peoria	CEMENT MASON	All	HWY		32.73	34.23	1.5	1.5	2	2	8.5	17.27	0	0.63	0
8/15/2018	Peoria	CERAMIC TILE FNSHER	All	BLD		31.78	31.78	1.5	1.5	2	2	10.35	11.32	0	0.8	0
8/15/2018	Peoria	ELECTRIC PWR EQMT OP	All	ALL		45.09	56.52	1.5	1.5	2	2	7.1	12.62	0	0.45	0
8/15/2018	Peoria	ELECTRIC PWR GRNDMAN	All	ALL		30.81	56.52	1.5	1.5	2	2	6.67	8.62	0	0.31	0
8/15/2018	Peoria	ELECTRIC PWR LINEMAN	All	ALL		50.11	56.52	1.5	1.5	2	2	7.25	14.03	0	0.5	0
8/15/2018	Peoria	ELECTRIC PWR TRK DRV	All	ALL		32.32	56.52	1.5	1.5	2	2	6.72	9.05	0	0.32	0
8/15/2018	Peoria	ELECTRICIAN	All	BLD		36.51	38.51	1.5	1.5	2	2	7.65	12.92	0	1.52	0
8/15/2018	Peoria	ELECTRONIC SYS TECH	All	BLD		28.25		1.5	1.5	2	2	7.35	11.15	0	0.4	0
8/15/2018	Peoria	ELEVATOR CONSTRUCTOR	All	BLD		44.78	50.38	2	2	2	2	15.43	16.61	3.58	0.61	0
8/15/2018	Peoria	GLAZIER	All	BLD		35.37		1.5	1.5	2	2	10.85	8.3	0	1.25	0
11/5/2018	Peoria	HT/FROST INSULATOR	All	BLD		43.7	46.2	1.5	1.5	2	2	12.92	13.16	0	0.72	0
8/15/2018	Peoria	IRON WORKER	All	BLD		32.41	34.31	1.5	1.5	2	2	11.01	16.32	0	1.31	0
8/15/2018	Peoria	IRON WORKER	All	HWY		36.82		1.5	1.5	2	2	10.66	15.47	0	0.64	0
8/15/2018	Peoria	LABORER	All	BLD		30.05		1.5	1.5	1.5	1.5	7.8	18.85	0	0.8	0
8/15/2018	Peoria	LABORER	All	HWY		29.78	31.28	1.5	1.5	2	2	8.2	21.45	0	0.8	0
8/15/2018	Peoria	LABORER, SKILLED	All	BLD		26.29		1.5	1.5	2	2	9.67	19.9	0	0.8	0
8/15/2018	Peoria	LABORER, SKILLED	All	HWY		30.08	33.08	1.5	1.5	2	2	8.2	16.68	0	0.8	4.8
8/15/2018	Peoria	LATHER	All	BLD		32.46	34.71	1.5	1.5	2	2	8.55	18	0	0.54	0
8/15/2018	Peoria	MACHINERY MOVER	ALL	HWY		36.82	38.82	1.5	1.5	2	2	10.66	15.47	0	0.64	
8/15/2018	Peoria	MACHINIST	All	BLD		48.38	50.88	1.5	1.5	2	2	7.23	8.95	1.85	1.47	0
8/15/2018	Peoria	MARBLE FINISHERS	All	BLD		31.78	31.78	1.5	1.5	2	2	10.35	11.32	0	0.8	0
8/15/2018	Peoria	MARBLE MASON	All	BLD		34.02	35.27	1.5	1.5	2	2	10.35	11.32	0	0.82	0
8/15/2018	Peoria	MILLWRIGHT	All	BLD		31.74		1.5	1.5	1.5	1.5	8.45	17.72	0	0.54	0
8/15/2018	Peoria	MILLWRIGHT	All	HWY		35.01	37.26	1.5	1.5	2	2	8.55	18.8	0	0.52	0
8/15/2018	Peoria	OPERATING ENGINEER	All	BLD	1	40.01	43.01	1.5	1.5	2	2	10	19.73	0	3.3	0
8/15/2018	Peoria	OPERATING ENGINEER	All	BLD	2	37.07	43.01	1.5	1.5	2	2	10	19.73	0	3.3	0
8/15/2018	Peoria	OPERATING ENGINEER	All	BLD	3	32.21	43.01	1.5	1.5	2	2	10	19.73	0	3.3	0
8/15/2018	Peoria	OPERATING ENGINEER	All	HWY	1	40.02	45.02	1.5	1.5	2	2	10	12.23	0	1.65	9.28
8/15/2018	Peoria	OPERATING ENGINEER	All	HWY	2	36.83		1.5	1.5	2	2	0	19.23	0	0	12
8/15/2018	Peoria	OPERATING ENGINEER	All	HWY	3	32.22	43.02	1.5	1.5	2	2	10	19.73	0	3.3	0
8/15/2018	Peoria	PAINTER	All	ALL		36.1		1.5	1.5	1.5	2	11.55	8.2	0	1.35	0
8/15/2018	Peoria	PAINTER SIGNS	ALL	BLD		33.92	38.09	1.5	1.5	1.5	1.5	2.6	2.71	0	0	
8/15/2018	Peoria	PILEDRIVER	All	BLD		33.46	35.71	1.5	1.5	2	2	8.55	18	0	0.54	0
8/15/2018	Peoria	PILEDRIVER	All	HWY		34.66	36.91	1.5	1.5	2	2	8.55	18.6	0	0.52	0
10/26/2018	Peoria	PIPEFITTER	All	BLD		39.5	43.85	1.5	1.5	2	2	7.25	12.78	0	1.16	0
8/15/2018	Peoria	PLASTERER	ALL	BLD		29	30.25	1.5	1.5	2	2	8.15	16.19	0	0.8	
8/15/2018	Peoria	PLUMBER	All	BLD		36.12		1.5	1.5	2	2	7.25	14.96	0	1	0
8/15/2018	Peoria	ROOFER	All	BLD		31.5	34.65	1.5	1.5	2	2	9	9.7	0	0.3	0
8/15/2018	Peoria	SHEETMETAL WORKER	All	BLD		33.47	35.14	1.5	1.5	2	2	9.87	17.49	0	0.95	0
8/15/2018	Peoria	SIGN HANGER	ALL	HWY		36.82	38.82	1.5	1.5	2	2	10.66	15.47	0	0.64	
8/15/2018	Peoria	SPRINKLER FITTER	ALL	BLD		37.12	39.87	1.5	1.5	2	2	8.42	8.5	0	0.35	

8/15/2018	Peoria	STEEL ERECTOR	ALL	HWY		36.82	38.82	1.5	1.5	2	2	10.66	15.47	0	0.64	
8/15/2018	Peoria	STONE MASON	All	BLD		34.1	35.6	1.5	1.5	2	2	10.35	11.32	0	0.82	0
8/15/2018	Peoria	TERRAZZO FINISHER	All	BLD		31.78	31.78	1.5	1.5	2	2	10.35	11.32	0	0.8	0
8/15/2018	Peoria	TERRAZZO MASON	All	BLD		34.02	35.27	1.5	1.5	2	2	10.35	11.32	0	0.82	0
8/15/2018	Peoria	TILE MASON	All	BLD		34.02	35.27	1.5	1.5	2	2	10.35	11.32	0	0.82	0
8/15/2018	Peoria	TRUCK DRIVER	All	ALL	1	37.85		1.5	1.5	2	2	11.65	6.12	0.25	0	1.18
8/15/2018	Peoria	TRUCK DRIVER	All	ALL	2	36.67		1.5	1.5	1.5	1.5	12.16	5.89	0	0.25	18.05
8/15/2018	Peoria	TRUCK DRIVER	All	ALL	3	37.85		1.5	1.5	2	2	11.65	6.12	0	0.25	1.03
8/15/2018	Peoria	TRUCK DRIVER	All	ALL	4	37.25	40.25	1.5	1.5	2	2	0	0	0	0	18.3
8/15/2018	Peoria	TRUCK DRIVER	All	ALL	5	39.21	41.07	1.5	1.5	2	2	12.65	6.12	0	0.25	0
8/15/2018	Peoria	TRUCK DRIVER	All	O&C	1	28.92	31.92	1.5	1.5	2	2	0	0	0	0	18.3
8/15/2018	Peoria	TRUCK DRIVER	All	O&C	2	29.34	32.34	1.5	1.5	2	2	0	0	0	0	18.3
8/15/2018	Peoria	TRUCK DRIVER	All	O&C	3	30.28	32.86	1.5	1.5	2	2	12.65	6.12	0	0.25	0
8/15/2018	Peoria	TRUCK DRIVER	All	O&C	4	29.8	32.8	1.5	1.5	2	2	0	0	0	0	18.3
8/15/2018	Peoria	TRUCK DRIVER	All	O&C	5	31.37	32.86	1.5	1.5	2	2	12.65	6.12	0	0.25	0
8/15/2018	Peoria	TUCKPOINTER	All	BLD		34.1	35.6	1.5	1.5	2	2	10.35	11.32	0	0.82	0

SAMPLE ADDENDUM

Peoria Park District
Planning, Design and Construction Department
1314 N. Park Road
Peoria, IL 61604
Telephone: (309) 686-3386

ADDENDUM NO.

PROJECT TITLE:

ISSUANCE DATE:

LOCATION:

The proposed Contract Documents for this Work are modified as follows:

I. **DRAWINGS**: (Delete/Change/Modify/Etc.)

II. **PROJECT MANUAL/SPECIFICATIONS/GENERAL CONDITIONS/ETC**.:
(Delete/Change/Modify/Etc.)

III. **INVITATION TO BID**: (Delete/Change/Modify/Etc.)

END OF ADDENDUM NO. _____

(Addendum may be bound into Project Manual, attached to front cover, faxed, mailed or delivered to bidders.)

Addendum No. _____
Page 1 of 1

Pleasure Driveway and Park District of Peoria, Illinois

Sample Agreement Between Owner and Contractor

This **AGREEMENT** for

is made as of the _____ day of _____ in the year of Two Thousand Nineteen (2019)

Between the Owner:

PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, ILLINOIS
1125 W. LAKE AVENUE
PEORIA, IL 61614

And the Contractor:

The Owner's Representative is:

PLANNING, DESIGN AND CONSTRUCTION DEPARTMENT
1314 N. PARK ROAD
PEORIA, IL 61604

The Architect or Engineer is:

apaceDesign Architects & Engineers
2112 E. War Memorial Dr.
Peoria, IL 61614

The Owner and Contractor agree as follows:

I. THE CONTRACT DOCUMENTS. The Contract Documents consist of this AGREEMENT, the Plans/Drawings for the Project dated March 11, 2019, all sections of the Project Manual dated March 19, 2019, including but not limited to the Instructions and Supplementary Instructions to Bidders, the Bid Form, the General Conditions (1997 AIA Document A201) and Supplementary General Conditions, the General Requirements, the Specifications, and other documents as enumerated in Section 10 and Attachment #1 of this AGREEMENT**,** and including addenda issued prior to the execution of this AGREEMENT. The Contract Documents form the CONTRACT between the Owner and the Contractor. The CONTRACT represents the entire and integrated contract for the construction of the Work of the Project between the parties hereto and supersedes prior proposals, contracts, negotiations, or representations, either written or oral.

II. THE WORK OF THE CONTRACT. The Contractor shall execute the entire Work described in the Contract Documents, unless modified in Section XI of this AGREEMENT**.**

III. BASIS OF PAYMENT. The Work of the CONTRACT shall be performed on a LUMP SUM basis.

IV. CONTRACT SUM. The Owner shall pay the Contractor the sum of

(and incorporates the acceptance of bid alternates as defined in sub-paragraph "A", below) for the Contractor's performance of the Work required by the Contract Documents, subject to modifications made by Owner approved Change Orders. If this CONTRACT calls for a unit price basis of payment, the contract sum stated above shall be adjusted by Change Order based upon multiplying the unit prices submitted by the Contractor on the Bid Form (and included herein as an Attachment to this CONTRACT) times (x) the actual quantities installed.

A. ACCEPTANCE OF ALTERNATES. The contract sum stated above is based on the acceptance of the following alternates, which are described in the Project Manual:

ITEM	ADD	DEDUCT

V. DATES OF COMMENCEMENT AND COMPLETION OF THE WORK. The Owner's Representative will issue a written Notice to Proceed with the Work of the Project after receiving the required Performance Bond, Labor and Material Payment Bond, and Certificate of Insurance (in proper form and providing the required coverages and amounts from a company [or companies] acceptable to the Owner, and naming the Owner as an Additional Insured), and any other pre-construction submittals required by the Contract Documents. The Contractor hereby acknowledges and agrees that failure to provide such submittals in a timely manner shall not be cause to adjust the date(s) for completion of the Work.

A. LIQUIDATED DAMAGES. Owner and Contractor recognize that time is of the essence of this CONTRACT and that Owner will suffer financial loss if the Contractor has not achieved Substantial Completion and Final Completion of the Work within the time specified below, plus any extensions thereof allowed in accordance with Article 8 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time.

B. SUBSTANTIAL COMPLETION. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as Liquidated Damages for delay (but not as a penalty), Contractor shall pay Owner One Hundred dollars ($100.00) for each calendar day that expires after one hundred thirteen (113) calendar days from Notice of Award until Substantial Completion is attained. The work is tentatively scheduled to begin on April 11, 2019 and be at Substantial Completion by August 1, 2019.

C. FINAL COMPLETION. After Substantial Completion if Contractor shall neglect, refuse, or fail to complete the remaining Work necessary to achieve Final Completion within fourteen (14) calendar days or any proper extension thereof granted by Owner, Contractor shall pay Owner one hundred dollars ($100.00) for each day that expires after the time specified.

VI. PROGRESS PAYMENTS, REDUCTION OF RETAINAGE AND FINAL PAYMENT.

A. Unless otherwise specified elsewhere in the Contract Documents, the Contractor may submit monthly applications for progress payments ("Application for Payment") to the Owner's Representative. Each Application for Payment must be certified by the Architect or Engineer (if applicable), or the Owner's Representative if an Architect or Engineer has not been engaged for construction phase services. An Application for Payment shall be for a period of no less than one calendar month ending on the last day of the month, unless otherwise approved in writing by the Owner's Representative. Application forms shall be subject to Owner's approval. Each Application for Payment shall be based upon the Schedule of Values submitted by the Contractor, in accordance with the Contract Documents. The Schedule of Values shall be approved by the Owner's Representative and the Architect or Engineer (if applicable) in advance of the Contractor's first Application for Payment and the approved schedule shall be used by the Contractor as the basis for submitting payment requests. The Owner's Representative and/or

Architect/Engineer's (if applicable) approval of the Schedule of Values shall not constitute a complete check for accuracy, and shall not relieve the Contractor from responsibility for errors of any sort.

B. An Application for Payment (certified by the Architect or Engineer, if applicable) shall be submitted to the Owner's Representative no later than the fifth (5th) day of the month following the period for which the application is being submitted. In such case, the Owner shall make the progress payment to the Contractor not later than the twentieth day of the next month. A progress payment request on an Application for Payment (certified by the Architect or Engineer, if applicable) received by the Owner's Representative after the fifth (5th) day of a month shall be made by the Owner not later than forty-five days after receipt by the Owner's Representative.

C. Based upon its review of the certified (by the Architect or Engineer, if applicable) Application for Payment, the Owner shall make a progress payment to the Contractor in such amount as the Owner reasonably determines is properly due, subject to a retainage of ten percent (10%) of the value of the Work completed and covered by the Application for Payment, less the aggregate of previous payments in each case. In determining the amount properly due, the Owner shall consider the value of labor, materials and equipment incorporated in the Work, or properly allocable to materials and equipment suitably stored at the site or at some other location previously agreed upon in writing by the parties. The Owner's Representative shall have the sole right to determine that materials or equipment stored off-site have been properly delivered, protected, and/or secured. The Owner's Representative (or the Architect or Engineer, if applicable) may nullify or withhold a Certificate of Payment, in whole or in part, for the reasons set forth in Section 9.5 of the General Conditions. Upon Substantial Completion of the Work, the Owner shall pay the Contractor a sum sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less such amounts as the Owner's Representative shall determine for incomplete work and unsettled claims.

VII. Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner when **1)** the Contract has been fully performed by the Contractor except for the Contractor's responsibility to correct nonconforming Work as provided in Subparagraph 12.2.2 of the General Conditions and to satisfy other requirements, if any, which necessarily survive final payment; and **2)** a final Certificate of Payment has been issued by the Architect/Engineer or Owner's Representative; such final payment shall be made by the Owner not more than forty-five (45) days after the receipt of the final Certificate of Payment by the Owner.

VIII. CHANGE ORDERS. The Owner and Contractor agree that changes in the Work are sometimes required and necessary, and that timely: **a)** submission of proposed changes in the Work or the scope of Work by the Owner, **b)** pricing by the Contractor, **c)** review by the Owner's Representative and/or Architect/Engineer, and **d)** final approval by the Owner are necessary in order to assure that the Work of the Project is completed on schedule. The Contractor hereby acknowledges and agrees that an increase in the scope of the Work does not grant or imply an increase in the Contract Time, unless specifically so stated on the final approved Change Order. The Contractor also agrees that any and all Work which deviates from the plans and specifications and/or results in additional Work performed by Contractor's forces, including those of his sub-contractor's, will not result in additional expense to the Owner, unless **finally approved both by the Owner and the Architect/Engineer (if applicable) prior to the additional Work being performed.** No claim for an addition to the Contract Sum shall be valid unless approved by a written Change Order signed by the Owner and the architect/engineer (if applicable) **prior to the additional Work being performed.**

IX. TERMINATION OR SUSPENSION. The CONTRACT may be terminated by the Owner or the Contractor as provided by Article 14 of the General Conditions. The Work may be suspended by the Owner as provided in Article 14 of the General Conditions.

X. ENUMERATION OF CONTRACT DOCUMENTS. The Contract Documents, except for modifications issued after the execution of this Agreement, consist of:

A. this Standard Form of Agreement Between Owner and Contractor, of the Pleasure Driveway and Park District of Peoria, Illinois.

B. the Plans or Drawings titled Kellogg & Newman Golf Course Storage Facility, dated March 11, 2019, and enumerated in ATTACHMENT #1 - "LIST OF DRAWINGS".

C. Supplementary and other Conditions of the CONTRACT, and the Specifications, are those found in the Project Manual titled "Golf Course Storage Buildings, Newman & Kellogg Golf Courses", and dated March 19, 2019, enumerated as follows:

1) Supplementary Instructions to Bidders

2) Contractor's Proposal, as accepted by the Owner
3) General Conditions of the Contract for Construction, AIA Document A201, 1997 Edition
4) Supplementary General Conditions
5) Major Subcontractor List
6) Directory of Minority & Women Owned Business Enterprises
7) Illinois Drug Free Workplace Certification
8) Contractor Certification (Individual or Corporate/Partnership)
9) Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors
10) Workforce Profile
11) Performance Bond
12) Labor and Material Payment Bond
13) Proof of Insurance
14) Specifications: Division 010000, "General Requirements"; Divisions 020000-350000 as applicable
15) Attachment A.6- Insurance Requirements
16) Certificate of Safety Compliance
17) Peoria Park District Weekly Workforce Report
18) Certified Payroll Form
19) Substance Abuse Prevention Program Certification

XI. MISCELLANEOUS PROVISIONS. Other Provisions of this Agreement are as follows:

This AGREEMENT is entered into as of the day and year first written above and is executed in at least three original copies of which one is to be delivered to the Contractor, one to the Architect/Engineer (if any) for use in the administration of the CONTRACT, and one to the Owner.

OWNER:	**CONTRACTOR :**
_____	_____
(Signature)	(Signature)
TIMOTHY J. CASSIDY, Park Board President	_____
	(Printed Name and Title)
ATTEST:	ATTEST:

ATTACHMENT #1 - LIST OF DRAWINGS

Number	Title	Date
G000	**TITLE SHEET**	**3/11/19**
C1	**NEWMAN - GRADING & STORM WATER PREV. PLAN**	**3/11/19**
C2	**KELLOGG – GRADING & STORM WATER PREV. PLAN**	**3/11/19**
C3	**NEWMAN – STORM WATER PREV. PLAN DETAILS**	**3/11/19**
A100	**KELLOGG – PLANS, ELEVATIONS, SCHEDULE**	**3/11/19**
A101	**NEWMAN – PLANS, ELEVATIONS, SCHEDULE**	**3/11/19**
A102	**NEWMAN/KELLOGG – SECTION**	**3/11/19**
A103	**NEWMAN – PARTIAL SECTION**	**3/11/19**
A104	**TYPICAL DETAILS**	**3/11/19**
M100	**KELLOGG – PLANS & DETAILS**	**3/11/19**
M101	**NEWMAN – PLANS, SECTIONS, DETAILS**	**3/11/19**
E001	**KELLOGG – SITE PLAN ELECTRICAL**	**3/11/19**
E002	**NEWMAN – SITE PLAN ELECTRICAL**	**3/11/19**
E100	**KELLOGG – FLOOR PLAN ELECTRICAL**	**3/11/19**
E101	**NEWMAN – FLOOR PLAN ELECTRICAL**	**3/11/19**
E200	**KELLOGG – ELECTR. PANEL SCHED. & SERV. DIAGRAM**	**3/11/19**
E201	**NEWMAN – ELECTR. PANEL SCHED. & SERV. DIAGRAM**	**3/11/19**
E300	**ELECTRICAL DETAILS**	**3/11/19**
E500	**LUMINAIRE & MATERIAL SCHED. & GEN. NOTES**	**3/11/19**

PERFORMANCE BOND

TO: PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA
PEORIA, ILLINOIS

KNOW ALL MEN BY THESE PRESENTS;

That_____
_____
as Principal, and_____
_____as
corporation of the State of _____, as Surety, are held and firmly bound unto the PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, PEORIA, ILLINOIS, as Obligee, in the amount of _____
_____
($_____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____, 20 _____ entered into a contract with Obligee for _____
_____
in accordance with contract documents prepared by the Architect-Engineer, which Contract is by reference made a part hereof and is hereinafter referred to as "the Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Principal shall promptly and faithfully perform the Contract and all changes thereof, and during the life of any guaranty or warranty required under the Contract, and, if Principal shall fully secure and protect the Obligee from all liability and from all loss or expense of any kind, including all court costs, engineering fees and attorneys' fees made necessary or arising from the failure, refusal or neglect of Principal to comply with all obligations assumed by Principal in connection with the performance of the Contract and all changes thereof, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Surety hereby waives notice of any changes in the Contract, including extensions of time for the performance thereof. Whenever Principal shall be and is declared to be in default under the Contract, Obligee having performed Obligee's obligations thereunder, Surety shall, after notice of such default, reserve all rights against all parties, take over and complete the Contract and become entitled to payment of the balance of any monies due or to become due to such defined Principal in accordance with the progress of the work.

A condition of this Bond is that the Principal shall faithfully perform in accordance with the prevailing wage clause provided in the bid specification or Contract pursuant to Illinois Compiled Statutes 820 ILCS 130/1 *et. seq.*

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Obligee named herein.

Signed and Sealed this _____ day of _____, 20 _____.

CONTRACTOR

_____
Contractor Firm Name

By: _____
Signature

_____
Title

SURETY

_____
Surety Name

By:_____
Attorney-in-Fact

_____
Resident Agent

ATTEST:

_____
Corporate Secretary (Corporations only)

LABOR & MATERIAL PAYMENT BOND

TO: PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA
PEORIA, ILLINOIS

KNOW ALL MEN BY THESE PRESENTS:

That: _____
_____
as Principal, and _____
_____
a corporation of the State of _____ as Surety, are held and firmly bound unto the PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, PEORIA, ILLINOIS, as Obligee, for the use and benefit of claimants as hereinafter defined in the amount of _____Dollars ($_____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____, 20 _____, entered into a Contract with Obligee for _____
_____
in accordance with contract documents prepared by the Architect-Engineer which Contract is by reference made a part hereof, and is hereinafter referred to as "the Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Principal shall promptly pay for all laborers, workers and mechanics engaged in the work under the Contract, and not less than the general prevailing rate of hourly wages of a similar character in the locality in which the work is performed, as determined by the State of Illinois Department of Labor pursuant to the Illinois Compiled Statutes 820 ILCS 130/1 et. seq. and for all material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

1. A claimant is defined as any person, firm, or corporation having contracts with the Principal or with any of Principal's subcontractors for labor or materials furnished in the performance of the Contract on account of which this Bond is given.

2. Nothing in this Bond contained shall be taken to make the Obligee liable to any subcontractor, materialman or laborer, or to any other person to any greater extent than it would have been liable prior to the enactment of The Public Construction Bond Act, approved June 20, 1931, as amended; provided further, that any person having a claim for labor and materials furnished in the performance of the Contract shall have no right of action unless he shall have filed a verified notice of such claim with the Obligee within 180 days after the date of the last item of work or the furnishing of the last item of materials, which claim shall have been verified and shall contain the name and address of the claimant, the business address of the claimant within the State of Illinois, if any, or if the claimant be a foreign corporation having no place of business within the State the principal place of business of the corporation, and in all cases of partnership the names and residences of each of the partners, the name of the Contractor for the Obligee, the name of the person, firm or corporation by whom the claimant was employed or to whom such claimant furnished materials, the amount of the claim and a brief description of the public improvement for the construction or installation of which the Contract is to be performed. No defect in the notice herein provided for shall deprive the claimant of its right of action under the terms and provisions of this Bond unless it shall affirmatively appear that such defect has prejudiced the rights of an interested party asserting the same.

3. No action shall be brought on this Bond until the expiration of 120 days after the date of the last item of work or of the furnishing of the last item of material except in cases where the final settlement between the Obligee and the Contractor shall have been made prior to the expiration of the 120 day period, in which case action may be taken immediately following such final settlement; nor shall any action of any kind be brought later than 6 months after the acceptance by the Obligee of the work. Such suit shall be brought only in the circuit court of this State in the judicial district in which the Contract is to be performed.

4. Surety hereby waives notice of any changes in the Contract, including extensions of time for the performance thereof.

5. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.

6. The Principal and Surety shall be liable for any attorneys fees, engineering costs, or court costs incurred by the Obligee relative to claims made against this Bond.

Signed and Sealed this _____ day of _____, 20 _____.

CONTRACTOR	**SURETY**
Contractor Firm Name:	
_____	_____
By: _____ Signature	By:_____ Attorney-in-Fact
_____ Title	_____ Resident Agent

ATTEST:

_____
Corporate Secretary (Corporations only)

CONTRACTOR'S AFFIDAVIT

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

THE undersigned, being duly sworn, deposes and says that he is _____
_____ of the _____
who is the contractor for the _____
building located at _____
owned by _____.

That the total amount of the contract including extras is $_____ on which he has received payment of $_____ prior to this payment. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names of all parties who have furnished material or labor, or both, for said work and all parties having contracts or sub-contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications:

NAMES	WHAT FOR	CONTRACT PRICE	AMOUNT PAID	THIS PMT.	BALANCE DUE

TOTAL ALL LABOR AND MATERIAL TO COMPLETE

There are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

Signed this _____ day of _____, 20 _____.

Signature: _____

Subscribed and sworn to before me this _____ day of _____, 20 ___.

_____
Notary Public

FINAL WAIVER OF LIEN

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

WHEREAS, the undersigned _____ha_____ been employed by THE PEORIA PARK DISTRICT to furnish material and labor for the _____

at the premises commonly known as _____

located in the City of _____, County of Peoria, State of Illinois.

The undersigned, for and in consideration of _____ ($_____) Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged, do_____ hereby waive and release any and all lien or claim or right of lien under the statutes of the State of Illinois relating to mechanics' liens, with respect to and on said above-described premises and improvements thereon and on the money, funds or other considerations due or become due from the owner on account of labor or services, material, fixtures, apparatus or machinery heretofore furnished or which may be furnished at any time hereafter by the undersigned for the above described premises.

Dated this _____ day of _____ 20 _____.

[Affix corporate seal here.]

_____
(Name of sole owner, corporation or partnership)

ATTEST:

_____ _____(SEAL)
(Signature of secretary of corporation) (Signature of sole owner or authorized representative of corporation or partnership)

WAIVER OF LIEN

GENERAL CONTRACTOR'S PARTIAL
TO COVER ONLY CERTAIN PAYMENTS

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO ALL WHOM IT MAY CONCERN:

WHEREAS, the undersigned _____ has been employed by THE PEORIA PARK DISTRICT to furnish material and labor for the _____at the premises commonly known as _____

_____

located in the City of Peoria, County of Peoria, and State of Illinois.

NOW, THEREFORE, the undersigned, for and in consideration of the sum of _____ _____ Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged by the undersigned, does hereby waive and release to the extent only of the aforesaid amount of _____ Dollars, paid simultaneously herewith, any and all lien or right or claim of lien under the statutes of the State of Illinois relating to mechanics' liens, with respect to and on said above-described premises, and the improvements thereon and on the money, funds, or other consideration due or to become due from the owner on account of labor, services, material, fixtures, apparatus or machinery, furnished by the undersigned, to or on account of the said owner, for the above-described premises, but only to the extent of the payment aforesaid.

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here]

_____
(Name of sole owner, corporation or partnership)

ATTEST:

_____ _____(SEAL)
(Signature of secretary of corporation) (Signature of sole owner or authorized representative of corporation or partnership)

SUB-CONTRACTOR'S FINAL WAIVER OF LIEN

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

WHEREAS, the undersigned _____
(sub-contractor)
ha____ been employed by _____
(general contractor)
to furnish material and labor for the _____ at the

premises commonly known as _____, in the City of _____,

County of Peoria, State of Illinois.

The undersigned, for and in consideration of _____

_____ ($_____) Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged, do _____ hereby waive and release any and all lien or claim or right of lien under the statutes of the State of Illinois relating to Mechanics Liens, on the above described premises and improvements thereon and on the money, funds or other considerations due or become due from the owner on account of labor or services, material, fixtures, apparatus or machinery heretofore furnished or which may be furnished at any time hereafter by the undersigned for the above described premises.

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here.]

ATTEST:_____

_____
(Name of sole owner, corporation or partnership)

_____ _____(SEAL)
(Signature of sole owner or authorized representative of corporation of partnership)
(Signature of secretary of corporation)

WAIVER OF LIEN

SUB-CONTRACTOR'S PARTIAL
TO COVER ONLY CERTAIN PAYMENTS

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

THE undersigned, _____
(sub-contractor)
has been employed by _____
(general contractor)
to furnish material and labor for the _____

_____

at the premises commonly known as _____

_____
located in the City of Peoria, County of Peoria, and State of Illinois.

NOW, THEREFORE, the undersigned, for and in consideration of the sum of _____ _____ Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged by the undersigned, does hereby waive and release to the extent only of the aforesaid amount of _____ Dollars, paid simultaneously herewith, any and all lien or right or claim of lien under the statutes of the State of Illinois relating to mechanics' liens, with respect to and on said above-described premises, and the improvements thereon and on the money, funds, or other consideration due or to become due from the owner on account of labor, services, material, fixtures, apparatus or machinery, furnished by the undersigned, but only to the extent of the payment aforesaid.

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here.]

_____
(Name of sole owner, corporation or partnership)

ATTEST:

_____ _____(SEAL)
(Signature of secretary of corporation) (Signature of sole owner or authorized representative of corporation or partnership)

PEORIA PARK DISTRICT
Weekly Workforce Report
Instructions

This weekly workforce report must be completed and returned to the Peoria Park District project manager for each week that you are working on Peoria Park District property. You are to report only those employees that are actually working on the Peoria Park District project identified on this report. Do not report employees that are not working on the project identified on this report.

If you have further questions regarding this report, please contact the Owner's Project Manager.

I. Trade and Hour Breakdown Table
- List the different trades (carpenter, laborer, plumber, etc.) and report the number of hours by race/gender for each trade;
- Total the hours for each trade on the right.

II. New Hires by Race and Gender
- If additional employees are hired for the job, please record the number of employees hired by race/gender.

III. Total Project Employee Breakdown
- Please track total hours by race/gender for the project if project lasts longer than a week.

Weekly Workforce Report (Peoria Park District Form) Date:_____ Week Ending: _____

Contractor/Subcontractor:_____ Project: _____

Trade & Hour Breakdown:

TRADE	FEMALE HOURS	CAUCASIAN HOURS	AFRICAN-AMERICAN HOURS	HISPANIC HOURS	NATIVE AMERICAN HOURS	ASIAN, PAC. ISLANDER HOURS	TOTAL HOURS

New Hires by Race & Gender

TRADE	CAUCASIAN	AFRICAN-AMERICAN	HISPANIC	NATIVE AMERICAN	ASIAN, PACIFIC ISLANDER	MALE	FEMALE

Total Project Employee Breakdown

	CAUCASIAN	AFRICAN-AMERICAN	HISPANIC	NATIVE AMERICAN	ASIAN, PACIFIC ISLANDER	MALE	FEMALE

State of Illinois
Illinois Department of Labor

Certified Transcript of Payroll

IDOL Case File Number: _____ Payroll Start: _____ Payroll End: _____

(Contract Number)

(Project Number)

(Project Location)

Contractor and/or Subcontractor

(Company Name) (Contact Name)

(Street Address) (City)

(State) (Zipcode) (Telephone Number)

Public Body Information

(Public Body Name) (Contact Name)

(Street Address) (City)

(State) (Zipcode) (Telephone Number)

Report Hours for Each Day, Including Overtime Hours, List Hourly Prevailing Wage Rate and Hourly Fringe Benefits Allotments.

Worker Name, Address Last Four of SSN & Telephone Number		* Hours worked each day SUN	MON	TUE	WED	THR	FRI	SAT	Total Straight Time Hours	Total OT Hours	Hourly Wage Rate	OT Wage Rate	Per Pay Period Gross	Net
	PW													
	N													

Labor Classification

Hourly Fringe Benefit: Pension: Health/Welfare: Vacation: Training:

	PW													
	N													

Labor Classification

Hourly Fringe Benefit: Pension: Health/Welfare: Vacation: Training:

	PW													
	N													

Labor Classification

Hourly Fringe Benefit: Pension: Health/Welfare: Vacation: Training:

Please place an “F” by the hourly rate for fringe benefits paid to a Fund jointly managed by one or more labor organizations or employers in accordance with the federal Labor Management Relations Act (See instruction 4 for completing this form). In addition contractors/subcontractors who do not make contributions for covered fringe benefits to a fringe benefit fund that is jointly managed and jointly governed by one or more labor organizations or employers in accordance with the federal Labor Management Relations Act must provide the additional information set forth on the form on page 2 (see Instruction 5). Contractors/subcontractors who do not make contributions for fringe benefits on a per hour basis for each hour worked must convert such contributions to an annualized per hour basis for purpose of reporting on this form in accordance with instruction 5. You must keep original records showing start and end time each day.

***PW - Prevailing Hours Worked *N - Non Prevailing Hours Worked**

State of Illinois
Illinois Department of Labor

Certified Transcript of Payroll

AFFIDAVIT

Weekly Statement of Compliance

Date: _____

I, _____ ,
(name signatory party)

_____ , do
(Title)

hereby state: that I pay or supervise the payment of the persons employed on the public works project _____ ;
(name of project)

that during the payroll period commencing on the _____ day of _____ , _____ ,
(day) (month) (year)

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____
(name of contractor or subcontractor)

from the full weekly wages earned by any person, and that no deductions have been made either directly or indirectly from the full weekly wages earned by any persons, other than permissible deductions as defined by Federal and/or State Law. I further certify that this payroll is correct and complete; that the wage rates contained therein are not less than the actual rates herein stated and that the classification set forth for each laborers or mechanic conform to the work he/she performed.

_____
Signature

Digital Signature _____

FRINGES

Health Fund _____
Health Address _____
Health Sponsor _____
Health Admin _____

Pension Fund _____
Pension Address _____
Pension Sponsor _____
Pension Admin _____

401(k) Fund _____
401(k) Address _____
401(k) Sponsor _____
401(k) Admin _____

Vacation Fund _____
Vacation Address _____
Vacation Sponsor _____
Vacation Admin _____

SUBCONTRACTORS

Attach explanation of Monies paid, copy of contract of billing, or other pertinent information.

Company Name: _____
Contact Person: _____
_____
(Address)
_____ _____ _____
(City) (State) (zipcode)
Telephone Number: _____

Company Name: _____
Contact Person: _____
_____
(Address)
_____ _____ _____
(City) (State) (zipcode)
Telephone Number: _____

Company Name: _____
Contact Person: _____
_____
(Address)
_____ _____ _____
(City) (State) (zipcode)
Telephone Number: _____

Company Name: _____
Contact Person: _____
_____
(Address)
_____ _____ _____
(City) (State) (zipcode)
Telephone Number: _____

Form **W-9**
(Rev. November 2017)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

► **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ►

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

		–							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	**Signature of U.S. person** ►	**Date** ►

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding, or

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting,* later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.

2. The treaty article addressing the income.

3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.

4. The type and amount of income that qualifies for the exemption from tax.

5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,

2. You do not certify your TIN when required (see the instructions for Part II for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code,* later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships,* earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code,* later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2—The United States or any of its agencies or instrumentalities

3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities

5—A corporation

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7—A futures commission merchant registered with the Commodity Futures Trading Commission

8—A real estate investment trust

9—An entity registered at all times during the tax year under the Investment Company Act of 1940

10—A common trust fund operated by a bank under section 584(a)

11—A financial institution

12—A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 5[2]
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

[1] See Form 1099-MISC, Miscellaneous Income, and its instructions.

[2] However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester,* later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.SSA.gov*. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/Businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. Go to *www.irs.gov/Forms* to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to *www.irs.gov/OrderForms* to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code,* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account[1]
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor[2]
5. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee[1] The actual owner[1]
6. Sole proprietorship or disregarded entity owned by an individual	The owner[3]
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	**Give name and EIN of:**
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity[4]
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships,* earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov.* You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at *spam@uce.gov* or report them at *www.ftc.gov/complaint.* You can contact the FTC at *www.ftc.gov/idtheft* or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see *www.IdentityTheft.gov* and Pub. 5027.

Visit *www.irs.gov/IdentityTheft* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

A complete copy of AIA Document A201, 1997 Edition, with Supplementary General Conditions incorporated, is available for review in the Peoria Park District's Planning, Design and Construction Office.

SUPPLEMENTARY GENERAL CONDITIONS

1. A. "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA Document A201, 1997 Edition, published by the American Institute of Architects, including revisions adopted before the date of the Project Manual, is hereby made part of these Specifications with same force and effect as though set forth in full.

B. The following modifies, changes, deletes from or adds to the General Conditions of the Contract for Construction (AIA Document A201, Fourteenth Edition, 1997). Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

C. Parenthesis ( ) indicates the appropriate section and Subparagraph of the General Conditions which each paragraph of the Supplementary General Conditions modifies or refers to.

2. INSERT THE FOLLOWING PHRASE TO PARAGRAPH (1.1.1) AFTER THE WORDS "The Contract Documents consist of the Agreement Between Owner and Contractor (hereinafter the Agreement)":

"the Contractor's Bid, the Advertisement for Bids, the Instructions to Bidders, sample forms and addenda relating to these,"

DELETE THE LAST SENTENCE OF PARAGRAPH (1.1.1).

3. ADD THE FOLLOWING SENTENCES TO END OF PARAGRAPH (1.2.1):

The Contractor shall notify the Owner's Representative immediately if discrepancies are discovered. Full-size or large-scale details or drawings shall govern small-scale drawings that the former are intended to amplify. Dimensions from drawings shall not be determined by scale or rule. Where the Drawings and Specifications conflict with each other or with themselves, the Owner's Representative (in consultation with the Architect, if any) will decide which conflicting requirement governs. Should discrepancies or doubt occur, Contractor shall not proceed with the Work without clarification from the Owner. Contractor shall request clarification in a reasonable time to avoid delays and increases in the Contract Sum.

ADD THE FOLLOWING PARAGRAPHS TO SECTION (1.2):

1.2.4 If any item or material shown on the Drawings is omitted from the Specifications, or vice-versa (except when the Drawings and Specifications clearly exclude such omitted item), and when such item or material is clearly required to complete the detail shown or specified, the Contractor shall furnish and install such item or material of the type and quality established by the balance of the detail shown and specified at no increase to the Contract Sum.

1.2.5 Where a typical or representative detail is shown on the Drawings, this detail shall constitute the standard for workmanship and materials throughout those parts of the Work.

1.2.6 Any Summary of Work as outlined in the Specifications shall not be deemed to limit the work required by the Contract Documents. The Contractor and each Subcontractor shall be responsible for carefully examining all Drawings, including all details, plans, elevations, sections, schedules and diagrams for each particular type of work, and for coordinating the Work described in the Drawings, with the related Specifications. The Contractor shall also be responsible for determining the exact scope of work for each type of work per the Contract Documents and Contractor shall endeavor to check cross-references of work excluded from any division. The Contract Sum is deemed to be based on a complete installation. When additional details or instructions are clearly required to complete the work, the Contractor is deemed to have made an allowance in the Contract Sum for completion of such Work consistent with the local standard of care.

1.2.7 The Drawings are intended to show the arrangement, design and extent of the Work and are schematic in nature. They are not to be scaled for roughing-in measurements or used as shop drawings.

4. ADD THE FOLLOWING PARAGRAPH TO SECTION (1.5):

1.5.3 Neither any oral representation by or oral agreement with any officer, agent, or employee of Owner or Architect before execution of this Contract shall affect or modify any of the Contractor's rights or obligations hereunder. Contractor is not aware of any facts that make misleading or inaccurate in any material respect any information Owner or Architect has furnished to Contractor which would have a material adverse affect on the Contract Time or Contract Sum which Contractor has not advised Owner or Architect of, and if, during the course of the performance of the Work, Contractor learns of any such facts it will so advise Owner. Contractor shall not be entitled to any adjustments in the Contract Time or the Contract Sum as a consequence of Contractor's breach of the terms of this Subparagraph.

5. IN PARAGRAPH (1.6.1) DELETE THE WORD "Architect" **IN THE FOURTH SENTENCE AND REPLACE IT WITH THE WORD "**Owner**".**

DELETE SENTENCES #7, #8, #9 STARTING WITH "The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are …."

6. DELETE PARAGRAPH (2.2.3) IN ITS ENTIRETY.

7. ADD THE FOLLOWING SENTENCE AT THE END OF PARAGRAPH (2.3.1):

"The Owner shall not be liable for any extra cost incurred by the Contractor by such an order."

8. IN PARAGRAPH (2.4.1) DELETE THE SECOND TO LAST SENTENCE.

9. IN PARAGRAPH (3.2.1, 3.2.2 AND 3.2.3) AFTER THE WORD "Architect**" ADD THE WORDS "**and Owner**".**

10. ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.2):

3.2.4 Before starting any work, the Contractor shall examine work performed by others to which his work adjoins or is applied to and report to the Owner's Representative any conditions that will prevent the satisfactory accomplishment of his work. Failure to notify the Owner's Representative of deficiencies or faults in preceding work prior to commencing work shall constitute acceptance thereof and waiver of any claim of its unsuitability.

11. ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.4):

3.4.4 Before ordering any material or doing any Work, the Contractor shall verify all measurements at the Project site and he shall be responsible for the correctness of same. No extra charge or compensation will be allowed to the Contractor on account of any difference between actual dimensions and the measurements shown on the Project Drawings.

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 Owner's Representative or other representative of Owner to observe the materials.

12. ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.5):

3.5.2 The Contractor agrees to assign to the Owner any and all manufacturer's warranties relating to materials and equipment furnished as part of the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties subject to installation directives and other terms of the Contract Documents. The Contractor agrees to deliver to the Owner, upon final payment, such assignments along with or as part of a reference manual, in form and detail reasonably acceptable to Owner, showing all such warranties and guarantees provided by the Contractor and Subcontractors. Such warranties and guarantees shall commence no sooner than the date of purchase from the supplier.

3.5.3 The warranty of Contractor provided in Paragraph 3.5 shall in no way limit or abridge the warranties of the suppliers of equipment and systems which are to comprise a portion of the Work, if they are broader, and all of such warranties shall be in form and substance as required by the Contract Documents. Contractor shall take no action or fail to act in any way which results in the termination or expiration of such third party warranties or which otherwise results in prejudice to the rights of the Owner under such warranties subject to installation directives and other terms of the Contract Documents. Contractor agrees to provide all notices required for the effectiveness of such warranties and shall include provisions in the contracts with the providers and manufacturers of such systems and equipment whereby Owner shall have a direct right of enforcement of such warranty obligations.

13. IN PARAGRAPH (3.6.1), DELETE THE WORD "Sales".

ADD THE FOLLOWING AT THE END OF PARAGRAPH (3.6.1):

The Peoria Park District is exempt from Federal, State and Local taxes. A certificate of exemption will be furnished upon request.

14. IN PARAGRAPH (3.10.2) BEFORE THE WORD "Architect's" **ADD THE WORDS** "Owner's and".

IN PARAGRAPH (3.10.2) AFTER THE WORD "Architect" **ADD THE WORDS** "and Owner's Representative".

ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.10):

3.10.4 The construction schedule shall provide for the most expeditious and practicable execution of the Work. The Contractor shall also work closely with the Owner to confirm that the construction schedule accurately reflects the status of the Project. The Contractor's construction schedule shall be updated every month by the Contractor and submitted to the Owner.

.1 Whenever it becomes apparent from the updated construction schedule that any substantial completion previously established by the construction schedule cannot be met, the Contractor shall, at the Owner's request, take any or all of the following actions with no increase to the Contract Sum or Contract Time (unless the delay is caused by an event set forth in paragraph 8.3 of these General Conditions thereby permitting adjustment of the Contract Sum and/or Contract Time under Paragraph 4.3.5 of these General Conditions):

.1.1 Increase construction manpower to substantially return the Project to schedule;

.1.2 Increase the number of working hours per shift, shifts per day or the amount of construction equipment or any combination of the foregoing which will substantially return the Project to schedule;

.1.3 Reschedule activities to concurrently accomplish activities, to the maximum degree practicable, in the time required by the Contract Documents.

If the Contractor fails to take any of these actions Owner shall have the notice and other rights set forth in Paragraph 2.4.

15. IN PARAGRAPH (4.1.1) DELETE THE FIRST SENTENCE AND SUBSTITUTE THE FOLLOWING:

"The Architect, Owner's Representative, and Owner's Project Manager are defined in Paragraph C of "Section 01000 - General" of "Division 01000 - General Requirements".

16. IN PARAGRAPH (4.2.1) DELETE THE WORDS "and will be an Owner's Representative**".**

17. IN PARAGRAPH (4.2.2) DELETE THE WORDS "as a representative of the Owner".

18. IN PARAGRAPH (4.2.4) IN THE FIRST SENTENCE SUBSTITUTE THE WORD "Architect" **FOR THE WORD** "Owner" **AND SUBSTITUTE THE WORD** "Owner" **FOR THE WORD** "Architect"**.**

19. IN PARAGRAPH (4.2.5) DELETE THE WORD "Architect's" **AND** "Architect"**AND SUBSTITUTE THE WORDS** "Owner Representative's" **AND** "Owner Representative"**.**

20. IN PARAGRAPH (4.2.6) IN THE SECOND SENTENCE AFTER THE WORDS "will have authority" **INSERT THE WORDS** "upon written authorization from the Owner".

21. IN PARAGRAPH (4.2.8) DELETE THE WORD "prepare" **AND SUBSTITUTE THE WORDS** "assist the Owner's Representative in preparing".

22. IN PARAGRAPH (4.2.9) DELETE THE WORD "Architect" **AND SUBSTITUTE WORDS** "Owner's Representative, assisted by the Architect".

23. IN PARAGRAPH (4.2.11) IN THE FIRST SENTENCE DELETE THE WORDS "and decide".

24. IN PARAGRAPH (4.2.12) IN THE FIRST SENTENCE DELETE THE WORD "and decisions".

IN PARAGRAPH (4.2.12) IN THE SECOND SENTENCE DELETE THE WORDS "and initial decisions" **AND** "or decisions".

25. ADD PARAGRAPH TO SECTION (4.2):

4.2.14 Notwithstanding any other provision of this Agreement to the contrary, the Architect shall have no authority to order or approve any material deviation from the Contract Documents, whether or not such deviation affects the Contract Sum or other Substantial Completion Date (as defined herein). In the event any such deviation is sought, prior written approval from the Owner's Representative and the Owner must be obtained. The Architect may decide quality issues and may approve non-material deviations from the Contract Documents.

26. IN PARAGRAPH (4.3.4) IN THE FOURTH SENTENCE DELETE THE WORD "decision" **AND SUBSTITUTE THE WORD** "recommendation".

IN PARAGRAPH (4.3.4) IN THE LAST SENTENCE DELETE THE WORD "determination" **AND SUBSTITUTE THE WORD** "recommendation".

27. DELETE PARAGRAPH (4.3.10) IN ITS ENTIRETY.

28. DELETE PARAGRAPH (4.4.1) AND SUBSTITUTE THE FOLLOWING:

"Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be initially referred in writing to the Architect for a recommendation."

29. IN PARAGRAPH (4.4.2) AFTER "(2)" ADD THE WORD "recommend" **AND CHANGE THE WORD** "reject" **TO** "rejecting".

IN PARAGRAPH (4.4.2) AFTER "(3)" ADD THE WORD "recommend" **AND CHANGE THE WORD** "approve" **TO** "approving".

IN PARAGRAPH (4.4.2) AT THE END OF THE SENTENCE DELETE THE WORD "resolve" **AND ADD THE WORDS** "make recommendation on".

30. IN PARAGRAPH (4.4.3) DELETE THE WORD "decision" **AND SUBSTITUTE THE WORD** "recommendation".

31. IN PARAGRAPH (4.4.4) IN THE LAST SENTENCE DELETE THE WORDS "either reject or approve the Claim" **AND SUBSTITUTE THE WORDS** "provide a recommendation regarding the Claim in accordance with Paragraph 4.2.2".

IN PARAGRAPH (4.4.4) AT THE END OF THE LAST SENTENCE DELETE THE WORDS "in whole or in part."

32. DELETE PARAGRAPHS (4.4.5) AND (4.4.6) IN THEIR ENTIRETY.

33. IN PARAGRAPH (4.4.8) DELETE THE WORD "resolution" **AND SUBSTITUTE THE WORDS** "final recommendation".

IN PARAGRAPH (4.4.8) AFTER THE WORD "Architect," **ADD THE WORD** "or".

IN PARAGRAPH (4.4.8) AT THE END OF THE SENTENCE DELETE THE WORDS "or by arbitration".

34. IN PARAGRAPH (4.5.1) DELETE THE WORD "decision" **AND SUBSTITUTE THE WORD** "recommendation".

IN PARAGRAPH (4.5.1) DELETE THE WORDS "arbitration or".

35. IN PARAGRAPH (4.5.2) IN THE SECOND SENTENCE DELETE THE WORDS "a demand for arbitration" **AND SUBSTITUTE THE WORDS** "legal or equitable proceedings".

IN PARAGRAPH (4.5.2) AFTER THE WORDS "proceed in advance of " **DELETE THE WORDS** "arbitration or".

36. IN PARAGRAPH (4.5.3) DELETE THE FIRST SENTENCE.

37. DELETE SECTION (4.6) IN ITS ENTIRETY.

38. IN PARAGRAPH (5.2.1) DELETE THE FIRST SENTENCE AND SUBSTITUTE:

> "The subcontractors/suppliers listed by the Contractor on the Major Subcontractor/Supplier List (submitted with the Bid) shall not be changed without the written consent of the Owner."

IN PARAGRAPH (5.2.1) IN THE SECOND SENTENCE DELETE THE WORDS "Architect will" **AND SUBSTITUTE THE WORDS** "Owner's Representative will".

IN PARAGRAPH (5.2.1) IN THE SECOND SENTENCE AFTER THE WORDS "promptly reply to" **ADD THE WORDS** "any request made by".

IN PARAGRAPH (5.2.1) IN THE SECOND SENTENCE AFTER THE WORDS "any such proposed" **ADD THE WORDS** "change in".

IN PARAGRAPH (5.2.1) IN THE LAST SENTENCE DELETE THE WORDS "Owner or Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

IN PARAGRAPH (5.2.1) IN THE LAST SENTENCE DELETE THE WORD "promptly" **AND ADD THE WORDS** "within 10 calendar days (of receipt of written request for such change from the Contractor)".

39. IN PARAGRAPH (6.2.2) BEFORE THE WORD "Architect" **ADD THE WORDS** "Owner and".

40. IN PARAGRAPH (6.3.1) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORD** "Owner".

41. IN PARAGRAPH (7.2.1) DELETE THE WORDS "the Architect" **AND SUBSTITUTE THE WORDS** "the Owner's Representative".

ADD THE FOLLOWING PARAGRAPHS TO SECTION (7.2):

> **7.2.3** A Change Order shall include all of the Contractor's costs associated therewith.

7.2.4 The Contractor shall not accept any request for a Change Order from any person other than the Owner and may not perform any work asserted to constitute a change in the Work until the Owner has approved the Change Order in writing, unless the Owner authorizes the Contractor, in writing, to proceed with a change prior to the Owner's final approval. Notwithstanding anything to the contrary herein, the Contractor shall not charge for overtime services in the performance of any Change Order Work, unless the Owner has specifically authorized overtime in writing. Owner may competitively bid changes in the Work and Contractor, Subcontractor and suppliers shall provide Owner with all documents Owner requests to facilitate such competitive bidding of changes in the Work.

7.2.5 There shall be no change in the Work, whether an alteration or addition to the Contract Sum or to any amounts due under the Contract Documents or to a change in the Contract Time, unless and until such alteration or addition has been authorized by a written Change Order executed and issued in accordance and compliance with the requirements with this Article 7 or by written authorization to proceed with such change in the Work signed by the Owner or as otherwise provided pursuant to the Contract Documents. The requirements set forth in this Paragraph 7.2.5 are of the essence. No claim that the Owner has been unjustly enriched by any alteration or addition to the Work, whether or not any such unjust enrichment to the Work or to the Owner in fact exists, shall form the basis of any claim for an increase in any amount due under the Contract Documents or a change in the Contract Time, and the terms of a fully-executed Change Order shall be conclusive.

42. IN PARAGRAPH (7.3.1) DELETE THE WORDS "the Architect" **AND SUBSTITUTE THE WORDS** "the Owner's Representative".

43. IN PARAGRAPH (7.3.4) DELETE THE WORDS "the Architect" **AND SUBSTITUTE THE WORDS** "the Owner's Representative".

44. IN PARAGRAPH (7.3.6) IN THE FIRST SENTENCE DELETE THE WORD "determined" **AND SUBSTITUTE THE WORD** "recommended".

45. IN PARAGRAPH (7.3.7) IN THE FIRST SENTENCE AFTER THE WORD "Architect" **ADD THE WORDS** "and the Owner's Representative".

46. IN PARAGRAPH (7.3.8) DELETE THE WORDS "the Architect" **AND SUBSTITUTE THE WORDS** "the Owner's Representative".

47. IN PARAGRAPH (7.3.9) DELETE THE WORD "determination" **AND SUBSTITUTE THE WORD** "recommendation".

48. IN PARAGRAPH (8.1.3) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

49. ADD THE FOLLOWING PARAGRAPHS TO SECTION (8.2) .

8.2.4 All work shall be "Substantially Complete" as required by the **Instructions to Bidders** and the **Agreement Between Owner and Contractor.**

8.2.5 It is further agreed that said completion schedule is reasonable, and the Contractor shall prosecute said work regularly, diligently and continuously at such rate of progress as will insure full completion thereof within the time specified.

8.2.6 Provided, however, the following exceptions:

.1 Any preference, priority or allocation order duly issued by the United States Government.

.2 Any unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including acts of God, or of a public enemy, acts of the Owner, acts of another Contractor in performance of a separate contract with the Owner, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather. The criteria on which the unusually severe weather shall be based is the average precipitation/temperatures received in the project area, as recorded over a period of the last five (5) years at the local area United States Weather Station. Any extension of time due to unusually severe weather must be requested by the Contractor on the basis of documented records of the actual precipitation/temperatures during the contract time period, compared with the normal/average for the area. Also, the criteria shall include the number of excessive precipitation or extreme cold days (i.e., days in which the temperature would adversely affect the type of work being constructed) over the same period and whether or not the Contractor's force worked on said days or stage of construction was affected.

.3 Any delays of subcontractors occasioned by any of the causes specified in this paragraph.

8.2.7 Provided further that the Contractor shall, within seven (7) days from the beginning of any such delay during the performance of the Contract, notify the Owner's Representative in writing of the alleged cause of such delay.

50. IN PARAGRAPH (8.3.1) DELETE THE WORDS "and arbitration".

IN PARAGRAPH (8.3.1) DELETE THE WORD "determine" **AND SUBSTITUTE THE WORD** "recommend".

51. DELETE PARAGRAPH (9.2.1) AND SUBSTITUTE THE FOLLOWING:

"Before the first Application for Payment, the Contractor shall submit to the Owner's Representative 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 Architect and Owner's Representative may require. This schedule, unless objected to by the Architect and Owner's Representative, shall be used as a basis for reviewing the Contractor's Applications for Payment."

52. IN THE FIRST SENTENCE OF (9.3.1), CHANGE "ten" **TO** "forty five".

IN PARAGRAPH (9.3.1) IN THE FIRST SENTENCE DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

ADD THE FOLLOWING TO THE END OF PARAGRAPH (9.3.1):

Payment requests shall consist of AIA Documents #702 "Application and Certificate for Payment"; AIA #703 "Continuation Sheet"; Contractors Affidavit of Payment to Subcontractors and Suppliers; Weekly Workforce Reports; Certified Payroll Form; and Waivers of Lien. (Waivers of Lien are required from the general contractor in the full amount of the current payment application, and from all subcontractors, suppliers, or workers who provide more than $10,000 of project material/labor of the Work. The waiver shall be in the amount(s) listed in the Contractor's Affidavit.) For final payment, the general contractor shall also provide a Waiver of Lien in the full amount of the contract price.

The Waiver of Lien and Contractor Affidavit forms used shall be the Peoria Park District's standard form(s): 1) "Final Waiver of Lien" (for general contractors), 2) "Waiver of Lien - General

Contractor's Partial To Cover Only Certain Payments", 3) "Sub-Contractor's Final Waiver of Lien", 4) "Waiver of Lien - Sub-Contractor's Partial To Cover Only Certain Payments, and 5) "Contractor's Affidavit". (These forms are included in the Project Manual, and are the required Waiver of Lien forms for the project.)

(If the Contractor is unable to provide the required sub-contractor waiver at the time the application for payment is submitted (preferred method) alternatively, it may be provided at the time that payment is delivered by the District. If the sub-contractor waiver(s) still cannot be provided at that time, the District will provide "two-party" checks in which the Contractor and the sub-contractor are named jointly as payees.)

Format of AIA #703 shall follow that of "Schedule of Values". (See Division 01000 Article IV.) All payment requests shall reflect retainage in the amount of 10% of completed work.

53. IN PARAGRAPH (9.3.1.1) DELETE THE WORDS "or by interim determination of the Architect, but not yet included in Change Orders".

54. ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (9.3.1):

9.3.1.3 Upon Substantial Completion, the Owner will pay 95% percent of the amount due to the Contractor on account.

9.3.1.4 Monthly progress payments will be made by the Owner on projects lasting more than sixty days (from award of the bid to the Substantial Completion date given in the Supplementary Instructions to Bidders).

55. ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (9.3.2):

9.3.2.1 Material stored on site will be considered for payment only when a Schedule of Stored Materials with appropriate values accompany the payment request as an attachment.

9.3.2.2 All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of material and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the contract.

56. IN PARAGRAPH (9.4.1) DELETE THE WORDS "Architect" **AND** "Architect's" **AND SUBSTITUTE THE WORDS "**Owner's Representative" **AND** "Owner's Representative's".

IN PARAGRAPH (9.4.1) DELETE THE PHRASE "with a copy to the Contractor".

57. IN THE FIRST SENTENCE OF PARAGRAPH (9.4.2) DELETE THE WORD "Architect".

IN THE FIRST SENTENCE OF PARAGRAPH (9.4.2) AFTER THE WORDS "Architect's" **ADD THE WORDS** "and Owner's Representative's".

IN THE FOURTH SENTENCE OF PARAGRAPH (9.4.2) DELETE THE WORDS "Architect has" **AND SUBSTITUTE THE WORDS** "Owner's Representative and Architect have".

58. IN PARAGRAPH (9.5.1) DELETE THE WORDS "Architect" **AND** "Architect's" **AND SUBSTITUTE THE WORDS** "Owner's Representative **AND** "Owner's Representative's".

59. IN PARAGRAPHS (9.6.1, 9.6.3, AND 9.6.4) DELETE THE WORDS "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

60. IN PARAGRAPH (9.7.1) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

IN PARAGRAPH (9.7.1) DELETE THE WORDS "or awarded by arbitration".

61. IN PARAGRAPH (9.8.2) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS "**Owner's Representative".

62. IN THE FIRST SENTENCE OF PARAGRAPH (9.8.3) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative assisted by the Architect".

IN THE SECOND AND THIRD SENTENCES OF PARAGRAPH (9.8.3) DELETE THE WORDS "Architect's" and "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative's" and "Owner's Representative".

63. IN PARAGRAPH (9.8.4) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

64. IN PARAGRAPH (9.9.1) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

65. IN PARAGRAPH (9.10.1) IN THE FIRST SENTENCE AFTER THE FIRST TWO APPEARANCES OF THE WORD 'Architect" **ADD THE WORDS** "and Owner's Representative".

IN PARAGRAPH (9.10.1) DELETE THE THIRD AND FOURTH APPEARANCES OF THE WORD "Architect" and "Architect's" **AND SUBSTITUTE THE WORDS** "Owner's Representative" and "Owner's Representative's".

IN PARAGRAPH (9.10.1) AFTER THE FIFTH APPEARANCE OF THE WORD "Architect's" **ADD THE WORDS** "and Owner's Representative's".

IN THE LAST SENTENCE OF PARAGRAPH (9.10.1) DELETE THE WORD "Architect's" **AND SUBSTITUTE THE WORDS** "Owner's Representative's".

66. IN PARAGRAPH (9.10.2) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORD** "Owner's Representative".

67. ADD THE FOLLOWING SUB-PARAGRAPH TO PARAGRAPH (9.10.2):

9.10.2.1 When all items including items noted within Division 1000 General Requirements are found to be complete and in conformance with the Contract Documents, a final payment will be issued.

68. IN PARAGRAPH (9.10.3) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

69. IN PARAGRAPH (11.1.1) IN THE FIRST SENTENCE AFTER THE PHRASE "as will protect the Contractor" **ADD THE WORDS** "Architect and Owner".

70. IN PARAGRAPH (11.1.2), IN THE FIRST SENTENCE DELETE THE WORDS "limits of liability specified in the Contract Documents" **AND SUBSTITUTE THE WORDS** "limits required in 'Attachment A – Project Specific Insurance Requirements' (which is included as the last section of the Project Manual and the requirements therein shall be made part of the Contract Documents),".

IN PARAGRAPH (11.1.2) AFTER THE FIRST SENTENCE ADD:

"In addition, if any of the work occurs within fifty feet of an active railroad line and the Contractor's general liability coverages provide for exclusions of coverage when working on or near a railroad, the Contractor shall provide a separate Railroad Protective Liability Insurance Policy naming the railroad as the insured party, with the coverage limits required by that railroad."

71. IN PARAGRAPH (11.1.3), AFTER THE WORDS "Certificates of insurance" **ADD THE WORDS** "and endorsements to the insurance policy(s) which are".

IN PARAGRAPH (11.1.3) AFTER THE WORDS "acceptable to the Owner" **ADD THE WORDS** "and naming the Owner, their agents and consultants as additional insured".

ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (11.1)

11.1.4 The Contractor may, at his option, furnish Owner's Protective Liability Insurance in lieu of naming the Owner Additional Insured on the Contractor's policy, as required above. This insurance shall protect the Owner from claims as set forth in Paragraph 11.1.1 of the General Conditions, and to the limits required herein, as shown in "Attachment A".

11.1.5 The Contractor shall furnish two copies of each of the required Certificates or Endorsements for each copy of the Agreement which shall specifically set forth evidence of all coverage required by the Contract Documents. The form of the Certificate(s) or Endorsement(s) shall be those as required in "Attachment A". The Contractor shall also furnish to the Owner copies of any endorsements which limit coverage, or are subsequently issued amending coverage or limits of coverage.

72. DELETE PARAGRAPHS (11.3.1, 11.3.2, AND 11.3.3) IN THEIR ENTIRETY.

73. DELETE PARAGRAPH (11.4.1) AND SUBSTITUTE:

"If the work of the project is being completed by one general or prime contractor rather than multiple prime contractors, the Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full replacement value thereof. Such insurance shall be in a company or companies against which the Owner has no reasonable objection. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

74. AT THE END OF PARAGRAPH (11.4.1.1) ADD THE FOLLOWING SENTENCE: "The form of policy for this coverage shall be "Completed Value".

75. DELETE PARAGRAPH (11.4.1.2) IN ITS ENTIRETY.

76. DELETE PARAGRAPH (11.4.1.3) IN ITS ENTIRETY AND SUBSTITUTE:

"If by the terms of this insurance any mandatory deductibles are required, or if the Contractor should elect, with the concurrence of the Owner, to increase the mandatory deductible amounts or purchase this insurance with voluntary deductible amounts, the Contractor shall be responsible for payment of the amount of all deductibles in the event of a paid claim. If separate contractors are added as insureds to be covered by this policy, the separate contractors shall be responsible for payment of appropriate part of any deductibles in the event claims are paid on their part of the Project."

77. DELETE PARAGRAPHS (11.4.3, 11.4.4, AND 11.4.5) IN THEIR ENTIRETY.

78. DELETE PARAGRAPH (11.4.6) AND SUBSTITUTE:

"The Contractor shall file two certified copies of all policies with the Owner before exposure to loss can occur. If the Owner is damaged by the failure of the Contractor to maintain such insurance and to so notify the Owner, then the Contractor shall bear all reasonable costs properly attributable thereto.

79. DELETE PARAGRAPHS (11.4.7, 11.4.8, 11.4.9, AND 11.4.10) IN THEIR ENTIRETY.

80. DELETE PARAGRAPH (11.5.1) AND SUBSTITUTE:

"The Contractor shall furnish a Performance Bond and a separate Labor and Material Payment Bond, each for one hundred percent (100%) of the Contract Sum. Form of these bonds shall be as provided by the Owner in the Project Manual and no other form will be accepted. The Surety shall be authorized to do business in the State of Illinois and be acceptable to the Owner.

81. IN PARAGRAPH (12.1.1) DELETE THE WORD "Architect's" **AND SUBSTITUTE WORDS** "Owner's Representative's and Architect's". **DELETE THE WORD** "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

82. IN PARAGRAPH (12.1.2) AFTER THE WORD "Architect" **ADD THE WORDS** "and Owner's Representative".

83. IN PARAGRAPH (12.2.1.1) AFTER THE WORD "Architect" **ADD THE WORDS** "and Owner's Representative".

84. IN PARAGRAPH (13.5.4) AFTER THE WORD "Architect" **ADD THE WORDS** "and Owner's Representative".

85. IN PARAGRAPH (14.1.1.3) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

86. IN PARAGRAPH (14.2.2) DELETE THE PHRASE ", upon certification by the Architect that sufficient cause exists to justify such action,".

87. IN PARAGRAPH (14.2.4) DELETE THE WORD "Architect" **AND SUBSTITUTE THE WORDS** "Owner's Representative".

88. DELETE PARAGRAPH (14.4.3) IN ITS ENTIRETY AND SUBSTITUTE:

In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination. In no event, however, will such amounts exceed the Contract Sum reduced by the amount of prior payments except for increases pursuant to the claims procedure in the Contract Documents. Subcontracts, subsubcontracts, and purchase orders will contain appropriate provisions for termination for convenience under this Paragraph 14.4.

89. ADD THE FOLLOWING ARTICLE 15: LABOR, SAFETY AND WAGE STANDARDS TO THE GENERAL CONDITIONS OF THE CONTRACT:

ARTICLE 15
LABOR, WAGE, SAFETY, AND OTHER STANDARDS

15.1 LABOR STANDARDS. All employers shall comply with the Employment of Illinois Workers on Public Works Act [30 ILCS 570/1 to 570/7].

15.2 WAGE STANDARDS.

15.2.1 PREVAILING WAGE ACT: Wages and benefits to employees shall comply with all Federal and State of Illinois statutes pertaining to public works projects and specifically: Wages of Employees on Public Works [820 ILCS 130/1 - 12].

15.2.2 Not less than the prevailing rate of wages as determined by the Park District or the Department of Labor shall be paid to all laborers, workers and mechanics performing work under this contract. All contractor's bonds shall include a provision as will guarantee the faithful performance of such prevailing wage clause as provided by this bid specification or contract.

15.2.3 The terms "general prevailing rate of hourly wages", "general prevailing rate of wages" or "prevailing rate of wages" when used in this Act mean the hourly cash wages plus fringe benefits for training and apprenticeship programs approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training, health and welfare, insurance, vacations and pensions paid generally, in the locality in which the work is being performed, to employees engaged in work of a similar character on public works.

15.2.4 PREVAILING WAGE ACT/FOIA
Contractors and subcontractors shall submit certified payroll on a monthly basis to the Park District in compliance with requirements of 820 ILCS 130/5. These records will be kept by the Park District for three years and may be reviewed by others through the Freedom of Information Act (FOIA). The Park District will exclude employee's address, telephone number, and social security number from public inspection.

15.3 SAFETY STANDARDS.

15.3.1 PROTECTION OF PERSONS AND PROPERTY: The Contractor and his subcontractors shall, at all times, comply with applicable provisions of Federal, State and Local laws.

15.3.1.1 The Contractor and his sub-contractors shall have written programs complying with Occupational Safety and Health Administration standards and/or Illinois Department of Labor requirements including, but not limited to the following: hazardous communications, hearing conservation, respirator use, confined space entry, scaffolding, ladders, ventilation, flammable and combustible liquids, and lockout/tagout. The

Contractor shall submit documentation of their programs at the request of the Owner's Representative, or Occupational Safety and Health Administration and/or Illinois Department of Labor officials.

15.4 EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION/SEXUAL HARASSMENT

15.4.1 During the performance of the contract, the contractor agrees to the following:

15.4.1.1 That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are under-utilized and will take appropriate affirmative action to rectify any such under-utilization.

15.4.1.2 That, if it hires additional employees in order to perform his contract or any portion thereof, it will determine the availability (in accordance with the Rules and Regulations of the Illinois Department of Human Rights) 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 under-utilized.

15.4.1.3 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, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability or an unfavorable discharge from military service.

15.4.1.4 That it will have a written sexual harassment policy to include at the minimum, the following:

15.4.1.4.1 a definition of sexual harassment under the law;

15.4.1.4.2 a description of sexual harassment utilizing examples;

15.4.1.4.3 a formalized complaint procedure;

15.4.1.4.4 a statement of victim's rights;

15.4.1.4.5 directions on how to contact the Illinois Department of Human Rights. Out-of-state companies must provide directions for filing with the enforcement agency within their state. Companies that issue a standard policy for all business locations must prepare an addendum providing directions on how to contact the appropriate enforcement agency; and

15.4.1.4.6 A recitation that there cannot be any retaliation against employees who elect to file charges.

15.4.1.4.7 In addition, it is recommended that the employer post a copy of the sexual harassment policy in a prominent and accessible location and distribute it in a manner to assure notice to all employees on an annual basis.

15.4.1.4.8 The Illinois Human Rights Act specifically provides that all documents may meet, but cannot exceed, the sixth grade literacy level. Therefore, the employers sexual harassment policy must be stated in plain language and in "laymen's terms".

15.4.1.5 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 so notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

15.4.1.6. 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 contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

15.4.1.7. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

15.4.1.8. 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 contracting agency 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.

15.4.2 In the event of the contractor's non-compliance with the provisions of the Illinois Human Rights Act, the contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporation, 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 regulations.

END OF SUPPLEMENTARY GENERAL CONDITIONS

SECTION 010000 - GENERAL

A. SUMMARY OF THE WORK

1. The Work covered under this Contract consists of that work described by the Invitation to Bid, the Instructions/Supplemental Instructions to Bidders, the Bid/Proposal Form, the General/Supplemental Conditions of the Contract, these General Requirements, the Plans, and the Technical Specifications.
2. The Contractor shall be responsible for all items incidental to the scope of the Work intended by the bidding documents as per A.1 above, including but not limited to, expenses incurred by the requirements of various Sections of Division 010000, unless specifically stated otherwise herein.
3. Changes to the Work as required by approved Change Orders shall be at the expense of the Owner, however, requests for additional payments made after the fact will not be considered.

B. OCCUPANCY BY OWNER.

1. The Owner reserves the right to occupy any portion of the project before it has been entirely completed, with the understanding that such occupancy shall in no way constitute acceptance of the work, in whole or in part, or of any work performed under the Contract, provided that such occupancy does not substantially interfere with completion of the work by the Contractor.

SECTION 012600 - CHANGE ORDERS

A. OWNER'S REPRESENTATIVE'S FIELD ORDERS

1. From time to time during progress of the Work the Owner's Representative may issue an "Owner's Representative's Field Order" which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.
2. Should the Contractor consider that a change in Contract Sum or Contract Time is required he shall submit an itemized proposal to the Owner's Representative **immediately and before proceeding with the Work**. If the proposal is found to be satisfactory and in proper order, the Field Order will be superseded by a Change Order.

B. PROPOSAL REQUESTS

1. From time to time during the progress of work the Owner's Representative may issue a "Proposal Request" for an itemized quotation for changes to the Work which may result in a change to the Contract Sum or Contract Time. This document **is not a Change Order** and is not a direction to proceed with the changes described therein.

C. CHANGE ORDERS

1. Change Orders are written documents describing changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof. Change Orders must be signed by both the Owner and the Architect/Owner's Representative prior to proceeding with the Work subject to the Change Order. **REQUESTS FOR "EXTRA'S" OR OTHER ADDITIONAL PAYMENTS OVER AND ABOVE THE CURRENT CONTRACT SUM WILL NOT BE CONSIDERED WITHOUT THE PRIOR, WRITTEN APPROVAL OF BOTH THE OWNER AND THE OWNER'S REPRESENTATIVE.**
    a) INITIATION. Change Orders may be initiated by a "Field Order" or "Proposal Request" per paragraphs "A" and "B" above. In addition, either the Contractor or Owner (or Owner's Representative) may initiate a Change Order through:
        1) Discovery of a discrepancy in the Contract Documents,
        2) Discovery of concealed conditions or,
        3) Discovery, during the course of the Work, of methods of accomplishing the Work in a better or more economical manner.
    b) PROCESSING CHANGE ORDERS.
        1) Change Orders will be dated and will be numbered in sequence.
        2) The Change Order will describe the change or changes, or will refer to the Proposal Requests or Field Orders involved.
        3) The Owner's Representative will issue three copies of each Change Order to the Contractor.
        4) The Contractor promptly shall sign all three copies and return them to the Owner's Representative.
        5) The Owner and Owner's Representative will retain two signed copies in their files, and will forward one signed copy to the Contractor.
        6) Should the Contractor disagree with the stipulated change in Contract Sum or change in Contract Time of Completion, or both:
            i) The Contractor promptly shall return all three of the Change Orders, unsigned by him, to the Owner's Representative with a letter signed by the Contractor stating the reason or reasons for the Contractor's disagreement.
            ii) The Contractor's disagreement with the Change Order shall not in any way relieve the Contractor of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.

SECTION 012900 – PAYMENT PROCEDURES

A. SCHEDULE OF VALUES

1. Prior to the start of construction, submit a proposed Schedule of Values to the Owner's Representative which shows a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.
    a) The Schedule of Values is required to be compatible (in the same format) with the Application for Payment "Continuation Sheet", AIA G703.
2. If not requested to submit additional data or to modify the submitted Schedule of Values within ten (10) days of submittal, the initially submitted Schedule shall be deemed approved.

B. APPLICATIONS FOR PAYMENT

1. Progress payments will be made only if specifically called for in the Agreement. In all other cases, the Contractor may submit an Application for Payment (3 copies) upon Substantial Completion (95% of the Contract Sum), with the balance of the Contract Sum to be paid at Final Completion.
   a) **Paragraph #52 of the Supplementary General Conditions defines the documentation required for each payment request.**
   b) Applications for payment shall be delivered to the Owner's Project Manager at:

Department of Planning, Design, and Construction
Peoria Park District
Bradley Park Equipment Service
1314 N. Park Road
Peoria, Illinois 61604

SECTION 013100 - PROJECT MEETINGS

A. PRECONSTRUCTION CONFERENCE

1. Conduct a preconstruction conference prior to the start of the Work, at the location of the Work. Provide attendance by the designated personnel of the Contractor, including Sub-contractor's and/or suppliers of major components of the Work, if requested by the Owner's Representative.
   a) AGENDA. Discuss items of significance that could affect progress including such topics as:
      1) Tentative construction schedule.
      2) Critical Work sequencing.
      3) Designation of responsible personnel.
      4) Procedures for processing field decisions and Change Orders.
      5) Procedures for processing Applications for Payment.
      6) Distribution of Contract Documents.
      7) Submittal of Shop Drawings, Product Data and Samples.
      8) Preparation of record documents.
      9) Use of the premises.
      10) Office, Work and storage areas.
      11) Equipment deliveries and priorities.
      12) Safety procedures.
      13) First aid.
      14) Security.
      15) Housekeeping.
      16) Working hours.
      17) Permits and Permitting Agency Requirements

B. PROJECT MEETINGS

1. Project Meetings will be held per the schedule determined at the Preconstruction Conference, or as needed for proper coordination and administration of the project.
   a) AGENDA
      1) Review and correct or approve minutes of the previous progress meeting.
      2) Review progress of the Work since last meeting, including status of submittals for approval.
      3) Identify problems which impede planned progress.
      4) Develop corrective measures and procedures to regain planned schedule.
      5) Complete other current business.

C. REPORTING

1. Distribute copies of the minutes of each meeting to each party present, and to other parties who should have been present, no later than three business days after each meeting.

SECTION 013300 - SUBMITTALS

A. Requirements for shop drawings, samples, mock-ups, product data, etc., relative to specific elements or components of the work are called out in the various sections of the Technical Specifications.

1. Submit items to allow for Owner's Representative's review and approval, potential re-submission if full approval is not given, ordering, delivery, fabrication time, etc., so as to allow the Work to proceed in a timely manner and in conformance with the project schedule.

B. OTHER CONTRACTOR SUBMITTALS

1. Unless otherwise modified the Contractor shall also submit:
   a) A "bar chart" type proposed construction schedule, within ten days after award of the Bid.
   b) Other submittals as required by other section of Division 010000.

C. Submission of the required Bonds and Certificate of Insurance are to be made prior to the Owner's issuance of a Notice to Proceed.

SECTION 014000 – QUALITY/REGULATORY REQUIREMENTS

A. GENERAL: Contractors shall comply with all laws, rules and regulations governing the work.

1. When Contractor observes that contract documents are at variance with specified codes, notify Owner's Representative in writing immediately. Owner's Representative will issue all changes in accord with General Conditions.
2. When Contractor performs any work knowing or having reason to know that the work is contrary to such laws, rules and regulations and fails to so notify the Owner's Representative, Contractor shall pay all costs arising therefrom. However, it will not be the Contractor's primary responsibility to make certain that the contract documents are in accord with such laws, rules and regulations.

B. SAFETY:
1. Comply with all federal, state, and local laws, rules and regulations governing the installation/construction of the work.
2. Develop and utilize safety program and training for workmen and sub-contractor employees.

C. TESTING
1. TESTS AND INSPECTIONS REQUIRED
a) Provide all tests and inspections required by governmental agencies having jurisdiction, as required by provisions of the Contract Documents and/or as specifically required by sections of the Technical Specifications.
2. PAYMENT FOR TESTING
a) Include within the Contract Sum an amount sufficient to cover all testing, re-testing, and inspections required by the Contract documents and/or the Technical Specifications. Additionally pay for all testing and inspections required by all governmental agencies having jurisdiction.
1) The Owner will pay for any testing and inspecting specifically requested by the Owner's Representative which are over and above those described in Paragraph 1.a) above.
2) When initial tests (over and above those defined by 1.a) above) requested by the Owner's Representative indicate non-compliance with the Contract Documents, costs of initial tests associated with that non-compliance will be deducted by the Owner from the Contract Sum, and subsequent retesting occasioned by the non-compliance shall be performed by the same testing laboratory and the costs thereof shall be paid by the Contractor.
3. WAIVER OF INSPECTION AND/OR TESTS
a) Specified inspections and/or tests may be waived only by the specific written approval of the Owner's Representative, and **such waivers will be expected to result in credit to the Owner equal to normal cost of such inspection and/or test.**

SECTION 014200 - REFERENCE STANDARDS AND DEFINITIONS

A. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed for performance of a required construction activity the Contractor shall obtain copies directly from the publication source.
2. Although copies of standards needed for enforcement of requirements may be included as part of required submittals the Architect reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.

B. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents they mean the recognized name of the trade association standards generating organization authority having jurisdiction or other entity applicable to the context of the text provision. Refer to the Encyclopedia of Associations, published by Gale Research Co. available in most libraries.

C. Definitions: Architect, Owner's Representative, and Owner's Project Manager
1. ARCHITECT: The Architect shall be the person or entity designated by the Owner as the Owner's Representative and shall be identified as such in the Agreement Between Owner and Contractor, and is referred to throughout the Contract Documents as if singular in number and masculine in gender.
2. OWNER'S REPRESENTATIVE: The duties of the Owner's Representative as listed in the Project Manual, include but are not limited to, construction phase observation and technical administration services.
a) LIMITS OF AUTHORITY: The Owner's Representative shall be authorized to provide approvals and interpretations concerning the plans, specifications and progress of the Work as bid, but is not authorized to change the scope of the Work on behalf of the Owner.
3. OWNER'S PROJECT MANAGER: The Owner's Project Manager will represent, act on behalf of, and provide interface between the Owner and the Contractor in respect to contract administration and/or other matters which affect the scope of the Work.
a) Unless defined otherwise in the Project Manual, the Owner's Project Manager shall be a designated member of the Planning, Design, and Construction Division of the Peoria Park District.
b) The Owner's Project Manager will also be the Owner's Representative and will provide construction phase observation and technical administration services, if a consultant Architect has not been engaged to do so, by the Owner.

SECTION 015000 – TEMPORARY FACILITIES & CONTROLS

A. MOBILIZATION
1. Furnish all labor, tools, materials, equipment, and incidentals necessary for preparatory work.
2. Provide and establish personnel, equipment, supplies, materials, offices or buildings, and other facilities necessary to work on the project.
3. Demobilize all of the above and remove temporary facilities at the completion of the project.

B. BARRIERS, PROTECTION OF SITE AND PROPERTY
1. GENERAL
a) Owner's improvements to remain, existing utilities, as well as adjacent site improvements shall be protected from damage by barriers, guards and coverings. Damaged work shall be replaced or repaired to condition prevailing at time of signing of contract, at no additional cost to Owner.
b) Provide 6' high, continuous chain link or orange plastic (used materials acceptable) construction fence to prohibit unauthorized personnel or public entry from the site of the Work. (Substitutions may be considered; submit request in writing to the Owner's Representative.)
c) Contractor shall provide, erect and maintain additional planking, fences, protective canopies, railings, shoring, lights, warning signs, etc., as needed for the protection of adjacent property and the public.
2. LANDSCAPE PROTECTION
a) All live, healthy trees, shrubs, etc. on the site or on the street fronts of the site, not specified to be removed and not interfering with installation of new work required hereunder, shall be protected against injury from construction operations.

b) All shade trees which are to remain and which are liable to damage during the building operations, shall be properly boxed and protected from damage during the course of construction work as directed by the Park District. **No site-related work shall occur until the required tree protection (fencing, boxing, etc.) has been installed and approved by the Owner or his representative.**

1) LIQUIDATED DAMAGES: The Owner reserves the right to charge the Contractor for damage to existing trees, and to deduct the charges from the amounts due the Contractor, based on the following schedule:

aa)	Broken limbs 1" or over in diameter:	$50 per caliper inch of limb
bb)	Trenching or grading within the tree dripline or 20' from the trunk, whichever is less, of trees 4" or over in caliper diameter:	$100 per tree/per foot within dripline, or within 20' minimum if applicable
cc)	Damage to tree trunks, including "barking", nicking, gouging, etc.	$150 per caliper inch of tree, per each injury

3. BARRIERS/CONSTRUCTION FENCE MATERIALS
   a) 2" open mesh chain link fence, 72" high minimum, galvanized, with appropriately sized posts; gates where indicated.
   b) Alternate barrier fencing materials may be acceptable, however, no additional payments will be made on account of approval of alternate barrier/safety fencing materials.
   c) Materials may be new or used, if in serviceable condition.
4. WATCHMAN SERVICE
   a) The Owner will not be responsible for loss due to theft or other damage which is not covered under Property Insurance. The Contractor shall make such arrangements for watchman service as he considers necessary and he shall be responsible for all loss or damage of his property, equipment, material, etc., at the site, and he shall make good such damage or loss without any additional cost to the Owner.
5. EXISTING IMPROVEMENTS - PROTECTION
   a) The Contractor shall be entirely responsible for all injuries to water pipes, electric conduits or cables, drains, sewers, gas mains, poles, telephones and telegraph lines, streets, pavements, sidewalks, curbs, culverts, retaining walls, building walls, foundation walls, or other structures of any kind met with during the progress of the Work, and shall be liable for damages to public or private property resulting therefrom.

C. CONSTRUCTION ACCESS, ROADS, AND PARKING AREAS
1. CONTRACTOR'S USE OF PREMISES
   a) The Contractor shall require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.
2. CONSTRUCTION ACCESS
   a) To avoid traffic conflict with vehicles of the Owner's employees and customers, and to avoid over-loading of streets and driveways elsewhere on the Owner's property, limit the access of trucks and equipment to the route shown (IF SHOWN) on the Drawings as "Access Route". If access route is not shown on the Drawings, coordinate construction access and routes with the Owner's Project Manager.
   b) Do not permit such vehicles to park on any street or other area of the Owner's property except in the area shown on the Drawings as "Contractor's Parking Area". If not shown on the drawings, the Contractor's Parking Area shall be as designated by the Owner's Project Manager.
   c) Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the job site.
3. SECURITY
   a) Restrict the access of all persons entering upon the Owner's property in connection with the Work to the Access Route and to the actual site of the Work.

D. TEMPORARY ENVIRONMENTAL CONTROLS
1. GENERAL
   a) Provide temporary environmental controls at the site of the Work to ensure that construction operations have no harmful effects on adjacent properties and on members of the public who may come in proximity to the Work, and/or the employees of the Owner who are engaged in regular daily tasks and operations and are unable to be relocated to another work site during construction operations.
   b) Owner reserves the right to stop the Work, at the Contractor's expense, until the Contractor provides necessary control measures for the conditions listed below; additionally, the Owner reserves the right to perform or have performed necessary control measures, should the Contractor refuse to do so at the time requested and to deduct the cost of those expenses from the amount due the Contractor.
2. DUST CONTROL
   a) Provide dust control materials to minimize dust from construction operations. Prevent air-borne dust from dispersing into the atmosphere.
3. WATER CONTROL
   a). Control surface water to prevent damage to the project, the site and adjoining properties.
      1) Control fill, grading, and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas; direct drainage to proper runoff channels or storm drainage utilities.
   b) Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.
   c) Dispose of drainage water in a manner to prevent flooding, erosion silting, or runoff of silt or sediment or other damage to all portions of the site or to adjoining properties.
4. RODENT CONTROL
   a) Provide rodent control to prevent infestation of construction or storage areas.
      1) Use methods and materials which will not adversely affect conditions at the site or on adjoining properties.
5. DEBRIS CONTROL
   a) Maintain all areas free of extraneous debris, waste, and rubbish.
6. POLLUTION CONTROL
   a) Prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
   b) Provide equipment and personnel, perform emergency measures to contain all spillages, and to remove contaminated soils or liquids.
      1) Excavate and dispose of all contaminated earth off-site. Replace with suitable compacted fill and topsoil.
   c) Take special measures, as necessary, to prevent harmful substances from entering public waters, including lakes, streams, intermittent drainage channels, and storm or sanitary sewers.
7. EROSION CONTROL

a) Plan and execute construction and earthwork in a manner to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
   1) Schedule the Work to minimize the areas of bare soil exposed at one time, if possible.
   2) Provide temporary control measures such as berms, dikes, and drains to prevent runoff of silt or sediment from the site.
   3) Comply with Section 015713.

E. PROJECT IDENTIFICATION AND SIGNAGE
1. GENERAL
   a) Provide and install project identification sign, if located and/or called out on the Drawings.
2. SUBMITTALS
   a) Provide shop drawing(s) of proposed sign/sign installation to Owner's Representative for approval, prior to installation
3. INSTALLATION
   a) Provide project sign as detailed on Drawings
   b) If not detailed on Drawings provide project identification sign per the following minimum requirement:
      1) Content
         aa) Name of project
         bb) Name of Owner
         cc) Name of Architect(s) and major consultants
         dd) Names of Contractor and major subcontractors
         ee) Allow additional 200 characters of text explaining the project

      2) Construction
         aa) Size: 4' x 8'
         bb) Materials: Min. 5/8" AC DFPA Exterior Plywood, with (2) 4" x 4" x 12' long pressure treated post supports
         cc) Paint: paint front and back, seal edges, provide content as approved by Owner's Representative. Conform to recognized sign painting standards in selection of paint materials. Use only professional sign painter with three years minimum experience to apply sign graphics and lettering.
      3) Install sign in a manner consistent with length of time of construction operations. Remove sign and fill post holes at project completion.

F. FIELD OFFICES
1. TEMPORARY FACILITIES
   Provide and pay for temporary (new, or used if in serviceable condition) facilities and controls needed for the Work, if called out on the Drawings, which may include, but are not necessarily limited to:
   a) Temporary utilities such as heat, water, electricity, and telephone;
   b) Field office for the Contractor's personnel (required if shown on the Drawings; otherwise at the Contractor's option and expense).
      1) Conform with requirements for Engineer's Field Office Type B, as defined in Article 646.04 of the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation.
   c) Sanitary facilities;
   d) Enclosures such as tarpaulins, barricades, and canopies;
   e) Temporary fencing of the construction site;
   f) Project sign.
2. Comply with Federal, State, and local codes and regulations.
   a) Maintain temporary facilities and controls in proper and safe condition throughout the progress of the work. The Contractor is responsible for conformance with all safety codes and regulations for all Work under his jurisdiction, including that of Sub-Contractors.
3. Locate temporary facilities as shown on the Drawings, or as approved by the Owner's Representative if not shown on the Drawings.

SECTION 015713 – EROSION & SEDIMENT CONTROL

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

B. SUMMARY
1. This Section includes the following:
   a) Site erosion and sediment control
   b) Silt fencing
   c) Ditch checks
   d) Erosion control blankets
   e) Culvert and inlet protection
   f) Stabilized entrance
2. Related Sections include the following:
   a) Division 31 – Earthwork.
   b) Division 32 – Exterior Improvements.

3. Erosion and Sediment Control Statement: The Peoria Park District takes the issue of construction related erosion and sediment control extremely seriously. The Peoria Park District is a community leader in the conservation and protection of our area's natural resources. This project will be watched closely by both staff and citizens for compliance with erosion and sediment control regulations and specifications.

C. QUALITY ASSURANCE
1. Materials and methods of construction shall comply with the following standards:

a) Illinois Department of Transportation
b) City of Peoria

D. PRODUCTS

1. Silt Fencing
   a) Fabric for silt fencing shall consist of woven or nonwoven filaments of polypropylene, polyester, or polyethylene. Fabric shall be resistant to degradation by ultraviolet light and heat exposure. Fabric shall be rot, insect, and mildew proof, and have a high resistance to tearing.
      1) Fabric shall comply with the following physical properties:

aa)	Grab tensile strength (lb) – ASTM D4632	200 (min)
bb)	Grab elongation @ break (%) – ASTM D4632	12
cc)	Burst strength (psi) – ASTM D751	250 (min)
dd)	Trapezoidal tear strength (lb) – ASTM D4533	75
ee)	Width (ft)	3.5 (min)
ff)	Weight (oz/sq. yd) – ASTM D3776	4.0
gg)	Equivalent opening size	30 (nonwoven)
hh)	(EOS) sieve no. – Corps of Engrs. CS-02215	50 (woven)

2. Ditch Checks
   a) Ditch checks will consist of silt fencing with the addition of wire reinforcement.
   b) Wire shall be 9 gauge.
   c) Alternate: Straw bales may be used in lieu of silt fencing
3. Posts
   a) Posts shall be standard “T” or “U” steel posts or wood with a minimum cross section of 3 square inches. Posts shall be a minimum of 60” in length. Posts shall be driven a minimum of 24” into the ground.
4. Erosion Control Blankets
   a) Excelsior Blanket: Excelsior blanket shall consist of a machine produced mat of wood excelsior of 80% 6” or longer fiber length. The wood from which the excelsior blanket is cut shall be properly cured to achieve adequately curled and barbed fibers.
      1) The blanket shall be of consistent thickness, with the fiber evenly distributed over the entire area of the blanket. The excelsior blanket shall be covered on the top side with a 90 day biodegradable extruded plastic mesh netting having an approximate minimum opening of 16 x 16 mm (5/8 x 5/8 in.) to an approximate maximum opening of 50 x 25 mm (2 x 1 in.). The netting shall be substantially adhered to the excelsior blanket by a knitting process using biodegradable thread or by an applied degradable adhesive. The netting shall be substantially adhered to the excelsior by a knitting process using biodegradable thread. The netting shall be entwined with the excelsior blanket for maximum strength and ease of handling.
      2) The excelsior blanket shall comply with the following:

aa)	Minimum width, ± 25 mm (1 in.)	600 mm (24 in.)
bb)	Minimum mass ± 10%	0.34 kg/sm (0.63 lb/sq yd)
cc)	Minimum length of roll, approximately	45 m (150 ft)

      3) The excelsior blanket shall be smolder resistant.
5. Culvert And Inlet Protection
   a) Culvert protection shall consist of a ditch check immediately upstream of every culvert entrance. Ditch check shall be installed to protect culvert interior from sedimentation.
   b) Inlet protection shall consist of purpose made devices by:

      Dandy Products, Inc.
      P. O. Box 1980
      Westerville, Ohio 43086-1980
      Phone: 1-800-591-2284
      Fax: 740-881-2791
      www.dandyproducts.com
      dlc@dandyproducts.com

      or

      NILEX, Inc.
      15171 E. Fremont Drive
      Centennial, CO 80112
      Phone: 1-800-537-4241
      Fax: 303-766-1110
      www.nilex.com
      denver@nilex.com

   c) “Or Equal” substitutions may be made with prior approval of Owner’s Representative.
6. Stabilized Entrance
   a) Stabilized entrance shall consist of coarse aggregate laid over geotextile fabric.
   b) Dimensions: 70’ long by 14’ wide.
   c) Geotextile Fabric: as per requirements of “silt fencing”.
   d) Aggregate: IDOT Class CA-1, CA-2, cA-3, or CA-4.

E. EXECUTION

1. Site Erosion And Sediment Control
   a) Contractor is responsible for fulfilling terms of City of Peoria Erosion Control Permit and all applicable portions of the “Erosion, Sediment, and Stormwater Control Ordinance of the City of Peoria”.
   b) Install control devices as shown on erosion control plan.
   c) Install additional measures as needed to control erosion and sedimentation on the site.
2. Silt Fencing Installation
   a) Install silt fencing according to details in plans. The silt fence shall be entrenched to a minimum depth of 8”.
   b) The silt fence shall be installed on the contour, with the ends extending up-slope.

c) Install silt fencing before commencing site clearing work.

3. Ditch Check Installation
   a) Install ditch checks according to details in plans.
   b) Install ditch checks at locations shown on plans.
   c) Install additional ditch checks as needed to control erosion within drainage swales as site conditions and weather dictate.
   d) Install ditch checks immediately after swales are graded.
4. Erosion Control Blankets Installation
   a) Install erosion control blankets as needed to control erosion in drainage swales and at the direction of the Owner's Representative.
   b) Anchor stakes shall be driven at a spacing of 2 feet on center.
5. Culvert And Inlet Protection Installation
   a) Install culvert protection at upstream entrances to all culverts.
   b) Install culvert protection to intercept waterborne silt and sediment and prevent it from entering culvert pipes.
   c) Install immediately after culvert installation.
   d) Install inlet protection according to manufacturer's written instructions at each inlet immediately after inlet construction.
6. Stabilized Construction Entrance Installation
   a) Install stabilized construction entrance and other approved measures as necessary to limit tracking of soil on to all paved surfaces.
   b) Comply with all City of Peoria codes limiting tracking of soil on to City streets.
7. Maintenance
   a) Inspect silt fences after each rainfall. Repair fencing, failures, end runs, and erosion cuts immediately.
   b) Remove soil from silt fencing after each rainfall.
   c) Erosion control maintenance and repair shall be considered incidental to the contract.
   d) Tracked soil and sediment shall be removed from all paved surfaces on a daily basis.
   e) Replace or provide new erosion and sediment control measures as needed during construction to provide protection to site and surrounding property for the entire time of construction, or until project is complete.
8. Close-Out
   a) Remove silt fencing and other erosion and sediment control devices after lawn or seeding has been established.
   b) Soil deposits remaining in place after silt fence is no longer required shall be dressed to conform to existing grade, and seeded with appropriate seed material.

SECTION 016000 – PRODUCT REQUIREMENTS

A. MATERIALS AND EQUIPMENT
   1. STANDARD SPECIFICATIONS
      a) Reference herein to known standard specifications of governmental agencies or technical societies shall refer to the latest edition of such specifications, adopted and published at date of these Specifications.
   2. MANUFACTURED ARTICLES
      a) All manufactured articles, materials and equipment to be incorporated in the work shall be new (unless otherwise specified) and of the quality specified and shall be used, erected, installed, connected, cleaned and conditioned as directed by and in conformity with job conditions to produce the best results obtainable.
         1) Field measurements for all special products and materials which requires close tolerances or fitting into other items or components of the Work shall be taken on the job by the party furnishing the materials.
   3. QUALITY ASSURANCE
      a) Per the Supplementary Instructions to Bidders, the Bidder by submission of a signed bid form, agrees to install products and equipment by brand and model name or names specified in the Technical Specifications, Divisions 02-35. Substitutions are allowed only in conformance to the following:
         1) Proprietary Specification Requirement: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.
         2) Semiproprietary Specification Requirement: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted
            aa) Where either of the two cases above prevail, and the named product is accompanied by "or approved equal" substitutions will be allowed only upon written approval of the Owner's Representative prior to submission of bids.
         3) Non-Proprietary Specification Requirement: When the Specifications lists products or manufacturers that are available and are accompanied by "or equal", the Contractor may propose any available product that complies with the Specifications' requirements; however, the Owner's Representative shall determine if the produced item complies with those requirements.
         4) Descriptive Specification Requirement: Where Specifications describe a product or assembly listing exact characteristics required, with or without use of a brand, trade, or model name, provide a product or assembly that provides the characteristics and otherwise complies with the Contract Documents.
         5) Performance Specification Requirement: Where Specifications require compliance with performance requirements, provide products or assembly that comply with these requirements and are recommended by the manufacturer for the application indicated.
         6) Compliance with Standards, Codes, and Regulations: Where the Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standard, code, or regulation specified.
      b) VISUAL MATCHING AND SELECTION. Where the Specifications require matching an established sample or call for "as selected", the Owner's Representative's decision will be final on whether a proposed product matches satisfactorily.

B. STORAGE AND PROTECTION
   1. GENERAL
      a) Contractor shall provide and maintain:
         1) Storage for materials and equipment to be installed in Project.
         2) Protection and security for stored materials and equipment, on and off site.
         3) Protection of existing on-site elements to remain.

4) Protection of adjacent properties improvements

2. METHODS
   a) Store off grade and cover with impervious material all moisture or water vulnerable materials.
   b) Store finished products and equipment in an enclosed building, on or off site.
   c) Maintain integrity of shipping cartons until ready for installation.
   d) Provide separate storage for combustible and non-combustible products.
   e) Follow storage recommendations of product and equipment manufacturers.
   f) Other methods shall be subject to Owner's prior written approval.

3. The Contractor shall maintain an emergency phone number where a contact person can be notified at any time, Sundays and holidays included, of an emergency condition due to the work which requires immediate repair or protection.

C. SUBSTITUTIONS
1. See "SECTION 016000 – A. MATERIALS AND EQUIPMENT" for requirements pertaining to substitution of specified materials, products, equipment, etc.
2. Contractor may propose substitute materials, products, equipment, etc., after award of the Bid; however, such proposals are expected to result in a cost savings to the Owner and/or higher quality Work at no additional cost to the Owner.

D. WARRANTIES AND BONDS
1. GENERAL
   a) This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
   b) Warranties for the Work and products and installations of each Contractor shall be one (1) year unless specified otherwise in the individual Sections of Divisions 02 through 35.
   c) Disclaimers and Limitations:
      1) Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and Contractors required to countersign special warranties with the Contractor.
      2) The responsibility of the Contractor in respect to the required warranties shall not be relieved or limited in any way by the failure of installed components, equipment, materials, etc., due to naturally occurring and/or re-occurring conditions at the site or area of the Work including, but not limited to:
         aa) ground and soil conditions, especially as related to frost heave;
         bb) high wind velocities (except those exceeding velocities normally used for calculating wind loading at the site of the Work);
         cc) rain and water damage (unless caused by winds exceeding normal design limits);
         dd) ice/snow loading on structures
         ee) and other naturally occurring or re-occurring site conditions
      3) The Contractor shall notify the Owner's Representative, prior to the award of the contract, of any part or component of the Work that is, in his opinion, not designed to accommodate the existing, naturally occurring, or re-occurring conditions of the site, and whether or not a change in the proposed methods of construction, types of equipment, etc., will affect the bid price.
         aa) Should the proposed change in construction methods, equipment type, etc., result in additional expense, the Owner reserves the right to request proposals from the other bidders and to make award the contract based on the bid amount which includes the proposed change.
2. WARRANTY REQUIREMENTS
   a) Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
   b) Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

   c) Replacement cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
   d) Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.
      aa) Rejection of Warranties: The Owner reserves the rights to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
   e) The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.
   f) For specific warranty requirements related to landscape materials, refer to the applicable Section.
3. SUBMITTALS
   a) Submit written warranties to the Owner's Representative prior to the date certified for Substantial Completion. If the Owner's Representative's Certificate of Substantial Completion designates a commencement date for warranties other that the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner's Representative.
      1) When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner's Representative within fifteen days of completion of that designated portion of the Work.

b) Form of Submittal: At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, Subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

c) Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.

d) Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the 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 the installer.

e) Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the project title or name, and the name of the Contractor.

f) When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

SECTION 017300 – EXECUTION

A. GEOTECHNICAL DATA

1. If the Owner has caused borings or other subsurface investigations to be made, the data or report pursuant to these investigations will be included in the Project Manual, as an Appendix, and labeled as such.
2. The Owner and Owner's Representative do not guarantee the accuracy or validity of the data, nor do they assume any responsibility for the Contractor's interpretation of the data.
3. The Contractor's may, at his option, perform additional subsurface investigation, however, it shall be at the Contractor's sole expense.

B. FIELD ENGINEERING

Provide such field engineering services as are required for proper completion of the Work including, but not limited to:

1. Establishing and maintaining lines and levels
2. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.
3. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks and control points. Preserve permanent reference points during construction.

C. COORDINATION OF TRADES AND SUB-CONTRACTORS

1. The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operation of all trades, sub-contractors, or materials and men engaged upon the work. He shall be prepared to guarantee to each of his subcontractors the dimensions which may be required for fitting of their work to all surrounding work and shall do, or cause his agents to do, all cutting, fitting, adjusting and patching necessary to make the several parts of the work come together properly and fit the work to receive, or be received by that of other contractors.
2. When two or more prime contracts are being executed at one time in such manner that the work on one contract may interfere with the work of another, the Owner's Representative shall decide which contractor shall cease work and which shall continue, or whether the work on both contracts may progress at the same time and in what manner.
    a) The Contractor shall not cause any unnecessary hindrance or delay to any other contractors on the premises, and shall be responsible for all damages done to the work of other contractors caused by him or by his employees.

D. REFERENCE AND CONTROL POINTS PROVIDED BY OWNER

In addition to layout procedures provided by the Contractor for proper performance of the Contractor's responsibilities:

1. Locate and protect existing control points before starting work on the site.
2. Preserve permanent reference points during progress of the Work.
3. Do not change or relocate reference points or items of the Work without specific approval from the Owner's Representative.
4. Promptly advise the Owner's Representative when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.
5. Upon direction of the Owner's Representative, require the field engineer to replace reference stakes or markers.
6. Locate such replacement according to the original survey control.

E. REFERENCE AND CONTROL POINTS PROVIDED BY THE CONTRACTOR

1. If not provided by the Owner (and defined as the responsibility of the Owner in the Contract Documents) establish sufficient general reference points in the form of permanent bench marks, grade stakes or other markers as will enable the Contractor to proceed with the Work.
2. The Contractor may lay out his own work, or cause the Work to be laid out by a qualified party such as a Registered Land Surveyor or a Professional Engineer, as necessary.
3. The Contractor shall establish and be responsible for all lines, elevations and measurements of the structure utilities, installations, and other Work executed by him under the contract.
    a) Exercise proper precautions to verify the figures and dimensions shown on the drawings before laying out the work; be responsible for any error resulting from failure to exercise such precaution.

SECTION 017329 - CUTTING AND PATCHING

A. CHASES AND OPENINGS

1. The Contractor is responsible for the provision and/or coordination of all chases, openings and recesses required by work of his own forces, subcontractors or separate contractors.
    a) Each subcontractor or separate contractor shall be responsible for furnishing advance information to the General Contractor as to exact dimensions and locations of such chases and openings, and shall provide and set in place all necessary sleeves, inserts and forms.
    b) Openings shall be accurately located, neatly cut, and no larger than necessary. Provide all rebuilding, patching, refinishing and painting required to restore the construction to original condition.
2. Provide shoring, bracing, and support as required to maintain structural integrity of the project.
3. Provide protection from cutting and patching operations as required for other portions of the project; protect the Work and existing improvements in proximity to the cutting and patching operations from the elements.

SECTION 017419 – CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

A. PERIODIC CLEANING

1. Each Contractor shall clean up after his own work as needed and/or ensure that sub-contractors clean up after their work and remove accumulations of waste, debris, and rubbish caused by construction operations.
    a) Remove all waste, rubbish and debris on a daily basis (if needed), as they accumulate, and after completion of the Work.

B. PROJECT COMPLETION

1. On completion of the project, the entire job shall be cleaned up and left in perfect condition, including adjacent areas.
    a) Marred surfaces shall be patched or repaired and touched up to match adjoining surfaces.
    b) All rubbish shall be removed from the site before acceptance.
    c) New surfaces and/or exposed elements of the Work shall be protected from stain and marring. These surfaces shall be cleaned to the satisfaction of the Owner's Representative or replaced if said stains or mars are unable to be completely removed

C. GOVERNMENTAL REGULATIONS

1. Conduct cleaning and disposal operations in compliance with Federal, State and local ordinances and anti-pollution laws and regulations.

SECTION 017700 - PROJECT CLOSEOUT

A. GENERAL

Work includes:

1. Substantial Completion.
2. Final Completion
3. Closeout submittals.
4. Instruction

B. SUBSTANTIAL COMPLETION

1. Prepare and submit the list ("punch-list") required by the first sentence of Paragraph 9.8.2 of the General Conditions.
    a) Within a reasonable time after receipt of the list the Owner's Representative will inspect to determine status of completion. Should the Owner's Representative determine that the Work is not Substantially Complete:
        1) The Owner's Representative will so notify the Contractor, in writing, giving the reasons therefore.
        2) Remedy the deficiencies and notify the Owner's Representative when ready for reinspection.
        3) The Owner's Representative will reinspect the Work.
    b) When the Owner's Representative concurs that the Work is Substantially Complete:
        1) The Owner's Representative will prepare a "Certificate of Substantial Completion" on AIA form G704, accompanied by the Contractor's list of items to be completed or corrected, as verified and approved by the Owner's Representative.
        2) The Owner's Representative will submit the Certificate to the Owner and to the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

C. FINAL COMPLETION

1. Prepare and submit the notice required by the first sentence of Paragraph 9.10.1 of the General Conditions.
    a) Verify that the Work is complete including, but not necessarily limited to, the items mentioned in Paragraph 9.8.2 of the General Conditions. Certify that:
        1) the Contract Documents have been reviewed;
        2) the Work has been inspected for compliance with the Contract Documents;
        3) the Work has been completed in accordance with the Contract Documents;
        4) equipment and systems have been tested as required, and are operational;
        5) the Work is completed and ready for final inspection.
    b) The Owner's Representative will make a final inspection to verify status of completion and if all "punch-list" items have been completed, and upon receipt of the Contractor's Final Application for Payment, issue a Certificate of Final Completion. Should the Owner's Representative determine that the Work is incomplete or defective:
        1) The Owner's Representative will so notify the Contractor, in writing, listing the incomplete or defective work.
        2) Remedy the deficiencies promptly, and notify the Owner's Representative when ready for reinspection.
    c) FINAL APPLICATION FOR PAYMENT
        1) Submit a final Application for Payment to the Owner's Representative, showing all adjustments to the Contract Sum.
        2) If needed, the Owner's Representative will prepare a final Change Order showing adjustments to the Contract Sum which were not made previously by Change Orders.
        3) Include final waivers of lien from the Contractor, sub-contractors, and major suppliers.
        4) Final payment will not be released until all close-out submittals have been made, final cleaning has been performed, and required instruction(s) to Owner's personnel have been accomplished.

D. CLOSEOUT SUBMITTALS

1. When the Owner's Representative determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals. Closeout submittals include, but are not necessarily limited to:
    a) Project record documents described in "Section 017839".
    b) Operation and maintenance manuals/data as described in "Section 017823".
    c) Warranties and bonds as described in "Section 016000".
    d) Keys and keying schedule;
    e) Spare parts and materials extra stock;
    f) Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:
        1) Certificates of Inspection, as required
        2) Certificate(s) of Occupancy

g) Certificates of Insurance for products and completed operations;
h) Evidence of payment and release of liens.
1) Consent of Surety to Final Payment
2) Contractor's Final Waiver of Lien
3) Separate releases or Waivers of Lien for sub-contractors, suppliers and others with lien rights against the Owner, together with a list of those parties.
i) List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

SECTION 017823 - OPERATING/MAINTENANCE MANUALS & INSTRUCTION

A. GENERAL
1. Compile operating/product data and related information appropriate for Owner's maintenance and operation of products and equipment provided under the Contract.
2. Instruct Owner's personnel in operation and maintenance of products, equipment and systems.
3. OPERATIONS AND MAINTENANCE DATA REQUIRED:
a) Operating and maintenance manuals are required for each area of Work which is listed below, if that area of Work is included within the scope of Work of the project:
1) HVAC
2) Plumbing
3) Electrical
4) Materials and finishes

B. OPERATIONS/MAINTENANCE MANUALS - FORM OF SUBMITTAL
1. Prepare operating and maintenance manuals in the form of an instructional manual, utilizing heavy-duty, durable 3-ring vinyl covered loose-leaf binders, for use by the Owner's operating personnel. Organize into suitable sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder. Provide when drawings or diagrams are required as part of the manual.
2. Provide sturdy manila or kraft envelope, accordion type file folder, or cardboard file boxes, properly labeled, of sufficient size to contain all submittals.
3. Submit one copy of data in final form at least fifteen days before final inspection. This copy will be returned within fifteen days after final inspection, with comments. After final inspection make corrections or modifications to comply with the Owner's Representative's comments and submit three copies of each approved manual to the Owner's Representative
4. WARRANTIES, BONDS AND SERVICE CONTRACTS
a) Provide a copy of each warranty, bond or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to be followed in the event of product failure. List circumstances and conditions that would affect validity of the warranty or bond. Provide list for each product containing name, address, and phone number of:
1) Contractor.
2) Subcontractor.
3) Maintenance contractor, as appropriate.
4) Local supply source for parts and replacement.
b) Identify area of responsibility of each contractor.

C. MANUAL FOR MATERIALS AND FINISHES
1. Submit two (2) copies of complete manual in final form.
2. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.
3. Content for products, applied materials and finishes:
a) Manufacturer's data, giving full information on products.
1) Catalog number, size, composition.
2) Color and texture designations.
3) Information for re-ordering special-manufactured products.
4. Instructions for care and maintenance.
a) Manufacturer's recommendations for types of cleaning agents and methods.
b) Cautions against cleaning agents and methods detrimental to product.
c) Recommended cleaning and maintenance schedule.
5. Moisture-Protection and Weather-Exposed Products: Provide complete manufacturer's data with instructions on inspection, maintenance and repair of products exposed to the weather or designed for moisture-protection purposes.
6. Manufacturer's Data: Provide manufacturer's data giving detailed information, including the following, as applicable:
a) Applicable standards.
b) Chemical composition.
c) Installation details.
d) Inspection procedures.
e) Maintenance information.
f) Repair procedures.

D. INSTRUCTION
1. Instruct the Owner's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work including, but not limited to;
a) Mechanical
b) Water supply
c) Electrical service/distribution and lighting
d) Other items or systems as required in individual sections of the Technical Specifications

2. Instructions for the Owner's Personnel: For instruction of the Owner's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the equipment or system involved.

SECTION 017839 - PROJECT RECORD DOCUMENTS (AS-BUILTS)

A. DOCUMENTS REQUIRED AT SITE

1. The Contractor shall maintain at the job site one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders, and other Contract modifications.
   a) Each of these project record documents shall be clearly marked "**Project Record Copy**"
   b) Shall be maintained in good condition
   c) shall be available at all times for inspection by the Park District, and shall not be used for construction purposes.

B. Project-record drawings shall be marked up to show significant changes made during construction progress, referenced to visible and accessible features of the structures. Project-record drawings shall be kept current and no work shall be concealed until required information has been recorded.

C. Record-documents shall be submitted in satisfactory condition to the Park District at the completion of the project. **FINAL COMPLETION OF THE PROJECT WILL NOT BE ATTAINED, AND FINAL PAYMENT WILL BE WITHHELD, UNTIL PROJECT "AS-BUILTS" ARE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.**

END OF GENERAL REQUIREMENTS

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under separate contracts.
5. Access to site.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:
1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Golf Course Storage Facility – Kellogg and Newman, 2015904.16 and 2015904.17.
1. Project Location: Kellogg Golf Course, 7716 N. Radnor Rd., Peoria IL., 61615; and Newman Golf Course, 2021 W. Nebraska Ave., Peoria, IL., 61604.

B. Owner: Peoria Park District, 1125 W. Lake Ave., Peoria, IL 61614.
1. Owner's Representative: Rebecca Fredrickson , 309-686-3386.

C. Architect: apaceDesign Architects + Engineers, 2112 E. War Memorial Drive, Peoria, IL 61614, 309-685-4722.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:
1. Project consists of demolition of an existing metal storage building at Newman Golf Course by the owner. Moving of the existing fuel tank at Newman will also be by owner/others. Contractor shall provide and install a pre-engineered post framed wood and metal building at each Newman and Kellogg golf course facility. It will include excavation, fill for the removed building at Newman, fill below all slabs and aprons, new concrete for footings as required, electrical work, ventilation, plumbing work, and grading. New concrete aprons, stoops and floor slabs will be furnished by the owner along with any top soil and final grading, and seeding. This work shall have a separate bid for each site (Kellogg and Newman) This work shall also be bid combined both sites by one contractor. The project may be awarded to two differing contractors each with a separate contract or one contractor for both sites under one contract.

B. Type of Contract.
1. Project will be constructed under a single prime contract. There may be 2 separate General Contractors for this work and each would have their own contract with Peoria Park District. (i.e., one contractor for Kellogg and one contractor for Newman) This Project may also end up being awarded to one General Contractor for both sites under a single prime contract in a combined bid per the bid form.

1.4 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.
1. Cooperate with moving of the Fuel Tank at Newman by others. Electrical work within this contract will coincide with work by the Fuel Tank contractor.

1.5 ACCESS TO SITE

A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
1. Limits: Confine construction operations to project work limited. Connections of utilities may be required beyond project limited and shall be coordinated with Owner a minimum 72 hours in advance and require a written notice to proceed from the Owner.
2. 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, unless Owner’s approves areas in writing.
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.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.6 COORDINATION WITH OCCUPANTS

A. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.

1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.7 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 to normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.

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 Architect's written permission before proceeding with utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
   1. Notify Owner not less than two days in advance of proposed disruptive operations.
   2. Obtain Owner's written permission before proceeding with disruptive operations.

E. Nonsmoking Building: Smoking is not permitted within the property.

F. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

1.8 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 033000 – CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide all concrete work, except floor slabs, aprons and stoops:
      a. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
      b. Testing of concrete and field inspections.
      c. Owner will be providing/installing all concrete floor slabs, stoops, curbs and aprons including reinforcement in slabs and floor sealers. General shall coordinate with Owner’s rep.

1.2 Related Work:

A. Specified Elsewhere:
   1. Section 312000 - "Earth Moving" for drainage fill under slabs-on-grade.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement.

D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer detailing fabrication, assembly, and support of formwork.

E. Welding certificates.

F. Material certificates.

G. Material test reports.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Testing Agency Qualifications: Owner engage an independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4/D 1.4M, "Structural Welding Code - Reinforcing Steel."

D. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
   1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5.
   2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

E. Concrete Testing Service: Owner will engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.

C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice.

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
   1. Portland Cement: ASTM C 150, Type I, gray.

B. Normal-Weight Aggregates: ASTM C 33, graded.
   1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
   2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

2.4 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
   1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
   2. Retarding Admixture: ASTM C 494/C 494M, Type B.
   3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
   4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
   5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
   6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.5 VAPOR RETARDERS

A. Sheet Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.

2.6 CURING MATERIALS

A. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.7 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

2.8 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

C. Admixtures: Use admixtures according to manufacturer's written instructions.
   1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
   2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
   3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

D. Proportion normal-weight concrete mixture as follows:
   1. Minimum Compressive Strength: 4000 psi at 28 days.
   2. Maximum Water-Cementitious Materials Ratio: 0.45.
   3. Slump Limit: 4 inches, plus or minus 1 inch.
   4. Air Content: Six percent, plus or minus 1.5 percent at point of delivery for 3/4-inch nominal maximum aggregate size.
   5. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.

2.9 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.10 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M, and furnish batch ticket information.
1. When air temperature is between 85 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 60 minutes.

2.11 CONCRETE FLOOR SLAB SEALER

A. Floor Coatings:
1. Sealer/Solvent Based for Concrete Floors: MPI #104.
a. Cononado Paint; Concrete. Coating, Clear 21-10.
b. Evclid Chemical Company; Lusterseal 300.
c. Sherwin Williams; Concrete and Terrazo Sealer B44-V22.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 VAPOR RETARDERS

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.4 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.5 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth to one-third of concrete thickness as follows:
1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: Comply with ACI 306.1.

D. Hot-Weather Placement: Comply with ACI 301.

3.7 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces exposed to public view.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.8 FINISHING FLOORS AND SLABS (By OWNER)

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.
   1. Apply float finish to surfaces to receive trowel finish.

C. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
   1. Apply a trowel finish to surfaces exposed to view.
   2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch.

D. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.

3.9 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
   1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
   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. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
   3. Curing and sealing compound in paragraph below may act as a permanent surface finish.
   4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat.

Maintain continuity of coating and repair damage during curing period.

3.10 APPLICATION OF CONCRETE FLOOR SEALER (BY OWNER)

A. Concrete Substrates, Traffic Surfaces:
1. Solvent Based Clear Sealer System:
a. First Coat: Sealer, Solvent Based for floors.
b. Top Coat: Sealer, Solvent Based for floors.

3.11 CONCRETE SURFACE REPAIRS (BY OWNER)

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

3.12 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

3.13 FIELD QUALITY CONTROL

A. Inspections:
1. Steel reinforcement placement.
2. Steel reinforcement welding.
3. Verification of use of required design mixture.
4. Concrete placement, including conveying and depositing.
5. Curing procedures and maintenance of curing temperature.

B. Concrete Tests¨ 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 one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. but less than 25 cu. yd. plus one set for each additional 50 cu. yd. or fraction thereof.
2. Slump: ASTM C143/C 143 M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour or each concrete mixture.
4. Compression Test Specimens: ASTM C31/C 31 M.
a. Cast and laboratory cure for two sets of two standard cylinder specimens for each composite sample.
b. Cast and field cure two sets of two standard cylinder specimens for each composite sample.
5. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.
a. Test one set of two field-cured specimens at seven days and one set of two specimens at 28 days.
b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

6. When strength of field-cure cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
8. Test results shall be reported in writing to Architect, 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 29 days, concrete mixture proportions and materials, compressive breaking strength and type of break for both 7- ad 28-day tests.
9. Nondestructive Testing: Impact hammer, sonoscope or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
10. 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. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods.
11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
12. Correct deficiencies in the Work that test reports and inspecting indicate do not comply with the Contract Documents.

END OF SECTION 03 30 00

Section 06 10 00 - Rough Carpentry

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
1. General Contractor Provide:
a. Framing with dimension lumber.
b. Wood blocking and nailers.
c. Plywood backing panels.

1.2 RELATED WORK

A. Specified Elsewhere:
1. Section 06 16 00 - Sheathing.
2. Section 13 34 20 - Post Framed Buildings.

1.3 DEFINITIONS

A. Exposed Framing: Framing Not Concealed by other construction.

B. Dimension Lumber: Lumber of 2" nominal or greater but less than 5" nominal in least dimension.

C. Lumber grading agencies, and the abbreviations used to reference them, include the following:
1. NELMA: Northeastern Lumber Manufacturer Association.
2. NLGA: National Lumber Grades Authority.
3. RIS: Redwood Inspection Service.
4. SPIB: The Southern Pipe Inspection Bureau.
5. WCLIB: West Coast Lumber Inspection Bureau.
6. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 15 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2[for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground].
   1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:
   1. Wood sills, sleepers, blocking, furring, and similar concealed members in contact with masonry or concrete.
   2. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
   1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
   2. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.

C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.[Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.]

D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.

E. Application: Treat items indicated on Drawings, and the following:
   1. Concealed blocking.
   2. Plywood backing panels.

2.4 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.
   1. Species:
      a. Mixed southern pine; SPIB.
      b. Northern species; NLGA.
      c. Eastern softwoods; NeLMA.
      d. Western woods; WCLIB or WWPA.

2.5 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
   1. Blocking.
   2. Nailers.
   3. Rooftop equipment bases and support curbs.

B. For items of dimension lumber size, provide Construction or No. 2 grade lumber of any species.
   1. Mixed southern pine; No. 2 grade; SPIB.
   2. Eastern softwoods; No. 2 Common grade; NeLMA.
   3. Northern species; No. 2 Common grade; NLGA.
   4. Western woods; Construction or No. 2 Common grade; WCLIB or WWPA.

2.6 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: DOC PS 1, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.
   1. Plywood shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.7 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
   1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Power-Driven Fasteners: NES NER-272.

C. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

D. Expansion Anchors: Anchor bolt and sleeve assembly of material stated below with capability to sustain, without failure, a load equal to times the load imposed when installed in concrete as determined by testing per ASTM E488 conducted by an independent testing agency.
   1. Material: Carbon-Steel components, zinc plated to comply with ASTM B633, Class FE/Zn5.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

D. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.

E. Shear Wall Panels: Install shear wall panels to comply with manufacturer's written instructions.

F. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

G. Do not splice structural members between supports unless otherwise indicated.

H. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

I. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

J. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

3.2 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06 10 00

Section 06 16 00 - Sheathing

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Wall sheathing.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

A. Orientated Strand Board: DOC PS2.

2.2 WALL SHEATHING

A. Oriented-Strand-Board Wall Sheathing: Exposure 1 sheathing.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
   1. For wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:
   1. NES NER-272 for power-driven fasteners.
   2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

D. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide: for type of structural - use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:
   1. Wall Sheathing:
      a. Nail to wood framing. Apply a continuous bead of glue to framing members at edges of wall sheathing panels.

END OF SECTION 06 16 00

Section 07 21 00 - Thermal Insulation

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Foam-plastic board insulation at upper floor slab only and perimeter slab.
      b. Glass-fiber blanket insulation at 4 walls of Storage Room only and cap.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 03 30 00 - Cast-in-Place Concrete.
   2. 13 34 20 - Post-Frame Building System.
   3. 31 20 00 - Earth Moving.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 FOAM-PLASTIC BOARD INSULATION (FOUNDATION/UNDERSLAB)

A. Extruded-Polystyrene Board Insulation: ASTM C 578, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. DiversiFoam Products; Mendota, IL.
      b. Dow Chemical Company (The).
      c. Owens Corning; Rockford, IL (foam insulation only).
      d. Pactiv Building Products; Lake Forest, IL.
   2. Type X, 15 psi (foundation).
   3. Type VI, 40 psi (underslab).

2.2 GLASS-FIBER BLANKET INSULATION

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. CertainTeed Corporation.
   2. Guardian Building Products, Inc.
   3. Johns Manville.
   4. Knauf Insulation.
   5. Owens Corning.

B. Reinforced-Foil Faced, Glass Fiber Blanket Insulation: ASTM C 665, Type III (reflective faced), Class A (faced surface with a flame-spread index of 25 or less) Category 1 (membrane is a vapor barrier), faced with foil serim, soil-scrim kraft, or foil serim polyethylene, R value of R19.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.2 INSTALLATION OF BELOW-GRADE INSULATION

A. On vertical surfaces, set insulation units loosely laid according to manufacturer's written instructions.
   1. If not otherwise indicated, extend insulation a minimum of 24 inches below exterior grade line.

B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.
   1. If not otherwise indicated, extend insulation a minimum of 36 inches in from exterior walls.

3.3 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Foam-Plastic Board Insulation: Seal joints between units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

C. Glass-Fiber Blanket Insulation: Install in cavities formed by framing members according to the following requirements:
   1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
   2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
   3. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
   4. For wood-framed construction, install blankets according to ASTM C 1320 and as follows:

a. With faced blankets having stapling flanges, secure insulation by inset, stapling flanges to sides of framing members.
b. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

5. Vapor-Retarder-Faced Blankets: Tape joints and ruptures in vapor-retarder facings, and seal each continuous area of insulation to ensure airtight installation.
a. Exterior Walls: Set units with facing placed toward interior of construction.

D. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

END OF SECTION 07 21 00

Section 072500 - Weather Barriers

PART 1 - GENERAL

1.1 SUMMARY

A. Base Bid:
   1. General Contractor Provide:
      a. Building wrap.
      b. Flexible flashing around openings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

A. Building Wrap: ASTM E 1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. Dow Chemical Company (The); Styrofoam Weathermate Plus Brand Housewrap.
      b. DuPont (E. I. du Pont de Nemours and Company); Tyvek HomeWrap and HeaderWrap.
      c. Ludlow Coated Products; R-Wrap Protective House Wrap.
      d. Pactiv, Inc.; GreenGuard Value Wrap - (Illinois Manufacturer).
      e. Raven Industries Inc.; Fortress Pro Weather Protective Barrier.
      f. Reemay, Inc.; Typar HouseWrap.
   2. Water-Vapor Permeance: Not less than 50 g through 1 sq. m of surface in 24 hours per ASTM E 96/E 96M, Desiccant Method (Procedure A).

B. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.2 MISCELLANEOUS MATERIALS

A. Flexible Flashing: Self-adhesive butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch.
   1. Products: Subject to compliance with requirements, provide one of the following:

a. DuPont (E. I. du Pont de Nemours and Company); DuPont Flashing Tape.
b. Raven Industries Inc.; Fortress Flashshield.
c. Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
d. Fiberweb, Clark Hammerbeam Corp.; Aquaflash 500.
e. Fortifiber Building Systems Group; Fortiflash 25.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

A. Cover sheathing with water-resistive barrier as follows:
1. Cut back barrier 1/2 inch on each side of the break in supporting members at expansion- or control-joint locations.
2. Apply barrier to cover vertical flashing with a minimum 4-inch overlap unless otherwise indicated.

B. Building Paper: Apply horizontally with a 2-inch overlap and a 6-inch end lap; fasten to sheathing with galvanized staples or roofing nails.

C. Building Wrap: Comply with manufacturer's written instructions.
1. Seal seams, edges, fasteners, and penetrations with tape.
2. Extend into jambs of openings and seal corners with tape.

3.2 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing where indicated to comply with manufacturer's written instructions.
1. Lap seams and junctures with other materials at least 4 inches except that at flashing flanges of other construction, laps need not exceed flange width.
2. Lap flashing over water-resistive barrier at bottom and sides of openings.
3. Lap water-resistive barrier over flashing at heads of openings.

END OF SECTION 072500

Section 079200 - Joint Sealants

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Silicone joint sealants.
      b. Urethane joint sealants.
      c. Preconstruction adhesion testing.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. Section 13 34 20 - Post-Frame Building System.

1.3 PRECONSTRUCTION TESTING

A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers eight samples of materials that will contact or affect joint sealants. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

1.4 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples: For each kind and color of joint sealant required.

C. Joint-Sealant Schedule: Include the following information:
   1. Joint-sealant application, joint location, and designation.
   2. Joint-sealant manufacturer and product name.
   3. Joint-sealant formulation.
   4. Joint-sealant color.

D. Product test reports.

E. Preconstruction compatibility and adhesion test reports.

F. Preconstruction field-adhesion test reports.

G. Field-adhesion test reports.

H. Warranties.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

B. Preinstallation Conference: Conduct conference at Project site.

1.6 WARRANTY

A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

2.2 SILICONE JOINT SEALANTS

A. Mildew-Resistant Neutral-Curing Silicone Joint Sealant: ASTM C 920.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. BASF Building Systems.
b. Dow Corning Corporation.
c. GE Advanced Materials - Silicones.
d. May National Associates, Inc.
e. Pecora Corporation.
f. Polymeric Systems, Inc.
g. Schnee-Morehead, Inc.
h. Sika Corporation; Construction Products Division.
i. Tremco Incorporated.
2. Type: Single component (S) or multicomponent (M).
3. Grade: Nonsag (NS).
4. Class: 50.
5. Uses Related to Exposure: Nontraffic (NT).

2.3 URETHANE JOINT SEALANTS

A. Urethane Joint Sealant: ASTM C 920.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. BASF Building Systems.
   b. Bostik, Inc.
   c. Lymtal, International, Inc.
   d. May National Associates, Inc.
   e. Pacific Polymers International, Inc.
   f. Pecora Corporation.
   g. Polymeric Systems, Inc.
   h. Schnee-Morehead, Inc.
   i. Sika Corporation; Construction Products Division.
   j. Tremco Incorporated.

2.4 JOINT SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
   1. Remove laitance and form-release agents from concrete.
   2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods

required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION

A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.
   3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

F. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.3 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
   1. Extent of Testing: Test completed and cured sealant joints as follows:
      a. Perform ten tests for the first 1000 feet of joint length for each kind of sealant and joint substrate.
      b. Perform 1 test for each 1000 feet of joint length thereafter or 1 test per each floor per elevation.
   2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.4 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces, including, but not limited to the following:
   1. Joint Locations:
      a. Isolation and contraction joints in cast-in-place concrete slabs.
      b. Joints between different materials listed above.
      c. Other joints as indicated.
   2. Joint Sealant: Multi-component pourable urethane..
   3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
   1. Joint Sealant: Multi-component nonsag urethane.
   2. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
   1. Joint Locations, include, but are not limited to the following:
      a. Control and expansion joints on exposed interior surfaces of exterior walls.
      b. Perimeter joints of exterior openings.
      c. Vertical joints on exposed surfaces of interior unit masonry and partitions.
      d. Perimeter joints between interior wall surfaces and frames of interior doors and windows.
      e. Other joints as indicated.
   2. Joint Sealant: Multi-component nonsag urethane.
   3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

D. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
   1. Joint Sealant Location:
      a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
      b. Other joints as indicated.
   2. Joint Sealant: Mildew Resistant Neutral-Curing Silicone.
   3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 07 9 200

Section 081113 - Hollow Metal Doors And Frames

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Standard hollow metal doors and frames.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. Section 08 71 00 - Door Hardware.
   2. Section 09 91 13 - Field Painting of Hollow Metal Doors and Frames.
   3. Section 13 34 20 - Post-Frame Building System.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.4 SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include elevations, door edge details, frame profiles, metal thicknesses, preparations for hardware, and other details.

C. Schedule: Prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Ceco Door Products; an Assa Abloy Group company.
   2. Curries Company; an Assa Abloy Group company.
   3. Republic Doors and Frames.
   4. Steelcraft; an Ingersoll-Rand company.

2.2 EXTERIOR HOLLOW-METAL DOORS AND FRAMES

A. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3.
   1. Physical Performance: Level A according to SDI A250.4.
   2. Doors:
      a. Type: As indicated in the Door and Frame Schedule.
      b. Thickness: 1-3/4 inches.
      c. Face: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A40 coating.
      d. Edge Construction: Model 1, Full Flush.
      e. Core: Polyurethane.

3. Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than 2.1 deg F x h x sq. ft./Btu when tested according to ASTM C 1363.
4. Frames:
   a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum A40 coating.
   b. Construction: Full profile welded.
5. Exposed Finish: Prime.

2.3 FRAME ANCHORS

A. Jamb Anchors:
1. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.

B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch, and as follows:
1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

2.4 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. Power-Actuated Fasteners in Concrete: From corrosion-resistant materials.

G. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing).

H. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat.

2.5 FABRICATION

A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Hollow-Metal Doors:
1. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.

C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
1. Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
3. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
4. Jamb Anchors: Provide number and spacing of anchors as follows:
a. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
1) Three anchors per jamb up to 60 inches high.
2) Four anchors per jamb from 60 to 90 inches high.
3) Five anchors per jamb from 90 to 96 inches high.
4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
b. Compression Type: Not less than two anchors in each frame.
5. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers.
a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

D. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

2.6 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
1. Shop Primer: SDI A250.10.
a. Confirm compatibility with finish painting.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
   a. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
   b. Install frames with removable stops located on secure side of opening.
   c. Install door silencers in frames before grouting.
   d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
   e. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
   f. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.
2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
   a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
3. Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
4. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
   a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
   b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
   c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
   d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

B. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.
   1. Non-Fire-Rated Steel Doors:
      a. Between Door and Frame Jambs and Head: 1/8 inch plus or minus 1/32 inch.
      b. Between Edges of Pairs of Doors: 1/8 inch to 1/4 inch plus or minus 1/32 inch.
      c. At Bottom of Door: 5/8 inch plus or minus 1/32 inch.
      d. Between Door Face and Stop: 1/16 inch to 1/8 inch plus or minus 1/32 inch.

3.2 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow-metal work immediately after installation.

C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

D. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

E. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

Section 083613 - Sectional Doors

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
1. General Contractor Provide:
a. Manual operated 1.75″ - 3" thick insulated sectional doors and supports guides, and hardware, including lockable keyed latches/handles.

1.2 REALTED WORK

A. Specified Elsewhere:
1. Section 055000 "Metal Fabrications" for miscellaneous steel supports.

1.3 PERFORMANCE REQUIREMENTS

A. General Performance: Sectional doors shall meet performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.

B. Structural Performance: Exterior sectional doors shall withstand the effects of gravity loads, and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
1. Wind Loads: Uniform pressure (velocity pressure) of 20 lbf/sq. ft., acting inward and outward.
a. Basic Wind Speed: 90 MPH.
b. Importance Factor: 1.5.
c. Exposure Category: C.

C. Air Infiltration: Maximum rate not more than indicated when tested according to ASTM E 283.
1. Air Infiltration: Maximum rate of 0.04 cfm/sq. ft. at 15 and 25 mph.

1.4 SUBMITTALS

A. Product Data: For each type and size of sectional door and accessory.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.
1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, location and size of each field connection.

C. Samples: For each exposed product and for each color and texture specified.
1. Include similar samples of accessories involving color selection.

D. Delegated-Design Submittal: For sectional doors indicated to comply with performance requirements and design criteria, including analysis data

signed and sealed by a State of Illinois Structural engineer responsible for their preparation.
1. Detail fabrication and assembly of seismic restraints.
2. Summary of forces and loads on walls and jambs.

E. Qualification Data: For Qualified Installer.

F. Seismic Qualification Certificates: For sectional doors, accessories, and components, from manufacturer.

G. Warranties: Sample of special warranties.

H. Maintenance Data: For Section Doors to include in Maintenance Manual.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain Sectional Doors from single source from manufacturer.
1. Obtain operations and hardware from same sectional door manufacturer.

B. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

C. Standard for Sectional Doors: Fabricate sectional doors to comply with DASMA 102 unless otherwise indicated.

D. Regulatory Requirements: Comply with applicable provisions in the US Architectural and Transportation Barriers Compliance Board's Americans with Disabilities Act (ADA) and Architectural Barriers (ABA) Accessibility Guidelines for Buildings and Facilities, Illinois Accessibility Code and ICC/ANSI A117.1.

1.6 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair sectional door or replace section door that fail in materials or workmanship within specified warranty period.
1. Warranty Period: One year.

B. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace operator or operator components of sectional doors that fail in materials or workmanship within specified warranty period.
1. Warranty Period: One year from date of Substantial Completion.

C. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Warranty Period: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 STEEL DOOR SECTIONS

A. Exterior Section Faces and Frames: Fabricate from manufacturer's standard zinc-coated (galvanized), cold-rolled, steel sheet.
   1. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
   2. For insulated doors, provide sections with continuous thermal-break construction, separating the exterior and interior faces of door.

B. Section Ends and Intermediate Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet welded to door section. Provide intermediate stiles formed from galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches apart.

C. Reinforce bottom section with a continuous channel or angle conforming to bottom-section profile and allowing installation of astragal.

D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place. Ensure that reinforcement does not obstruct vision lites.

E. Provide reinforcement for hardware attachment.

F. Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard insulation, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within steel sections that incorporate the following interior facing material, with no exposed insulation:
   1. Interior Facing Material: Zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet.

2.2 TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Manufacturer's standard, galvanized-steel track system of configuration indicated, sized for door size and weight, designed for lift type indicated and clearances shown on Drawings. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed.

B. Track Reinforcement and Supports: Galvanized-steel track reinforcement and support members. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.

C. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door unless otherwise indicated.

D. Windows: Manufacturer's standard window units of type and size indicated and in arrangement shown. Provide removable stops of same material as door-section frames.

2.3 HARDWARE

A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty, galvanized-steel hinges at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails.

C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Provide 2-inch- diameter roller tires for 2-inch- wide track.

2.4 LOCKING DEVICES

A. Locking Device Assembly: Fabricate with cylinder lock, spring loaded dead bolt, operating handle, cam plate, and adjustable locking bars to engage thru slots in track.
1. Lock Cylinders: Keyed to Owner’s desire.
2. Keys: Three.

2.5 COUNTERBALANCE MECHANISM

A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs mounted on torsion shaft made of steel tube or solid steel. Provide springs designed for number of operation cycles indicated.

B. Cable Drums and Shaft for Doors: Cast-aluminum or gray-iron casting cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.

C. Cables: Galvanized-steel lifting cables.

D. Cable Safety Device: Include, on each side-edge of door, a device designed to automatically stop door if either lifting cable breaks.

E. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.

F. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.6 MANUAL DOOR OPERATORS

A. General: Equip door with manual operator by Door Manufacturer.

B. Push Up Operation: Lift handles and pull rope for raising and lower doors, with counterbalance mechanism designed so that required lift of pull for door operation does not exceed 25 lbs. (111N).

2.7 DOOR ASSEMBLY

A. Steel Sectional Door: Sectional door formed with hinged sections.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. C.H.I. Overhead Doors, Arthur, IL.
      b. Overhead Door Corporation.
      c. Raynor, Dixon, IL.
      d. Wayne-Dalton Corp.
      e. Haas Door Co.

B. Operation Cycles: Not less than 50,000.

C. R-Value: 16.4 minimum.

D. Steel Sections: Zinc-coated (galvanized) steel sheet, formed into sections 31.75″ – 2″ inches thick.
   1. Exterior-Face Surface: Manufacturer's: Standard.
   2. Interior Facing Material: Zinc-coated (galvanized) steel sheet.

E. Track Configuration: Normal headroom or low, if required.

F. Weatherseals: Fitted to bottom and top and around entire perimeter of door.

G. Windows: Approximately 24 by 8 inches, with curved corners, and spaced apart the approximate distance as indicated on Drawings; in one row at height indicated on Drawings; installed with insulated glazing of clear float glass.

H. Locking Devices: Equip door with outside keyed cylinder locking and handle with bars to slotted interior track.

I. Manual Door Operator: Chain-hoist operator.

J. Door Finish:
   1. Baked-Enamel Kynar Finish: Color and gloss as selected by Architect from manufacturer's full range.
   2. Finish of Interior Facing Material: Match finish of exterior section face.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Tracks: Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment. Repair galvanized coating on tracks according to ASTM A 780.

C. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Adjust doors and seals to provide weathertight fit around entire perimeter.

3.2 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner’s repsrentative/maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 08 36 13

Section 087100 - Door Hardware

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Mechanical door hardware for the following:
         1) Exterior keyed swinging doors. Provide the following hardware as described for each door.
         2) AHC - Architectural Hardware Consultant.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. Section 081100 - Hollow Metal Doors and Frames.
   2. Section 134220 - Post-Frame Building Systems.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction and installation details, material descriptions of individual components and profiles, and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as installation procedures and diagrams. Coordinate final door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
   1. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
   2. Content: Include the following information:
      a. Identification number, location, hand, fire rating, size, and material of each door and frame.
      b. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
      c. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
      d. Description of electrified door hardware sequences of operation and interfaces with other building control systems.

C. Keying Schedule: Prepared by or under the supervision of Installer, detailing Using Agency's final keying instructions for locks.

D. Maintenance Data: For each type of door hardware to include in maintenance manuals.

E. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and an Architectural Hardware Consultant who is available during the course of the Work to consult with Contractor, Architect, and Using Agency about door hardware and keying.
   1. Warehouse Facilities: In project's vicinity.
   2. Scheduling Responsibility: Preparation of door hardware and keying schedules.

B. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as follows:
   1. For door hardware, an Architectural Hardware Consultant (AHC).

C. Source Limitations: Obtain each type of door hardware from a single manufacturer.

D. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

E. Accessibility Requirements: For door hardware on doors in any accessible route, comply with [the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and Accessibility Guidelines and Illinois Accessibility Code.
   1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
   2. Comply with the following maximum opening-force requirements:
      a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
   3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
   4. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

F. Keying Conference: Contractor conduct keying conference with Owner’s Representative at Project site or by phone or email.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver keys to manufacturer of key control system for subsequent delivery to Using Agency.

B. Deliver keys to Owner’s Representative by registered mail.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
   a. Manual Closers: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. Provide door hardware for each door as scheduled on Drawings to comply with requirements in this Section.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.
   2. References to BHMA Designations: Provide products complying with these designations and requirements for description, quality, and function.

2.2 HINGES

A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Hager Companies.
      b. IVES Hardware; an Ingersoll-Rand company.
      c. McKinney Products Company; an ASSA ABLOY Group company.
      d. Stanley Commercial Hardware; Div. of The Stanley Works.

B. Anti-Friction Bearing Hinges:
   1. Mounting: Full Mortise (Butts).
   2. Bearing Material: Manufacturer's standard anti-friction bearing.
   3. Grade: Grade 1 (heavy weight).
   4. Base and Pin Metal:
      a. Exterior Hinges: Stainless steel with stainless steel pin.
      b. Interior Hinges: Stainless steel with stainless steel pin.
      c. Hinges for Fire-Rated Assemblies: Stainless steel with stainless steel pin.
   5. Non-rising loose unless otherwise noted.
   6. Tips: Flat Button.
   7. Corners: Square.
   8. Finish: 630 Satin Stainless Steel.

2.3 MECHANICAL LOCKS AND LATCHES

A. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.
   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

B. Mortise Locks: BHMA A156.13; Operational Grade 1; stamped steel case with steel or brass parts; Series 1000.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company.
b. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
c. Schlage Commercial Lock Division; an Ingersoll-Rand company.
d. Yale Security Inc.; an ASSA ABLOY Group company.

2.4 LOCK CYLINDERS

A. Lock Cylinders:
1. Manufacturer: Same manufacturer as for locking devices.

2.5 KEYING

A. Keying System: Removable core type.
1. Contractor verify and match keying desired by Owner to match a particular building entry key.
a. Coordinate with A/E and Owner’s Representative.
b. Provide minimum five keys.

2.6 OPERATING TRIM

A. Operating Trim: BHMA A156.6; stainless steel, unless otherwise indicated.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Hager Companies.
b. Hiawatha, Inc.
c. IVES Hardware; an Ingersoll-Rand company.
d. Rockwood Manufacturing Company.

2.7 SURFACE CLOSERS

A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. LCN Closers; an Ingersoll-Rand Company; Princeton, IL.
b. Norton Door Controls; an ASSA ABLOY Group company.
c. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
d. Yale Security Inc.; an ASSA ABLOY Group company.

B. Surface Closer with Cover: Grade 1; Modern Type with mechanism enclosed in cover.
1. Mounting: Parallel arm.
2. Back Check: Adjustable, effective between 60 and 85 degrees of door opening.
3. Cover Material: Molded plastic.

4. Closing Power Adjustment: At least 50 percent more than minimum tested value.

2.8 MECHANICAL STOPS AND HOLDERS

A. Wall-Mounted Stops: BHMA A156.16; polished cast brass, bronze, or aluminum base metal.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Hager Companies.
b. Hiawatha, Inc.
c. IVES Hardware; an Ingersoll-Rand company.
d. Rockwood Manufacturing Company.
e. Stanley Commercial Hardware; Div. of The Stanley Works.

B. Wall Bumpers: Grade 1; with rubber bumper; 2-1/2" diameter, minimum 3.4" projection from wall; with back plate for concealed fastening installation; with convex bumper configuration.

C. Finish: 630 Satin Stainless Steel.

2.9 DOOR GASKETING

A. Door Gasketing: BHMA A156.22; air leakage not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Hager Companies.
b. National Guard Products.
c. Pemko Manufacturing Co.; an ASSA ABLOY Group company.
d. Reese Enterprises, Inc.
e. Zero International.

B. Adjustment Housed Perimeter Gasketing: Screw adjustable vinyl bulb gasket material held in place by aluminum housing.

C. Door Sweeps: Vinyl gasket material held in place by flat aluminum housing or flange; surface mounted to face of door with screws.

2.10 THRESHOLDS

A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Hager Companies.
b. National Guard Products.
c. Pemko Manufacturing Co.; an ASSA ABLOY Group company.
d. Reese Enterprises, Inc.
e. Zero International.

B. Saddle Thresholds:
1. Type: Fluted Top - Meets ADA.
2. Base Metal: Aluminum.

2.11 METAL PROTECTIVE TRIM UNITS

A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch-thick stainless steel; with manufacturer's standard machine or self-tapping screw fasteners.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Hiawatha, Inc.
      b. IVES Hardware; an Ingersoll-Rand company.
      c. Rockwood Manufacturing Company.

2.12 AUXILIARY DOOR HARDWARE

A. Silencers for Metal Door Frame: Grade 1, neoprene or rubber; minimum 3/8" diameter. Fabricated for drilled in - application to frame.

2.13 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
   1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
   2. Fire-Rated Applications:
      a. Machine Screws: For the following:
         1) Hinges mortised to doors or frames.
         2) Strike plates to frames.
         3) Closers to doors and frames.
      b. Steel Through Bolts: For the following unless door blocking is provided:
         1) Closers to doors and frames.
   3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
   4. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."
   5. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.14 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware specification or schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Variations of finishes are not acceptable.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

B. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.
   1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
   2. Custom Steel Doors and Frames: HMMA 831.

C. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
   1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
   2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

D. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

E. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches of door height greater than 90 inches.

F. Lock Cylinders: Install construction cores to secure building and areas during construction period.
   1. Replace construction cores with permanent cores.
   2. Furnish permanent cores for installation, coordinate keying with Using Agency.

G. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

H. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

I. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

J. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

K. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

L. Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.2 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant: General Contractor shall engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

3.3 HARDWARE SETS

A. Single Exterior Man Type Personnel Doors:

Butt Hinges - Minimum three per door
Lockset, Entrance Function - Keyed per Owner’s request.
Overhead Closer
Kickplate
Weatherstripping
Door Sweep
Threshold, Clear Anodized
Aluminum Rain Drip at Head - Clear Anodized

B. Overhead Doors:
1. Cylinders for each overhead door and keyed per Owner’s request. Coordinate cylinder type with awarded door manufacturer.

END OF SECTION 08 71 00

Section 099113 - Exterior Painting

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
1. General Contractor Provide:
a. Surface preparation and the application of paint systems on the following exterior substrates including 1 interior door at Newman:
1) Steel.
2) Galvanized metal. (Door frames)

1.2 RELATED WORK

A. Specified Elsewhere:
1. Section 05 50 00 - Metal Fabrications.
2. Section 08 11 13 - Hollow Metal Doors and Frames.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples: For each type of paint system and each color and gloss of topcoat.
1. Submit card sample in each color and sheen of topcoat on an 8" x 11" card.

C. Material Safety Data Sheets: Submit material safety data sheets for each component of the paint system.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles for the paint category indicated.

2.2 PAINT, GENERAL

A. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.

C. Colors: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

C. Proceed with coating application only after unsatisfactory conditions have been corrected.
1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.

B. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
2. Ferrous Metal: Abrasive blast or power abrade with tools to properly remove loose rust and mill scale.
3. Galvanized: Remove surface contamination or passivators.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

A. Steel Substrates:
1. Sherwin Williams; Chicago, IL:

a. Prime Coat: S-W Pro Industrial Pro-Cryl Universal Metal Primer B66-310 Series. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: S-W DTM Acrylic Waterbased Industrial, B66-100 Series.

2. Diamond Vogel:
a. Prime Coat: Same as top coats. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: Pinnacle Finium DTM-AT Acrylic, Semi-Gloss.

3. Pratt Lambert:
a. Prime Coat: P & L Z6631 Universal Acrylic HP. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: P & L Z6700 Series DTM Acrylic Waterborne Semi-Gloss Enamel.

4. PPG Industries Inc; Batavia, IL:
a. Prime Coat: Pitt-Tech HPC/Industrial Maintenance 90-712 Series. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: Pitt-Tech HPC/Industrial Maintenance, Int/Ext High Gloss DTM Industrial Enamel 90-374 Series.

B. Galvanized-Metal Substrates:
1. Sherwin Williams; Chicago, IL:
a. Prime Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: S-W DTM Acrylic Waterbased Industrial, B66-100 Series.

2. Diamond Vogel:
a. Prime Coat: Same as top coats. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: Pinnacle Finium DTM-AT Acrylic, Semi-Gloss.

3. Pratt Lambert:
a. Prime Coat: P & L Z6631 Universal Acrylic HP. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: P & L Z6700 Series DTM Acrylic Waterborn Semi-Gloss Enamel.

4. PPG Industries Inc; Batavia, IL:
a. Prime Coat: Pitt-Tech HPC/Industrial Maintenance 90-712 Series. Omit for factory primed metals. Spot prime as needed.
b. Intermediate and Top Coats: Pitt-Tech HPC/Industrial Maintenance, Int/Ext High Gloss DTM Industrial Enamel 90-374 Series.

END OF SECTION 099113

Section 133420 - Post-Frame Building Systems

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Furnish and install post-frame building system (indicated on Drawings as "Pre-Engineered Wood Building").

1.2 RELATED WORK

A. Specified Elsewhere:
   1. Section 03 30 00 - Cast In-Place Concrete.
   2. Section 06 10 00 - Rough Carpentry.
   3. Section 06 16 00 - Sheathing.
   4. Section 07 21 00 - Thermal Insulation.
   5. Section 07 92 00 - Joint Sealants.
   6. Section 08 11 13 - Hollow Metal Doors.
   7. Section 08 36 13 - Sectional Doors.
   8. Section 08 71 00 - Door Hardware.
   9. Section 09 91 13 - Exterior Painting.
   10. Section 23 34 23 - Fans.
   11. Section 31 20 00 - Earth Moving.

1.3 GENERAL DESCRIPTION OF BUILDING SYSTEM

A. Primary Framing:
   1. Posts embedded below grade to depth per designer of record.

B. Post Frame Type:
   1. Clear span post-frame with trusses connected directly to posts.
   2. Clear span post-frame with trusses attached to headers.

C. Roof Pitch: 4" to 12" main span.

D. Secondary Framing: Purlins and other items as detailed.

E. Lateral Bracing: For resisting and distributing lateral forces.

F. Wall Details:
   1. Exterior Sheathing: Preformed steel panels.
   2. Interior Sheathing: Preformed steel panels.
   3. Insulated: None (Except Storage Room at Newman).

G. Roof Details:
   1. General: Manufactured approved Ridge Vent.
   2. Exterior Sheathing: Preformed steel panels.
   3. Ceiling Sheathing: None (N.A.).
   4. Insulated: None (N.A.).

H. Accessories: Vented pre-finished soffits, gutters and downspouts, including hangers and brackets.

1. Coordinate with grilles specified in Section 23 33 00 Air Duct Accessories.
2. Coordinate with exhaust fans and curbs specified in Section 23 34 23 Fans.

1.4 REFERENCES

A. AWC (NDS) - National Design Specification for Wood Construction.

B. IBC - International Building Code.

C. ANSI/ASCE 7 - Minimum Loads of Buildings and Other Structures.

D. ANSI/TPI 1 - National Design Standard for Metal Plate Connected Wood Truss Construction.

E. APA - Engineered Wood Construction Guide.

F. APA - PDS 04 - Panel Design Specification.

G. APA - Roof Sheathing Fastening Schedules for Wind Uplift.

H. ASAE EP 484 - Diaphragm Design of Metal-Clad, Post-Frame Rectangular Buildings. ASABE Standards. St. Joseph, MI.

I. ASAE EP 486. Post and Pole Foundation Design: Shallow Post Foundation Design. ASABE Standards. St. Joseph, MI.

J. ASAE EP 559 - Design Requirements and Bending Properties for Mechanically Laminated Columns. ASABE Standards. St. Joseph, MI.

K. ASCE 32 - Design and Construction of Frost Protected Shallow Foundations.

L. ASTM A 123 - Specification for Zinc (Hot-Dip Galvanized) Coating on Iron and Steel Products.

M. ASTM A 153 - Specification for Zinc (Hot-Dip Galvanized) Coating on Iron and Steel Hardware.

N. ASTM A 653/A 653M - Specification for Steel Sheet, Zinc-coated Galvanized or Zinc-iron alloy-coated Galvanealed by the Hot-Dip Process.

O. ASTM C665 - Specification for Mineral-Fiber Blanket Thermal Insulation.

P. ASTM F 1667 - Specification for Driven Fasteners: Nails, Spikes and Staples.

Q. AWPA U1 - USE CATEGORY SYSTEM: User Specification for Treated Wood Products.

R. BCSI, Building Component Safety Information. Guide for Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses.

S. Climate Atlas of the US 1968. Department of Commerce - ESSA and Technical Papers 25, 37, 41 and 49. US Department of Commerce.

T. Dipper.NWS.NOAA.gov/hdsc/pfds/orb/two letter state abbreviation_pfds.html. National Weather Service Rainfall Data Website.

U. ANSI/AITC A 190.1 - Structural Glued Laminated Timer.

V. EWS X 450 - Product Guide - Glulam for Light Frame Construction and Manufactured Housing.

W. NFBA - Accepted Practices for Post-Frame Building Construction: Framing Tolerances.

X. NFBA - Accepted Practices for Post-Frame Building Construction: Metal Panels and Trim Installation Tolerances.

Y. SSPC - Paint 20 - Zinc Rich Primers (Type I, "Inorganic", and Type II, "Organic"); Society for Protective Coatings; 1991 (Part of Steel Structures Painting Manual, Vol. Two).

Z. ACI 318 - Building Code Requirements for Structural Concrete.

1.5 DESIGN REQUIREMENTS

A. The building shall be designed by the Designer of Record (the Contractor's licensed structural engineer) as a complete system. All structural members and connections shall be the responsibility of the Designer of Record. All components of the system shall be specified by the Designer of Record. This includes, but is not limited to, components such as foundations, primary framing, secondary framing and lateral bracing.

B. Design Code:
1. Design load application shall be in accordance with 2012 edition of IBC.

C. Building Category:
1. For purposes of design load calculation, the building shall be classified as Type II in accordance with the 2012 edition of IBC.

D. Dead Loads:
1. The dead load shall be the weight of the post-frame building system materials as determined by the Designer of Record.

E. Collateral Loads:
1. The collateral load shall be a minimum 5 psf or as shown on the bid specification drawings. Collateral loads shall not be carried by the roof sheathing.

F. Live Loads:
1. The building roof structural members shall be capable of supporting a minimum uniform gravity live load of 25 psf.

G. Snow Loads:
1. The design snow load shall be based on a design ground snow load of 25 psf using an exposure factor of 1.0, importance factor of 1.0, and temperature factor of 1.1 per 2009 edition of IBC per the Designer of Record.

H. Wind Load:
1. The design wind speed for the post-frame building system shall be 90 mph, based on the three second gust, an importance factor of 1.0, and an exposure category of C for an enclosed, building per the 2012 edition of IBC and the Designer of Record.

I. Seismic Loads:
1. The seismic load shall be based on seismic design Category B, seismic site Class D, spectral acceleration parameters S_s=0.17 and S_1 = 0.06, occupancy Category II and building type response modification coefficient, per the 2012 edition of IBC per the Designer of Record.

J. Deflection requirements shall be in accordance with the applicable provisions of the 2012 edition of IBC.

1.6 SUBMITTALS - NOTE: The Contractor's design drawings and design calculations shall bear the seal and signature of a structural engineer licensed in the **State of Illinois**.

A. Design Drawings: Indicate assembly dimensions, locations of structural members, connections, attachments, openings, cambers, loads, wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage, installation and; framing anchor bolt settings, sizes and locations from datum, and foundation loads.

B. Product Data: Provide data on profiles, component dimensions, fasteners, and color selection.

1.7 QUALITY ASSURANCE

A. Structural framing and sheathing shall be the design of a structural engineer licensed in Illinois.

B. The builder shall have specialized experience in the construction of post-frame building systems for a period of at least ten years.

1.8 WARRANTY

A. The Building Manufacturer shall supply a warranty to the Using Agency which shall provide that the Manufacturer with:
1. For a period of fifty years:
a. Absorb repair or replacement costs; including material and labor, if any preservative treated lumber fails due to decay or insect attack.
b. Repair, or at its discretion, replace free of charge the building framework, including the roofing and/or siding panels, if directly damaged by snow loads.
2. For a period of twenty years to repaint free of charge:
a. Any manufacturer's coated panel on which corrosion due to pollutants in the atmosphere had resulted in red rust.
b. Any panel on which under conditions of normal weathering, chalking has occurred in excess of eight units (ASTM D-659).
c. Any panel on which under conditions of normal weathering, color change has occurred in excess of five units (ASTM D-2244).

d. Any roofing or siding panel on which the paint has separated from the panels due to checking or peeling.
e. Any trims, gutters and downspouts, which have failed under any four methods above.

3. For a period of five years:
   a. Repair, or at its discretion, replace free of charge the building framework, including roofing and/or siding panels, if directly damaged by wind loads, unless damage is caused by flying or falling objects.
4. For a period of one year:
   a. Repair other building parts that prove to be defective in materials or workmanship.
5. The manufacturer shall not be liable for damage due to deterioration caused by interior chemical vapors and/or dust, damage by flying or falling objects, or collateral damage to interior walls, ceiling, partitions, overhead doors, equipment and/or contents or cost of preparing of the site.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with specified requirements, the following manufacturers are acceptable.
   1. Hein Post Frame Structure, Peoria, IL, Phone 309-208-5232.
   2. Lester Buildings, 7811 Judd Road, Pecatonica, IL 61063, Phone 800-826-4439.
   3. Morton Buildings, Inc., 252 W Adams Street, Morton, IL, 61550-1804, Phone 309-263-7474.
   4. Borkholder Buildings, (Local) 407 East Mount Vernon Street, Metamora, IL 61548, (309) 367-2373.

2.2 MATERIALS - POST FOUNDATION

A. Post foundation materials shall be pressure preservative treated wood posts and concrete footer pads.

B. Concrete in all post foundation components shall have minimum compressive strength of 2500 psi per IBC.

C. Wood products used in foundations must be protected with pressure preservative chemical treatments to retention levels for Use Category UC4B or better per AWPA-U1.

D. Backfill around below grade portions of post foundations shall be native material.

2.3 MATERIALS - POSTS

A. Wall posts are Glued-laminated structural wood products identified in the 2015 edition NDS.

B. Portions of wood posts below grade and less than 8" above grade must be protected with pressure preservative chemical treatments to retention levels for Use Category UC4B or better per AWPA-U1.

C. All in place structural performance required connection hardware in the portion of the post below grade and 8" or less above grade shall be hot dipped galvanized per ASTM 153 per Designer of Record.

2.4 MATERIALS - SKIRTBOARDS

A. Skirtboards are solid sawn products identified in the 2005 edition of NDS.

B. Wood skirtboards must be pressure preservative treated with preservative chemical treatments and to retention levels per AWPA-UC4A or better.

C. All connection hardware used to attach the skirtboards shall be hot dipped galvanized per ASTM 153.

2.5 MATERIALS - WALL GIRTS

A. Wall girts are solid sawn structural wood products identified in the 2055 edition of NDS.

B. Wall girts shall satisfy the wind load requirements specified herein plus any additional lateral loadings exerted by stored materials acting directly on the wall sheathing.

C. All wall girts less the 8" above grade must be pressure preservative treated with preservative chemical treatments and to retention levels for Use Category UC-4B or better per ASPA-U1.

D. Wall girts are placed directly on the outside face of wall columns per the Designer of Record.

E. Wall girts are attached to the posts with fastener schedules specified by the Designer of Record.

F. All in place structural performance required connection hardware in the girts 8" or less above grade shall be hot dipped galvanized per ASTM 153.

G. All in place structural performance required connection hardware in the portion of copper-based pressure-treated girts 8" or more above grade shall be hot dipped galvanized per ASTM 153.

H. All in place structural performance required connection hardware in the portion of untreated girts 8" or above grade shall be hot dipped galvanized per ASTM 153.

2.6 MATERIALS - POST HEADERS

A. Post Headers: One of the following:
1. Solid sawn, glued-laminated or structural composite lumber wood products identified in the 2015 edition of NDS.
2. Parallel chord plate connected trusses designed in accordance with the 2015 edition of NDS.
3. Wide flange steel girders.

B. Post headers are attached to post with connector hardware per the Designer of Record.

2.7 MATERIALS - WALL SHEATHING

A. Wall sheathing shall satisfy the wind load requirements specified herein under Article "Design Requirements" plus any additional lateral loadings exerted by materials acting directly on the wall sheathing.

B. Wall sheathing consists of ribbed steel panels attached to outside edge of wall girts in accordance with manufacturer's specifications.

C. Metal sheathing substrate shall be G-90 per ASTM 653/A 653M per Designer of Record. Thickness: 29 ga.
   1. Fasteners used to through-fasten painted steel screws.
      a. EPDM washered, center drive, painted stainless steel screws.
      b. Screw heads shall have neoprene washers with screw face color to match panel color.

D. Exterior Surfaces: The exterior wall finish shall be pre-painted metal: Pre-coated steel with polyvinylidene fluoride (PVDF) finish with color from manufacturer's standard colors selected by Owner’s Rep. and/or Architect.

2.8 MATERIALS - WALL INSULATION (At Storage Room Only of Newman Building)

A. Type and Quantity: Wall insulation shall be ASTM C665 conforming, batt glass fiber type, faced with reinforced foil with UL flame spread classification of 25 or less where exposed and shall have a material R-value of 19 hr-ft2-f/Btu per Designer of Record.

B. Reflective insulation shall be installed in the wall and shall be installed relative to the other insulation materials per the Designer of Record.

2.9 MATERIALS - PRIMARY ROOF FRAMING

A. All roof framing shall satisfy the load requirements specified herein except dead load for purlins only includes contributions from the purlins and sheathing and other roof coverings.

B. The primary roof framing shall consist of metal plate connected wood trusses designed and fabricated in accordance with TPII per the Designer of Record.

2.10 MATERIALS - ROOF PURLINS

A. Roof purlins shall satisfy the load requirements specified herein except dead load for purlins includes only the contributions from the purlins, sheathing, and other roof covering.

B. Roof purlins shall be solid sawn structural wood products identified in the 2005 edition of NDS per the Designer of Record.

C. Roof purlins shall be placed directly on the top of trusses with strong axis oriented per shop drawings.

D. Roof purlins shall be attached to the truss with fastener types and schedules per the Designer of Record.

2.11 MATERIALS - ROOF SHEATHING

A. All roof sheathing shall satisfy the load requirements specified herein except dead load only includes contributions from the sheathing and other sheathing coverings.

B. Roof sheathing consists of ribbed steel panels to top edge of roof purlins in accordance with manufacturer's specifications. Thickness: minimum 29 ga.
   1. Fasteners used to through-fasten painted steel panels:
      a. EPDM washered, center drive, painted stainless steel screws.
      b. Screw heads shall have neoprene washers with screw face color to match panel color.

C. Metal roof sheathing substrate shall be AZ55 ASTM A792 per Designer of Record. Thickness: Minimum 29 ga.

D. Exterior Surfaces: The exterior roof finish shall be pre-painted metal: Pre-coated steel of ployvinylidene fluoride (PVDF) finish with color from manufacturer's standard colors selected by Owner’s Rep. and/or Architect.

E. Interior Surfaces: Metal panels: Pre-coated steel with was coat of (polyester)acrylic).

2.12 MATERIALS - TRIMS, DOWNSPOUTS AND GUTTERS

A. Trim materials include flashings, internal and external corners, closure pieces, fascia, infills, and caps. All trim shall be compatible with the wall/roofing sheathing and sheathing finish materials per product supplier. Die-formed steel from the same quality material as the siding panel. Gauge same as siding.
   1. Gutters, Downspouts and Brackets: Fabricate to cross sections required by SMACNA for sizing appropriately per Chapter 1 Roof Drainage Systems.
      a. Fabricate from one of the following factory coil coated materials:
         1) Aluminum: .032" minimum.
         2) Galvanized: 29 gauge minimum.
   2. Accessories: Provide wire ball strainer at each downspout.

2.13 PERSONNEL DOORS AND FRAMES

A. Doors and frames are specified in Section 081113 - Hollow Metal Doors and Frames.

2.14 VEHICULAR DOORS

A. Vehicular doors are specified in Section 083613 - Sectional Doors.

2.15 FABRICATION

A. Built-Up Wood Post Headers: Fabricate using wood grade and numbers and type fasteners per the Designer of Record.

B. Nail-Laminated Wood Posts: Fabricate per Designer of Record.

C. Roof Trusses: Fabricate per TPI 1.

D. Glued-Laminated Products: Fabricate per ANSI/AITC A 190.1.

2.16 SNOW GUARDS

A. Snow Guards: Prefabricated non-corrosive units designed to be adhesively installed without penetrating metal roof panels.
   1. Surface-Mounted, Stainless steel-powder coated, Stop-Type Snow Guards: Stops designed for attachment to pan surface of metal roof panels using construction adhesive, silicone or polyurethane sealant, or adhesive tape.
      a. Products: Subject to compliance with requirements, provide one of the following:
         1) SNOBLOX.
         2) Sno-Gem, Inc.
         3) Zaleski Snow Guards.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspection:
   1. Before start of installation, Contractor shall carefully inspect installed Work of all trades affecting construction of the post frame building. Verify that all such work is complete to the pint where installation of the post-frame building may properly commence.
   2. Verify that the work of this section amy be installed in accordance with all applicable codes and regulations, and with original design as shown and indicated on the shop drawings approved by the Designer of Record.
   3. Discrepancies: In the event of a discrepancy, installer shall immediately notify the Designer of Record. Installation shall not proceed until discrepancies and/or unsatisfactory conditions have been fully resolved and/or approved as agreed by the Designer of Record and the installation.

3.2 ERECTION

A. General: Work shall proceed in accordance with Contractor's current, written instructions and as per approved design specifications and approved shop drawings for erection of post-frame building systems.
   1. Install all foundations, roof and wall structural elements, building components, and accessories as shown in the approved design shop drawings or in component supplier instruction sheets.
   2. Install all connections between structural components per design drawings.
   3. Install purlins and wall girts in the orientation shown in the shop drawings.
   4. Handle, install and brace all trusses during construction according to TPI's, HIB-Post Frame document.
   5. Install required roof bracing as shown on the shop drawings.
   6. If applicable, install individual web member permanent lateral restraint at the locations shown on the sealed truss shop drawings.
   7. If applicable, install diagonal bracing to appropriate individual web members for permanent lateral restraint as specified by the Designer of Record.

8. Install permanent wind bracing in the wall system as shown on the shop drawings.

B. Adjust all operating components as required to ensure that they operate in accordance with manufacturer's or supplier's recommendations.

C. Install all framing components to within tolerances recommended in the NFBA Framing Tolerances standard, "Accepted Practices for Post Frame Building Construction: Framing Tolerances".

D. Install all metal panel and metal trim components to within tolerances recommended in NFBA's Cladding Tolerances standard, "Accepted Practices for Post-Frame Building Construction: Metal Panel and Trim Installation Tolerances".

E. Install all wood structural panels to within tolerances recommended in APA PDS.

F. Provide temporary restraint and bracing for the roof trusses during construction.

G. Provide temporary wall bracing during construction.

H. Do not field cut or modify structural members without approval of the Designer of Record.

I. All roof and wall accessories to be installed weathertight.

J. Gutter, downspout, flashings and trim.
1. Install gutters and downspouts, flashings and trim in accordance with manufacturer's instructions, and SMACNA "Architectural Sheet Metal Manual".
2. Provide concealed fasteners, where possible, set units true to line, and level as indicated.
3. Install work with laps, joints and seams that will be permanently watertight and weather resistant.

3.3 CLEANING AND PROTECTION

A. Cleaning: General Contractor shall clean all building elements, components and/or surfaces in areas with "more than normal construction amount" of foreign matter such as dirt, dust or other surface debris. "More than normal" dirt, debris and other blemishes are defined as being visible by a majority of normal-sighted individuals when viewed under natural noonday lighting from an at-grade position no closer than 15' to the blemish in question.
1. Touch up all marred, abraded, or otherwise damaged finishes as deemed necessary and in accordance with the definition for "more than normal" above, so that evidence of such damage is eliminated.
2. At the completion of Work, remove trash, debris, and all excess materials, cartons and/or items so that all areas of work are clean.
3. Protection: Provide protective measures, as required, so the wood post-frame building is without damage or deterioration at the time of Substantial Completion.

END OF SECTION 13 34 20

Section 220529 - Supports and Anchors for Plumbing

Part 1. - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. Contractor Provide:
      a. Support for non-potable water pipe.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 221100 – Water Piping.
   2. 221119 – Domestic Water Piping Specialties.

1.3 SYSTEM DESCRIPTION

A. Definitions:
   1. Plumbing piping includes non-potable water pipe.

1.4 REFERENCES

A. AISC – American Institute of Steel Construction.

B. ASME B31.9 – Building Services Piping.

C. ASTM F708 – Design and Installation of Rigid Pipe Hangers.

1.5 SUBMITTALS

A. Submit under provisions of Owner’s Division 1 Specifications.

B. Product Data: Provide manufacturers catalog data including load capacity. Submit pipe supports not listed in this specification.

1.6 REGULATORY REQUIREMENTS

A. Conform to Illinois Plumbing Code for support of plumbing piping.

1.7 COORDINATION

A. Sleeves:
   1. Coordinate placement with concrete trades.
   2. Sleeves installed after wall construction are acceptable per this specification.

2. - PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

A. Acceptable Manufacturers.
   1. B-Line.
   2. Grip Strut.
   3. Fee and Mason.
   4. Grinnel.
   5. Unistrut.

B. Hanger Description:
1. Side mounted brackets for attachment to wood joist shall be bolt through steel angle or malleable iron bracket.
2. Strut supports shall be primed 14 gauge rolled carbon steel with galvanized die-formed accessory clamps and fasteners.

C. Plumbing Piping:
1. Conform to ASME B31.9 ASTM F708 and Illinois Plumbing Code.
2. Hangers for Pipe Sizes 1-1/2″ and Over: Carbon steel, adjustable, clevis.
3. Vertical Support: Steel riser clamp or steel strut with accessory clips and neoprene inserts.

2.2 ACCESSORIES

A. Hanger Rods: Mild steel continuous threaded.

2.3 ANCHORS

A. Concrete type for pipe or equipment supports. Shall be wedge type with either studs or National coarse female thread. Alternative type shall be self drilling expansion type. Anchors shall be U. L. listed.

2.4 SLEEVES

A. Sleeves for pipes through floors. Schedule 40 PVC.

2.5 SEALANTS

A. Exterior moisture sealant - Shall be non-hardening silicone type rated for temperatures of -40 degrees F to 250 degrees F. Material shall be available in white, gray, brown, and black colors. Material shall be sunlight resistant.

B. Manufacturer

	Exterior Sealant
1. Tremco	Spectrum 2
2. 3M	2000 150
3. General Electric	SCS1000
4. Dow Corning	999A
5. Pecora	864

3. - EXECUTION

3.1 APPLICATION

A. Plumbing Pipe:
1. Shall be supported in accord to the Illinois Plumbing Code and this specification.
2. Shall be supported so it does not twist on its threaded connection.

B. Hanger Rod:
1. Hanger rod size shall be: 3/8″ for pipe up to 2″ in size and loads up to 360 lbs.

3.2 ANCHORS

A. Use anchors in concrete floors.

B. Drill hole clean of loose material. Install anchor, flush with surface. Size hole in accord to manufacturers' recommendation. Physically test anchor by pulling against it. Loose anchors will not be accepted.

3.3 PIPE HANGERS AND SUPPORTS

A. Utilize hangers in accord to Application paragraphs.

B. Place supports to keep pipe from loosening.

C. Do not use perforated hangers strap.

3.4 SLEEVES, SEALS & ESCUTCHEONS

A. Size sleeves as detailed.

B. Place sleeves in forms at location desired. Extend sleeves through floors one inch above finished floor level. Caulk sleeves.

C. Exterior wall penetrations shall be sealed with colored silicone between pipe and opening. Pack interior of sleeve with fiberglass batt.

END OF SECTION 22 05 29

SECTION 221100 - WATER PIPING

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Base Bid:
   1. Contractor Provide:
      a. New dip-tube arrangement shown.
      b. Extension of non-potable water piping.
      c. Exploration work to locate existing underground non-potable water mains including depth and horizontal location.
      d. Excavation and backfill required to connect existing pipe into new building.

1.02 DESCRIPTION

A. Definitions
   1. Non-potable Water – Includes extension of existing shallow bury pipe into new building at Newman.
   2. Plumbing Contractor = Plumbing Subcontractor or Plumbing Trade.

B. Description:
   1. Base bid domestic water piping shall include:
      a. Extension of non-potable water service into Newman building.

1.03 RELATED WORK

A. Specified Elsewhere:
   1. 220529 – Supports and Anchors for Plumbing.
   2. 221110 – Domestic Water Piping Specialties.

1.04 REFERENCES

A. ASME B16.3 - Malleable Iron Threaded Fittings.

B. ASME B16.22 - Wrought Copper and Bronze Solder-Joint Pressure Fittings

C. ASTM A53 - Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and Seamless.

D. ASTM A120 - Pipe, Steel, Black and Hot-Dipped Zinc Coated (Galvanized), Welded and Seamless, for Ordinary Uses.

E. ASTM B32-92 - Solder Metal.

F. ASTM B88 - Seamless Copper Water Tube.

G. ASTM F876-93 – Standard Specification for Crosslinked Polyethylene (PEX) tubing.

1.05 SUBMITTALS

A. Submit under provisions of P.P.D General Conditions and Specifications

B. Product Data: Provide data on valves and piping accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

C. Schedule of Values:
1. Provide a separate dollar value of all plumbing work used on this job as part of the Schedule of Values.

1.06 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Owner’s General Conditions.

B. Record actual locations of new connections. Record lateral and vertical locations of underground pipe. Locate in relation to walls and surfaces which extend beyond concealing surfaces.

C. Obtain A/E review of record documents before or at each pay progress meeting.

1.07 QUALITY ASSURANCE

A. Valves: Manufacturer's name and pressure rating marked on valve body.

1.08 REGULATORY REQUIREMENTS

A. Perform Work in accordance with State of Illinois Plumbing Code and the International Plumbing Code 2015.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site under provisions of the Owner’s General Conditions.

B. Accept valves on site in shipping containers with labeling in place. Inspect for damage.

C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Do not install underground piping when bedding are wet or frozen.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

A. Unless otherwise specified the manufacturer’s number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 WATER PIPING (BURIED)

A. PEX tubing cross lined high density polyethylene (HDPE) meeting ASTM F876-93. Color shall be blue for cold water.

1. Fittings shall be lead-free brass insertion type made specifically for PEX piping.
2. Connections shall be stainless steel crimp ring or pinch clamp system pressed into place.
3. Acceptable Manufacturers:
   a. Zurn PEX
   b. Sharkbite Equivalent
   c. NIBCO PEX

2.03 DIPTUBE PIPE

A. Copper Tubing: ASTM B88, Type K, hard drawn.
1. Fittings: ASME B16.22, wrought copper.
2. Joints: ASTM B32-92, solder, lead-free and antimony-free.
3. Acceptable Products:

	Solder
a. Taracorp	Tarament Sterling.
b. Oatey	Silver.

2.04 NON-POTABLE WATER RISER PIPE

A. Piping shall be ASTM A53 or A120 Schedule 40 galvanized steel with threaded (NPT) connections. Fittings shall be hot dipped galvanized confirming with ASME B16.3.

2.05 FLANGES, UNIONS, AND COUPLINGS

A. Dielectric Unions: Brass insert with copper solder end, dielectric gasket with female NPT connection. Shall be lead free.
1. Acceptable Products:
   a. Watts 3001
   b. Wilkens DUXLC

2.06 VALVES

A. Ball Valves up to and including 3”: Bronze 600# wog, 150# swp two piece body, stainless steel or chrome plated full port bronze ball, teflon seats and stuffing box ring, lever handle, solder or threaded ends.

B. Acceptable Products:

	Ball
1. Apollo	Model 77 Series
2. Watts	Model 6800 Series
3. Milwaukee	Model BA 400 Series

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions under which plumbing piping is to be installed.

B. Verify excavations are free of debris or stones.

C. Verify that excavations are to required grade, dry, and not over-excavated.

D. Verify existing piping at new connection points is in sound condition.

E. Verify “rough-in’ locations with building structure.

F. Correct any unsatisfactory conditions before beginning installing piping products of this section. Commencement of installation indicated acceptance of conditions.

3.02 PREPARATION

A. Ream pipe and tube ends. Remove burrs.

B. Remove scale and dirt, on inside and outside, before assembly.

C. Valves:
1. Remove shipping materials.
2. Examine valve (interior and exterior) to verify that valve is clean and corrosion free.
3. Verify that valves operable through full open and close positions.

3.03 DEMOLITION

A. Removal for reuse.
1. Disconnect existing piping where new piping is shown for reconnection carefully by dis-assembling joints or by squarely cutting, for rethreading, soldering or otherwise connecting.
2. Cap open end of pipe temporarily if to be reused or permanently if not shown for reuse.

3.04 EXCAVATION, BEDDING AND BACKFILL

A. Excavate existing fill and material to locate existing piping and to install new. Granular materials shall be saved for reuse providing it is not polluted with mud or building debris.

B. Install new underfloor piping on compacted granular cradle bedding. Install at least 3 inches of bedding above top of pipe. Use clean p-gravel or sand as bedding.

C. Remaining backfill shall be what was removed from excavation less debris or shall be bedding material.

3.05 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Provide non-conducting dielectric union at riser for diptube.

C. Route piping in orderly manner and maintain gradient.

D. Install piping to conserve building space and not interfere with use of space.

E. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Install fittings at changes in direction. Install swing joints at branch connections to mains.

F. Connecting components of unequal size: Install standard reducers or increasers, correctly sized for application indicated.

G. Joints:
1. Threaded Steel Pipe:

a. Cut threads squarely with minimum number dictated by pre-threaded fitting connections.
b. Paint exposed cut threads with rust resistant paint.
c. Seal threads with both Teflon tape and Teflon paste.

2. Copper Pipe:
   a. Sweat Fittings:
      1) Solder shall be full depth of fitting socket.
      2) Joints shall be "wiped" and form a neat fillet.

H. Non-potable Water Piping System:
1. Install on interior side of building insulation.
2. Pitch: 1/32″-per-foot (1/4 percent) or greater to drain point. Do not trap. Provide valves at drain point.
3. General-purpose valves:
   a. Install valves with stems horizontal or above horizontal. Do not install inverted.
   b. Position valves to allow easy access. Provide additional support where required.
   c. Provide valves as shut offs to all equipment and as indicated.
   d. Allow clearance for insulation at handles.
4. Connections:
   a. Mechanical devices: Provide connections to hydrant\ as required.
5. Install underground piping as single continuous piece to existing pipe.

I. Underground Water Pipe:
1. Use PEX pipe specified
2. Make connection to existing pipe with fewest number of adaptor fittings.
3. Provide male NPT adaptor to PEX tubing. Provide female NPT adaptor to existing pipe.
4. Provide a compression connection and NPT brass adaptor for polyethylene tubing. Provide solvent welded NPT male fittings and brass reducer couplings if existing underground pipe is PVC.

3.06 APPLICATION

A. Construct diptube as detailed.

B. Application Chart:

Use Description	Pipe Type	Fitting Type
1. Diptube Pipe	Type K Copper	Sweat Solder
2. Extension of Underground pipe	Blue PEX	Compression Adaptors
3. Riser Pipe	Schedule 40 Galvanized	Threaded

3.07 ERECTION TOLERANCES

A. Slope water piping and arrange to drain at low points.

3.08 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM.

A. Do in accord with the Illinois Plumbing Code.

END OF SECTION 221100

SECTION 221119 – DOMESTIC WATER PIPING SPECIALTIES

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Base Bid:
   1. Plumbing Contractor Provide:
      a. Hydrants and Faucets.
      b. Vacuum breakers.

1.02 DESCRIPTION

A. Definitions:
   1. Plumbing Contractor = Plumbing Subcontractor for this work.

B. Frost proof hydrants shall be located in warm storage room.

1.03 RELATED WORK

E. Specified Elsewhere:
   1. 221100 – Water Piping.

1.04 REFERENCES

A. ANSI/ASSE 1019 - Wall Hydrants, Frost Proof Automatic Draining Anti-Backflow Types.

1.05 SUBMITTALS

A. Submit under provisions of the Owner’s General Conditions and Division 1 specifications.

B. Product Data: Provide component sizes, rough-in requirements, service sizes, and finishes.

1.06 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of the Owner’s General Conditions and Division 1 specification.

B. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site under provisions of Owner’s General Conditions.

B. Accept specialties on site in original factory packaging. Inspect for damage.

1.08 EXTRA MATERIALS

A. Furnish under provisions of the Owner’s General Conditions.

B. Provide two loose keys for each hydrant.

1.09 COORDINATION

A. With other trades:
1. Determine point where hydrant is to penetrate building to meet required heights.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

A. Unless otherwise specified the manufacturer’s number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.03 HYDRANTS

A. Acceptable Products:

		Interior Faucet	Exposed Hydrant
1.	Woodford	Model 26	67 Series
3.	Zurn	Z1341	Z1321

B. Exterior Wall Hydrant: ANSI/ASSE 1019 and 1052; non-freeze, self-draining type with rough chrome, hose thread spout, lockshield and removable key, and integral vacuum breaker. Hydrant shall drain whether a hose is attached or not when valve is shut off. Provide with wall clamp.

C. Interior Faucet shall:
1. Have vacuum breaker gravity drainage and wheel handle.
2. Have male NPT connection.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions.

END OF SECTION 221119

Section 230529 - Supports and Anchors for HVAC

1. - GENERAL

1.01 WORK INCLUDES

A. Base Bid:
1. Contractor Provide:
a. Supports for equipment and duct.
b. Sleeves and seals for penetrations involving ducts.
c. Curbs for roof fan penetrations.

1.2 RELATED WORK

A. Specified Elsewhere:
1. 13 34 20 - Post-Frame Building Systems.
2. 23 34 00 – Fans.
3. 23 31 00 – Ductwork.

1.3 SUBMITTALS

A. Submit under provisions of Owner’s Division 1 Specifications.

B. Product Data: Provide manufacturers catalog data including load capacity.

1.4 REGULATORY REQUIREMENTS

A. International Mechanical Code 2015 for support of HVAC duct.

1.5 COORDINATION

A. Coordinate selection and placement of roof curbs with supplier and installer of Post Frame Building.

2. - PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

A. Acceptable Manufacturers.
1. B-Line.
2. Grip Strut.
3. Fee and Mason.
4. Grinnel.
5. Unistrut.

B. Hanger Description:
1. Side mounted brackets for attachment to wood joist shall be bolt through steel angle or malleable iron bracket.
2. At Contractors option, attachment to wood joist shall be 1/4" to 3/8″ lag screws with connections for 3/8″ hanger rod from side or inline.
3. Lag-screw anchors with oversized heads tapped for 3/8″ rod are acceptable for load not exceeding 300 lbs. These shall be zinc plated carbon steel with wood. 1-1/4″ minimum wood thread meeting AISI 1022 and National Coarse 3/8″ National Coarse thread rod socket meeting AISI 1018-1022.

2.2 ACCESSORIES

A. Hanger Rods: Mild steel continuous threaded national coarse thread.
   1. Nuts shall be SAE Grade 3 minimum with cadmium plating and national coarse thread.
   2. Lock washers shall be cadmium plated split spring type sized for the rod.

B. Auxiliary Steel and Trapeze Hangers.
   1. Manufactured struts shall be rolled of 12, 14, or 16 gauge material to meet loading required or as noted on Drawings or otherwise specified. It shall have a hot dipped galvanized coating.

C. Acceptable Products.
   1. B-Line.
   2. Uni-strut.
   3. Grip Strut.

2.3 SEALANTS

A. Exterior moisture sealant - Shall be non-hardening silicone type rated for temperatures of -40 degrees F to 250 degrees F. Material shall be available in white, gray, brown, and black colors. Material shall be sunlight resistant.

B. Manufacturer

		Exterior Sealant
1.	Tremco	Spectrum 2
2.	3M	2000 150
3.	General Electric	SCS1000
4.	Dow Corning	999A

2.4 ESCUTCHEONS

A. For ductwork - Shall be galvanized angle sized to overlap entire opening.

2.5 ROOF CURBS

A. Shall match fan caps of fans in Section 233400 with roof profile of post and frame building.

B. Shall be for gable top installation.

C. Shall have interior sleeves sized for backdraft damper provided with fan.

D. Shall be constructed of 18 gauge galvanized steel with continuously welded water tight seams, built-in cricket and 1-1/2’ 3 lb. density fiberglass insulation.

E. Acceptable Manufacturers:

   1. KCC Manufacturing.
   2. Pate.
   3. Roof Products System (RPS).
   4. Thybar.

3. - EXECUTION

3.1 APPLICATION

A. Hanger Rod:

1. Hanger rod size shall be: 3/8″ for loads up to 360 lbs.

3.2 HANGERS AND SUPPORTS

A. Utilize hangers in accord to Application paragraphs.

B. Place hangers within 12″ of each horizontal elbow.

C. Support vertical duct such that it cannot be deflected.

D. Provide auxiliary steel to span structure where required. Provide in accord to strut manufacturer’s published data.

E. Secure upper attachment from the top side of wood joists.

F. Do not use perforated hanger strap.

3.4 SEALS & ESCUTCHEONS

A. Exterior and interior wall penetrations shall be sealed with colored silicone between pipe and sleeve. Pack interior of sleeve with fiberglass batt.

B. Provide escutcheon on exposed interior penetrations. Secure escutcheons into place with bead of sealant under. Wipe away exposed sealant.

C. The annular area around ducts which penetrate walls or ceiling which extend continuously to the roof deck shall be packed tightly with fiberglass batt, and be sealed tightly with caulking.

END OF SECTION 23 05 29

Section 230593 - Testing, Adjusting & Balancing for HVAC

1. - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Test and balance new exhaust systems shown on drawings.
      b. Test and balance new fans serving exhaust systems.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 23 09 00 - Temperature Controls.
   2. 23 31 00 - Ductwork.
   3. 23 33 00 – Air Duct Accessories.
   4. 23 34 00 - Fans.
   5. 23 37 13 – Diffusers, Registers and Grilles.

1.3 SYSTEM DESCRIPTION

A. Summary:
   1. Test and Balance shall:
      a. Verify maximum and minimum exhaust airflow in each building.
      b. Verify fans and equipment are functioning per design and manufacturer’s performance data.

B. Intent of work is to:
   1. Verify ventilation and exhaust flows are as specified.
   2. Leave the Park District with a functioning system.

C. Definitions:
   1. Air balance - testing and adjusting air system components to achieve design parameters or to evenly distribute available air. Includes both flow and temperature measurements recording of measurements, and adjustment of system to achieve specified air flows.
   2. Calibration - Comparison of the measured values of an instrument with a known quantity.
   3. Testing - measurement of temperatures, gas flow, electric current and voltage which show how much work an air conditioner is doing or how much heat a furnace is providing.

1.4 QUALITY ASSURANCE

A. Air balance firm shall meet pre-qualification requirements of the CDB. Firm shall have personnel certified in accord to one of the standards referenced under REGULATORY REQUIREMENTS or shall be a registered professional Engineer experienced with this type of work.

B. Personnel doing work on site shall have certifications noted above.

C. Instrumentation used for testing and balancing shall be calibrated no more than one month before date of use.

D. The Peoria Park District and Architect/Engineer reserve the right to pick two different measurements to be remade after the test and balance report is submitted. If one of the two selected measurements are found to be more than 50 percent different than those submitted in the report the entire balance report shall be redone.

E. Payment for at least ten percent balance work will not be made until building has been turned over to the Owner.

F. The Architect/Engineer will compare measured fan characteristics against the manufacturer's published fan curves and tabulated data. Test data which falls outside of the manufacturer's published curves may require retesting subject the Architect/Engineer review.

1.5 REGULATORY REQUIREMENTS AND STANDARDS

A. AABC - National Standards for Total System Balance.

B. ADC - Test Code for Grilles, Registers, and Diffusers.

C. ASHRAE 111 - Practices for Measurement, Testing, Adjusting, and Balancing of Building Heating, Ventilation, Air-conditioning, and Refrigeration Systems.

D. NEBB - Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems.

E. SMACNA - HVAC Systems Testing, Adjusting, and Balancing.

F. SMARTA - Sheet Metal, Air Conditioning and Roofing Contractors Trade Association of Illinois.

G. TABIC - Testing and Balancing Institute for Certification.

1.6 SUBMITTALS

A. Submit name and qualification certificate of air balance technician who actually does work. Do this at least ten working days before work is to be done.

B. Test Reports: Indicate data on standardized form following AABC. SMACNA, SMARTA or TABIC.

C. Provide written certification from installing contractors systems are in correct working condition and ready for test.

D. Field Reports: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.

E. Prior to commencing work, submit report forms or outlines indicating adjusting, balancing, and equipment data required.

F. Submit draft copies of report for review prior to final acceptance of Project. Provide as a PDF. Provide final copies for A/E and for inclusion in operating and maintenance manuals.

G. Submit cost of balance work as line item on contractors schedule of values. Provide name of balance contractor that time.

H. Provide final reports in soft cover, letter size, three-hole binder manuals, complete with index page, with cover identification at front and side.

I. Include detailed procedures, agenda, sample report forms prior to commencing system balance.

1.7 PROJECT CONDITIONS

A. Building/Construction Conditions:
1. All portions of systems shall be complete before balance work is begun. Ceilings shall be in place. Grill shall be in place.
2. Balance work which does not involve heating or cooling apparatus shall be accomplished when ambient temperatures are above 20 degrees F and less than 80 degrees F.

1.8 SEQUENCING

A. Do not do work until systems are complete.

B. Work with temperature installer to balance devices under all operational sequences.

2. - PRODUCTS

2.1 MANUFACTURER & PERFORMANCE

A. Not Used.

3. - EXECUTION

3.1 EXAMINATION

A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
1. Systems are started and operating in a safe and normal condition.
2. Temperature control systems are installed complete and operable.
3. Proper thermal overload protection is in place for electrical equipment.
4. Fans are rotating correctly.
5. Grilles are installed and connected.
6. Duct system leakage is minimized.

B. Submit field reports immediately by telephone and email. Report defects and deficiencies noted during performance of services which prevent system balance. Do not report defects and deficiencies in written reports except as preliminary situations for which remedies were found.

C. Beginning of work means acceptance of existing conditions.

3.2 PREPARATION

A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Architect/Engineer to facilitate spot checks during testing.

B. Provide additional balancing devices as required.

3.3 FIELD QUALITY CONTROL

A. Air Handling Systems: Adjust to within plus or minus five percent of design for return and exhaust systems.

B. Air Outlets and Inlets: Adjust outlets and inlets in space to within plus or minus three percent of design.

3.4 ADJUSTING

A. Ensure recorded data represents actual measured or observed conditions.

B. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.

C. Leave systems in proper working order, replacing covers, closing doors to electrical switch boxes, and restoring controllers and to specified settings.

D. At final inspection, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by the Owner and/or Architect/Engineer.

3.5 AIR SYSTEM PROCEDURE

A. Adjust exhaust systems to provide required.

B. Measure air quantities at air inlets with calibrated flow hood. Do not use velocity traverse of duct without express consent of the Architect/Engineer.

C. Vary total system air quantities by adjustment of fan speed. Adjust motor speed control or change motor speed leads as required.

D. Measure static air pressure conditions on exhaust.

3.6 TESTING AND BALANCING

A. Motors:
   1. Check and record full load amperes.
   2. Report any motors which are overloaded, defective, or operating within their service safety factor.

B. At Fans:
   1. Measure:
      a. Air flow.
      b. Total static pressure.
      c. RPM.

C. All work for related equipment shall be done on the same day and time.

3.7 REPORTS

A. Report forms:
   1. Title Page:
      a. Project name and location.
      b. name of test and balance technician.
      c. Report date.
   2. Summary Comments:
      a. Final performance.
      b. Notable characteristics of system.
      c. Nomenclature used throughout report.
      d. Test conditions.
   3. Instrument List:
      a. Instrument.
      b. Manufacturer.
      c. Model number.
      d. Serial number.
      e. Range.

f. Calibration date.

4. Electric Motors:
   a. Manufacturer.
   b. Model/Frame.
   c. HP/BHP.
   d. Phase, voltage, current, both nameplate and actual.
   e. RPM.
   f. Service factor.
   g. Starter size, rating, heater elements.
   h. Sheave Make/Size/Bore.
5. Exhaust Fan Data:
   a. Location.
   b. Manufacturer.
   c. Unit number.
   d. Air flow, specified and actual.
   e. Total static pressure specified and actual.
   f. Fan RPM.
   g. Current loading of motor.

END OF SECTION 23 05 93

Section 230900 - Temperature Controls

1. - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. Contractor Provide:
      a. Nitrogen dioxide/carbon monoxide controls to operate garage fan systems.
      b. All wire conduit and cable required to complete systems.
      c. Commissioning and startup of fan control systems and the equipment they control.
      d. Miscellaneous assorted control connections and wiring and devices to make system function.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 23 05 93 - Testing, Adjusting Balancing for HVAC.
   2. 23 34 23 - Fans.

1.3 REFERENCES

A. ANSI/NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.4 SYSTEM DESCRIPTION

A. Exhaust Fans:
   1. The small exhaust fans shall operate continuously. It shall draw whatever air it needs in through cracks around doors.
   2. The larger exhaust fan shall cycle as required to flush diesel and gasoline fumes as detected by Nitrogen dioxide/carbon monoxide detectors/controls. Open doors shall be utilized for make-up air.

1.5 SUBMITTALS

A. Submit under provisions of the Owner’s Division 1 specifications.

B. Shop Drawings: Indicate complete operating data, system drawings, wiring diagrams, and written detailed operational description of sequences.

C. Product Data: Include description and engineering data for each control system component. Include sizing as requested.

D. Schedule of Values:
   1. Shall list the name of the business entity whose employees actually perform the work listed in this section.
   2. Separate line items with applicable costs shall be listed for each of the following:
      a. Submission of shop drawings and product data.
      b. Material and equipment costs.
      c. Installation labor of materials and equipment.
      d. Startup/commissioning of HVAC systems.
      e. Training of Owner’s personnel and preparation of training materials and maintenance manuals.

1.6 PROJECT RECORD DOCUMENTS

A. Submit record documents under provisions of Owner’s Division 1 Specification.

B. Accurately record actual location of control components, including safety devices, thermostats, and sensors.

C. Revise shop drawings to reflect actual installation and operating sequences.

1.7 OPERATION AND MAINTENANCE DATA

A. Submit operation and maintenance data under provisions of Owner’s Division 1 Specification.

B. Include systems descriptions, set points, and controls settings and adjustments.

C. Include inspection period, cleaning methods, recommended cleaning materials, and calibration tolerances.

D. Format and Content:
1. The manual shall include data for only those controllers and systems actually installed. Manufacturer's standard publications shall be highlighted to reflect the system actually used and edited to delete the systems, controllers and equipment not actually used. A cover sheet or sheets which define the correct equipment is acceptable but does not fill the requirements noted above for editing and highlighting.
2. The manual shall be 8-1/2" x 11" paper size, or shall be bound into an 8-1/2" x 11" folder.
3. There shall be a separate section for each type of equipment. Equipment names used for the work shall be noted on maintenance manuals.
4. Provide manual in a PDF format as well. Preliminary submittal shall be in PDF format.

1.8 OWNER INSTRUCTION AND COMMISIONING

A. System Operation:
1. Controls and equipment which is controlled shall be fully operational and tested by the respective trades which installed the devices. Corrective work shall be performed. Contractor shall review work of all related trades. Work like “bumping” motors and energizing controls to determine if systems will function shall be completed. Notify equipment installers of non-functioning items. This shall be done prior to substantial completion.
2. Obtain from the Owner a list of those individuals who are authorized to provide schedules to the contractor and to receive instructions regarding system operation.

B. Owner Instruction:
1. Instruction shall be provided on at least one occasion.
2. Provide a blank Owner Attendance Record for all personnel who attend training session.
1. Notify the Owner at least two weeks before instructional sessions are needed. Coordinate instructional time at Owner’s convenience during normal workday.
2. Simply telling whomever of the Owner’s personnel who may be on site when the hardware installation is complete does not meet this specification.

C. Training Material:
1. Shall include description of each operating mode of the system.

2. Shall include a glossary of terms which are particular to the project and operation of the systems.
3. Shall include troubleshooting potential problems.
4. Shall include photographs and drawings of the systems as they are actually installed.
5. Shall utilize the same identification symbols as actually installed.
6. Shall cover routine maintenance. Provide separate reproducible check lists for daily, weekly, monthly and yearly maintenance.
7. Include name and telephone number of trained individual who will answer questions on the project.

D. Training Medium:
1. Provide instruction in written form. Provide four paper copies and a PDF copy.

E. Obtain a signed attendance sheet for each training session. Turn a copy of these sheets over to the A/E and the Owner.

1.9 QUALIFICATIONS

A. Installing Contractor:
1. Shall have local service capability which can service a control problem within two hours of being called by the Using Agency.
2. Shall have the “In-House” capability of troubleshooting controllers’ installed.

1.10 SEQUENCING AND SCHEDULING

A. Sequence work to ensure installation of components is complementary to installation of similar components in other systems.

B. Coordinate work and ensure system is completed and commissioned by Date of Substantial Completion.

C. Coordinate installation of system components with installation of mechanical systems equipment such as air handling units and air terminal units.

1.11 WARRANTY

A. Provide two year warranty for all parts and labor beginning with the date of substantial completion.

1.12 COORDINATION

A. Temperature control system protocol shall be carefully coordinated with that provided by terminal heating/cooling unit manufacturers.

2. - PRODUCTS

2.1 COMPOSITE SYSTEMS

A. Systems shall consist of controllers integrated with electronic sensors and electric operators and power relays.

B. Wiring shall be in accord to Division 26. Cable for electric signal shall be no less than 18 gauge. Cable for electronic signal shall be shielded and acceptable to the control system manufacturer. Jacket color shall not be red or blue or green.

2.2 CONTROLLERS

A. Shall be stand-alone type.

B. Nitrogen Dioxide/Carbon Monoxide Gas Detection and Control:
1. Shall operate as a package control with integral or remote sensors, pilot relay output, direct readying display, adjustment and calibration mechanisms, alarms and enclosure.
2. Shall operate with 120 volt single phase electric power supply which is either factory installed or recommended and furnished by a factory authorized representative for field installation. Interior controls shall operate at 24 volts.
3. Enclosure for unit and power supply shall be a minimum of a NEMA 1.
4. Separate sensors shall detect nitrogen dioxide and carbon monoxide. They shall either be contained within the control with appropriate aspiration mechanisms or shall be remote mounted. Sensors shall be field replaceable.
5. Display shall indicate the concentration of nitrogen dioxide and carbon monoxide in parts per million.
6. Unit shall be capable of operation at temperatures across a minimum range of -4 to 122 degrees F and relative humidity's between 10 percent and 90 percent.
7. Alarms shall be both audible and visual and shall include an alarm acknowledgement/silencing feature.
8. Each sensor shall have a low and a high alarm level with independent SPDT contacts per alarm level.
9. Provide dry contact output. Contacts shall be rated for a minimum of 5 amperes at 24 volts.

D. Acceptable Products:

	Nitrogen Dioxide Detector
1. Honeywell	E^3 Point
2. Monoxivent	FDS-SA-CO-NO2

2.3 SWITCHES AND RELAYS

A. Relays shall have DPDT contacts rated for 30 amperes at 120 volts. Provide with a 24 volt coil and a NEMA 1 enclosure.

B. Acceptable Products:

1. Dayton	5X846 w/Enclosure
2. Square D	8501 CT Series/UE1
3. Allen Bradley	700-HG Series

2.4 CONTROL TRANSFORMERS

A. Shall have 120 volt input voltage and 24 volt output voltage. Power rating shall be 40 VA.

B. Shall have 1/2" NPT stub conduit or foot connection for mounting. Provide with NEMA 1 enclosure.

C. Primary connection shall be wire pig tails. Secondary connection shall be screw terminals or wire pig tails.

D. Acceptable Products:

1. Functional Devices Inc.	TR40VA Series.
2. Dayton	4VZE5.
3. Kele	691 Series.

2.5 SEQUENCE OF OPERATION

A. Exhaust Fans:
   1. Small exhaust fan shall operate manually through its manual motor starter.
   2. Manually vary speed of fan with accessory motor dimmer supplied by fan manufacturer.
   3. Large exhaust fan:
      a. Shall energize upon a call from the nitrogen dioxide controller sensing a concentration of nitrogen dioxide of over .7 parts per million or a carbon monoxide concentration of over 25 parts per million.

3. - EXECUTION

3.1 EXAMINATION

A. Verify that systems are ready to receive work.

B. Beginning of installation means installer accepts existing conditions.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Gas detectors shall be mounted with their tops noted on Drawings.

C. Provide junction boxes for wire connections. Provide EMT conduit on walls and inaccessible ceiling spaces of new construction.

D. All wire ends shall be labeled and coded to match installation drawings. Wires extending to remote switches and thermostats shall be labeled or coded to indicate line side and switched side.

E. After completion of installation, test and adjust control equipment. Submit data showing set points and final adjustments of controls.

END OF SECTION 23 09 00

Section 233100 - Ductwork

1. - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Provision of new exhaust and transfer duct.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 23 05 29 - Supports and Anchors for HVAC.
   2. 23 05 93 - Testing, Adjusting and Balancing for HVAC.
   3. 23 00 00 – Air Duct Accessories.
   4. 23 37 13 – Diffusers, Registers and Grilles.

1.3 SYSTEM DESCRIPTION

A. Definitions:
   1. Exhaust Ductwork – That duct downstream of exhaust registers and grilles which discharges to the out-of-doors.
   2. Transfer Air Ductwork - That duct between rooms that feeds air which is exhausted from the space.

1.4 QUALITY ASSURANCE

A. Installers and Fabricators shall be fully familiar with S.M.A.C.N.A Construction Standards.

1.5 REGULATORY REQUIREMENTS AND STANDARDS

A. NFPA 90A – Installation of Air Conditioning and Ventilating Systems.

B. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.

C. International Mechanical Code 2006.

2. - PRODUCTS

2.1 MATERIALS

A. Galvanized Steel Ducts: ASTM A525 and ASTM A527 galvanized steel sheet, lock-forming quality, having G60 zinc coating of in conformance with ASTM A90.

B. Steel Ducts: ASTM A366.

C. Sealants - shall be flexible setting water based, water resistant type compatible with ducts sealed. Shall have flame spread no more than 5.0 when .020" thick. Shall have anti-microbial agents. Material shall be listed and labeled in accordance to UL 181 A, B or C as applicable.

2.2 DUCTWORK FABRICATION

A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated. Duct shall be able to accommodate pressures of plus/minus 2” of water gauge

without collapse or leaks. Minimum gauges shall be in accord to SMACNA and ASHRAE standard except as noted on Drawings.

B. Construct T's, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows are used, provide airfoil turning vanes. Provide these whether or not they are shown on the drawings.

C. Increase duct sizes gradually, not exceeding 30 degrees divergence.

3 - EXECUTION

3.1 SEQUENCING AND SCHEDULING

A. Coordinate work with other trades. Review all drawings of other work to determine required interaction.

3.2 APPLICATION

A. Galvanized steel duct shall be used throughout.

3.3 INSTALLATION

A. Install manufactured duct in accordance to manufacturers instruction except where this specification requires additional work. Install fabricated duct as noted above.

B. Duct seams and joints shall be hammered, rolled or sealed airtight. All transverse and longitudinal joints in outside air and exhaust ducts shall be sealed with sealant specified. Corners on fittings and connections to equipment shall be sealed tight. No leaks will be allowed.

C. Apply duct sealant according to manufacturer's instruction. Allow sealant material to acclimate before application. Do not install when space temperature is less than noted on the sealant container.

D. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.

E. Flanged connections shall have reinforced bolted corners and spring steel clips around full perimeter.

F. Sharp corners on standing seams and supports shall be bent over and ground smooth.

3.6 FIELD QUALITY CONTROL

A. Visual Inspection - Contractor shall provide visual inspection of work as it progresses to insure supports, sizes, configuration and tightness specified is maintained. A/E will occasionally inspect for same qualities.

B. If Testing and Balancing performed in Section 23 05 93 shows fan horsepower and pressure curves do not match the volumetric readings obtained at the inlets and outlets the ducts, the ducts shall be re-inspected visually.

C. Whenever Testing and Balancing or Owner/Architect/Engineer inspections determine there may be leaks in the duct system, seal openings found. Redoing Test and Balance work is an acceptable method of proving duct is airtight.

END OF SECTION 23 31 00

Section 233300 - Air Duct Accessories

1. - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Bird screens.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 23 31 00 - Ductwork.

1.3 REGULATORY REQUIREMENTS AND STANDARDS

A. International Mechanical Code 2015.

B. NFPA 90A - Installation of Air Conditioning and Ventilating Systems.

C. NFPA 70 - National Electrical Code.

D. SMACNA - HVAC Duct Construction Standards - Metal and Flexible.

2. - PRODUCTS

2.1 BIRD SCREENS

A. Screen material shall be wire cloth.
   1. Wire cloth shall be 19 gauge galvanized wire woven in a .25″ mesh pattern.

3. - EXECUTION

3.1 INSTALLATION

A. Bird Screens
   1. Hem edges within continuous 24-gauge double thickness frame. Press frame sides closed within a brake clamp. Install drive screws or rivets at frame corners to prevent frames from disconnecting from one-another.

END OF SECTION 23 33 00

SECTION 233423 - FANS

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Base Bid:
   1. Contractor Provide:
      a. Roof mounted exhaust fans.
      b. Inline centrifugal exhaust fans.

1.02 RELATED WORK

A. Specified Elsewhere:
   1. 233100 - Ductwork.
   2. 233300 - Air Duct Accessories.
   3. 230593 - Testing, Adjusting and Balancing for HVAC.

1.03 REFERENCES

A. AMCA 99 - Standards Handbook.

B. AMCA 211 - Laboratory Methods of Testing Fans for Rating Purposes.

C. AMCA 261 - Directory of Products Licensed to bear the AMCA Certified Ratings Seal.

D. AMCA 300 - Test Code for Sound Rating Air Moving Devices.

E. AMCA 311 - Method of Publishing Sound Ratings for Air Moving Devices.

F. NEMA MG1 - Motors and Generators.

G. NFPA 70 - National Electrical Code.

H. UL 705 - Power Ventilators.

1.04 DESCRIPTION

A. Definition:
   1. Ventilating Contractor = Ventilating Subcontractor for this work.

1.05 SUBMITTALS

A. Submit under provisions of the Owner’s Division 1 Specification.

B. Product Data: Provide data on fans and accessories including fan curves with specified operation point clearly plotted, sound power levels at rated capacity, and electrical characteristics and connection requirements. Fan curves are required. Single points will not be acceptable.

C. Manufacturer’s Installation Instructions.

D. Submit line item price for fans on the Schedule of Values. Identify supplier vendor.

1.06 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of the Owner’s Division 1 specifications.

B. Maintenance Data: Include instructions for lubrication, motor and drive replacement, spare parts list, and wiring diagrams.

1.07 COORDINATION

A. With Electrical Trades:
   1. Deliver switches and speed controls for installation.
   2. Confirm rough-in location of devices.

B. With General Trades:
   1. Locate roof and wall penetrations.
   2. Furnish curbs for installation.

PART 2 - PRODUCTS

2.01 MANUFACTURER & PERFORMANCE

A. Unless otherwise specified the manufacturer’s number specified or scheduled is listed merely as an aid to prospective bidders. In most cases it is an incomplete number and relies upon the written description to fully define the item. Where model numbers define a single manufactured item which does not include the items include in the written description, the model number shall be modified as required to most closely meet the described requirements.

2.02 PRODUCT REQUIREMENTS

A. Performance Ratings: Conform to AMCA 211 and bear the AMCA Certified Rating Seal.

B. Sound Ratings: AMCA 311, tested to AMCA 300, and bear the AMCA Certified Sound Rating Seal.

C. Fabrication: Conform to AMCA 99.

D. UL Compliance: UL listed and labeled, designed, manufactured, and tested in accordance with UL 705.

2.03 ROOF FANS

A. Hooded Propeller Fans:
   1. Shall have spun aluminum hood and venturi and an aluminum base, with 16 gauge 1/2” mesh birdscreen. Provide with 14 gauge steel motor mount frame insolated with rubber-in-shear isolators. Motor cover shall be spun aluminum.
   2. Drive shall be direct as scheduled.
   3. Motor shall be high efficiency heavy duty drip proof type. Motors 1/2 horsepower and less shall have permanently lubricated sealed bearings.
   4. Electrical Components:
      a. Provide electrical wireway from under curb cap to motor compartment.
      b. Provide motor speed control to match motor.
      c. Provide NEMA disconnect under hood.
   5. Propeller blade shall be cast aluminum air foil or deep pitch fabricated design with a cast hub. Blades shall be factory secured with set screws and roll pins. Hub shall be secured to the motor

shaft with 2 set screws or a taper lock bushing. Assemble shall be statically and dynamically balanced.

B. Acceptable Products:

		Propeller
1.	Greenheck	AE
2.	Loren Cook	AQD

C. Accessories:
1. Gravity actuated dampers shall have aluminum blades, nylon bearings and felt edge seals.
2. Curbs shall be as specified in 230529.

2.04 CENTRIFUGAL FANS

A. Plastic Inline Centrifugal Fans.
1. Shall have tubular/”barrel” configuration. Housing shall be constructed of UL-recognized UV protected thermoplastic resin. Provide with mounting bracket and cylindrical end connections.
2. Impeller shall be backward inclined centrifugal type.
3. Motor shall have sealed long life bearings and be type that can accept a speed control. Provide with integral junction box for electrical connection.
4. Provide separate speed control matched to fan motor.

B. Acceptable Products

1.	Fantech	FR Series
2.	Vents-Us	VK Series

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install in accordance with manufacturer’s instructions.

B. Roof Fans:
1. Secure with stainless steel lag screws to roof curb.
2. Install backdraft dampers on inlet to roof fans.

C. In-line Fans:
1. Support from structure above. Use equipment supports specified in 220529. Support independently from ceiling and ductwork.
2. Provide draw band connections. Do not screw into housing seal draw band connection.

D. Do not operate fans for any purpose until duct work is clean, filters in place, bearings lubricated, and fan has been test run under observation.

END OF SECTION 233423

Section 233713 - Diffusers, Registers and Grilles

1. - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide:
      a. Exhaust grille shown.

1.2 RELATED WORK

A. Specified Elsewhere:
   1. 23 05 93 – Testing Adjusting and Balancing for HVAC.
   2. 23 31 00 – Ductwork.
   3. 23 30 00 – Air Duct Accessories.

1.3 REFERENCES

A. ADC 1062 - Certification, Rating and Test Manual.

B. AMCA 500 - Test Method for Louvers, Dampers and Shutters.

C. ARI 650 - Air Outlets and Inlets.

D. ASHRAE 70 - Method of Testing for Rating the Air Flow Performance of Outlets and Inlets.

E. SMACNA - HVAC Duct Construction Standard - Metal and Flexible.

1.4 DESCRIPTION

A. Definition:
   1. Register – Is a grille with an attached damper.
   2. Register, Grille and Diffuser Dimensions Size = A x B where A = Width and B = Height.

1.5 SUBMITTALS

A. Product Data:
   1. Submit under provisions of Section 01 33 23. Submittals for this section shall include:
      a. Height and width dimensions of louvers and verification that subcontractors and general contractors have verified these items.

2. - PRODUCTS

2.1 REGISTERS, GRILLES AND DIFFUSERS

A. All units:
   1. Shall have a minimum over lap margin of 1”.
   2. Shall have off-white baked enamel finish.
   3. Shall have accessory mounts to match ceiling or wall finish type shown on Architectural Drawings.

B. Exhaust grilles shall be constructed with extruded aluminum face bars set at .67” to 3/4" centers with a welded and gusseted aluminum frame. Provide intermediate mullions to limit face bar span to a maximum of 12”.

C. Acceptable Products:

Manufacturers Type	Nailor	Krueger	Price	Titus
1. Exhaust Grilles	7100 Series	S580H	530 Series	350R Series

3. - EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Check location of inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement.

C. Install grilles to ductwork with air tight connection.

END OF SECTION 23 37 13

SECTION 260500 – COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.01 SUMMARY

A. Contractor Provide Base Bid:
1. Labor and materials for complete electrical systems. These materials include, but are not limited to: circuit breakers, devices, boxes, conduit, conductors, connectors, fittings, and anchors, as required and indicated in these specifications and/or shown on the Electrical Drawings.
2. Power connections and control equipment and wiring as required for equipment provided under other sections or by Owner.
3. All minor system components reasonably required for the proper functioning and/or safe operation of the systems and to meet all related codes and ordinances.
4. Required system and component testing as required in these specifications and/or related codes and ordinances.
5. Coordination with other trade contractors.
6. Sleeves for raceways and cables.

1.02 RELATED WORK

A. Specified elsewhere:
1. 260519 – Low-Voltage Electrical Power Conductors and Cables
2. 260526 – Grounding and Bonding for Electrical Systems
3. 260529 – Hangers and Supports for Electrical Systems
4. 260533 – Raceway and Boxes for Electrical Systems
5. 260553 – Identification for Electrical Systems
6. 262416 – Panelboards
7. 262726 - Wiring Devices
8. 265100 – Interior Lighting
9. 265600 – Exterior Lighting

1.03 REFERENCES - LATEST EDITIONS

A. NFPA 70 - National Electrical Code.

B. Americans With Disabilities Act - (ADA).

C. International Building Code (IBC).

D. Illinois Accessibility Code.

E. Illinois Energy Conservation Code (IECC).

F. All other Contract Documents - including Construction Drawings.

1.04 VERIFICATION OF POINTS

A. Before submitting his bid, Contractor shall visit the site to carefully verify all exposed points of existing utilities and new connections. Contractor shall verify concealed or buried points of connection as near as possible. Verify these points, as to locations, size, type, depth, operating characteristics, and complications; including, but not limited to:

1. Present site conditions.
2. Present electrical utility distribution system and requirements.
3. Work associated with equipment provided under other sections or by Owner.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Provide all information requested.

B. When two or more items of same material or equipment are required, they shall be of the same manufacturer. Product manufacturer uniformity does not apply to raw materials, bulk materials, wire, conduit, fittings, sheet metal, steel bar stock, welding rods, solder, fasteners, motors for dissimilar equipment units, and similar items used in Work, except as otherwise indicated.

C. Provide products compatible within systems, with interconnected systems, and with other connected items.

D. Provide permanent operational data nameplate on each item of power operated equipment, indicating manufacturer, product name, model number, serial number, capacity, operating and power characteristics, labels of tested compliances, and similar essential data. Locate nameplates in an accessible location.

2.02 PRODUCT OPTIONS AND SUBSTITUTIONS

A. Options and Substitutions shall be done per the Division 1 instructions.

B. All product substitutions shall include any incurred costs by the Contractor, any sub-contractor, other trades, Owner, or Owner’s consultants. No increase in cost or contract shall be allowed for modifications or corrections, due to approval of Contractor requested or submitted substitutions.

2.03 ELECTRICAL SUBMITTALS

A. Submit per specification Division 1 requirements.

B. Electrical equipment submittals shall include a clear item description - not just catalog number.

C. Catalog pages must be clearly marked to indicate the exact product being proposed with all necessary accessories and options identified and selected. Pages including multiple products or options, where selections are not indicated may be rejected for re-submittal.

2.04 DELIVERY, STORAGE AND HANDLING

A. Deliver products to project site with proper identification, including; names, model numbers, types, grades, compliance labels, and similar information needed for distinct identifications; adequately packaged and protected to prevent damage during shipment, storage, and handling.

B. Store equipment and materials at the site, unless off-site storage is authorized in writing. Protect stored equipment and materials from damage.

C. Coordinate deliveries of electrical materials and equipment to minimize construction site congestion. Limit each shipment of materials and equipment to the items and quantities needed for the smooth and efficient flow of installations.

PART 3 - EXECUTION

3.01 COORDINATION

A. Coordinate all work per requirements of Division 1.

B. See mechanical and architectural specifications, drawings, and submittals, for work concerning the connection of electrical power and any required controls.

C. Contractor shall verify electrical characteristics and requirements (name plate data) of equipment furnished by others (FBO) for proper coordination and equipment operation. Contractor shall confirm requirements of final equipment furnished by others (FBO) and shall select associated electrical devices accordingly. Before any work is installed, and before any equipment is purchased, The Contractor shall carefully check specifications and plans for every trade and job condition, and any lack of coordination between his work, the plans, specifications, or job conditions shall be immediately reported to the Architect/Engineer in writing.

D. Contractor shall coordinate equipment connection requirements with approved equipment submittals, prior to rough-in.

3.02 ROUGH-IN

A. Verify final locations and electrical characteristics for rough-ins with field measurements and with the requirements of the actual equipment to be connected.

B. Refer to equipment specifications, of other divisions, for rough-in requirements.

C. Coordinate rough-ins for Owner provided equipment.

3.03 ELECTRICAL INSTALLATIONS

A. Comply with NECA 1.

B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounted items.

C. Coordinate electrical equipment and materials installation with other building components.

D. Right-of-way: Give to piping systems installed at a required slope.

E. Verify all dimensions by field measurements.

F. Arrange for chases, slots, and openings in other building components to allow for electrical installations.

G. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
   1. Sleeves for raceways and cables: Steel pipe sleeves – ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
   2. Grout: Nonmetallic, shrinkage-resistant, ASTM C 1107, factory-packaged nonmetallic aggregate, noncorrosive, non-staining, mixed with water to consistency suitable for application and a 30-minute working time.
   3. Sleeve installation for electrical penetrations:
      a. Electrical penetrations occur when raceways, cables, and wireways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
      b. Concrete slabs and walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
      c. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
      d. Fire-rated assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
      e. Cut sleeves to length for mounting flush with both surfaces of walls.
      f. Extend sleeves installed in floors 2 inches above finished floor level, unless noted otherwise.
      g. Seal space outside of sleeves with grout for penetrations of concrete and masonry. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
      h. Interior penetrations of non-fire-rated walls and floors shall be sealed in the annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint.
      i. Fire-rated-assembly penetrations shall maintain the indicated fire rating of the walls, partitions, ceilings, or floors at point of raceway or cable penetrations, using sleeves with firestop materials.
      j. Roof-penetration sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing unites applied in coordination with roofing work.
      k. Above-ground, exterior wall penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
      l. Underground, exterior wall penetrations: Install PVC pipe sleeves. Size sleeves for 1-inch annular clear space between sleeve and raceway or cable for installing mechanical sleeve seals.

H. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work.

I. Coordinate the cutting and patching of building components to accommodate the installation of electrical equipment and materials.

J. Where mounting heights are not detailed or dimensioned, install electrical services and overhead equipment to provide the maximum headroom possible.

K. Install electrical equipment for compliance with code-required clearances and to facilitate maintenance and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.

L. Provide access panels and doors for electrical items behind finished surfaces or otherwise concealed.

M. Coordinate the installation of electrical materials and equipment above ceilings with suspension system, mechanical equipment, other systems and structural components.

N. Drawings for work under Divisions 260000 are Diagrammatic and are intended to convey scope of work and indicate general arrangement of conduit, boxes, equipment, lighting fixtures, and other work included in the contract.
   1. See details and schedules on drawings and specifications for meanings of abbreviations, additional requirements, and information. Check civil, architectural, structural, mechanical, and other electrical drawings for scale, space limitations, beams, door swings, windows, ductwork, coordination, and additional information, and report any discrepancies or conflicts to Architect/Engineer prior to submitting bid.
   2. The Contractor shall install and completely wire all equipment furnished by others (FBO) in accordance with the Manufacturer's wiring diagrams and as required for a complete operating installation. Contractor shall verify and coordinate electrical characteristics and requirements of (FBO) equipment prior to ordering associated equipment or rough-in of conduit and wiring to avoid conflicts.

3.04 RECORD DOCUMENTS

A. Provide record documents as required by this Article and Division 1 specifications.

B. Mark Drawings to indicate revisions to conduit size and location both exterior and interior, actual equipment locations, dimensioned to column lines, concealed equipment dimensioned to column lines, distribution and branch electrical circuitry, fuse and circuit breaker size and arrangements, support and hanger details, Change Orders, and concealed control system devices.

C. Accurately mark locations of underground, or under floor electrical conduits and conductors. Provide dimensions from fixed points of reference.

D. On-site record mark ups shall be monitored for compliance with record keeping requirements.

3.05 OPERATION AND MAINTENANCE DATA

A. Procedures and requirements for preparation and submittal of maintenance manuals shall be done as required by Division 1.

B. In addition to the information required by Division 1 specifications, include the following information when requested:
   1. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of all replaceable parts.
   2. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions.
   3. Maintenance procedures for routine preventative maintenance and troubleshooting, disassembly, repair, and reassembly, aligning and adjusting instructions.

3.06 WARRANTIES

A. Procedures and submittal requirements for warranties shall be done, as required by the Division 1 specifications, and as pertains to specific warranties. See individual equipment specifications for warranty requirements.

B. Compile and assemble the warranties specified in Divisions 260000 into a file folder labeled for this project.

C. Provide complete warranty information, for each product or equipment item, to include date of beginning of warranty or bond; duration of warranty or bond; and names, addresses, and telephone numbers and procedures for filing a claim and obtaining warranty services.

D. Except as modified in individual specification sections:
   1. All materials and workmanship shall be warranted for 1 year.
   2. All warranties begin upon official date of substantial completion, allowing Owner’s beneficial use of the work.
   3. Warranted materials shall be provided for replacement within 30 days of notice of failure to Contractor (or as specifically allowed by Owner’s Representative).
   4. The first year of warranted items shall include materials and labor for replacement/repair and shall be responded to, within 10 working days of notice of problem to Contractor.
   5. Warranty material replacements shall not diminish Owner’s stock of extra items.

3.07 CLEANING

A. General requirements for final cleaning shall be done as required by Division 1.

B. Maintain clean work space with daily cleanup of all occupied areas.

3.08 TESTING

A. Provide testing and documented results as required by each specification section or applicable codes, laws, and ordinances.

B. Provide testing and documented results as required or recommended by manufacturer(s) for certification or warranty.

END OF SECTION 260500

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Building wires and cables rated 600 V and less.
   2. Connectors, splices, and terminations rated 600 V and less.
   3. Conductors required for all new general power and lighting circuits required or indicated.
   4. Conductors required for connections to both motorized and non-motorized equipment requiring power.

1.2 DEFINITIONS

A. EPDM: Ethylene-propylene-diene terpolymer rubber.

B. NBR: Acrylonitrile-butadiene rubber.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Qualification Data: For testing agency.

C. Field quality-control test reports.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Alcan Products Corporation; Alcan Cable Division.
   2. American Insulated Wire Corp.; a Leviton Company.
   3. General Cable Corporation.

4. Senator Wire & Cable Company.
5. Southwire Company.

B. Copper Conductors: Comply with NEMA WC 70.

C. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN.

D. Multi-conductor Metal-Clad (MC) Cable: Not permitted except for pre-manufactured fixture and motorized equipment connections (not to exceed 6’-0” in length).

E. Cables Not Allowed:
1. Armored Cable (AC).
2. Flat Cable Assemblies (FC).
3. Flat Conductor Cable (FCC).
4. Integrated Gas Spacer Cable (IGS).
5. Metal-Clad Cable (MC), except as noted above.
6. Mineral-Insulated, Metal-Sheathed Cable (MI).
7. Nonmetallic-Sheathed Cable (NM, NMC, NMS).
8. Underground Feeder Cable (UF).
9. Nonmetallic Extensions.
10. Concealed Knob-and-Tube.
11. Open Wiring on Insulators.

2.2 CONNECTORS AND SPLICES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. AFC Cable Systems, Inc.
2. Hubbell Power Systems, Inc.
3. Ideal Industries, Inc.
4. O-Z/Gedney; EGS Electrical Group LLC.
5. 3M; Electrical Products Division.
6. Tyco Electronics Corp.

B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper. Stranded for all conductors.

B. Branch Circuits: Copper. Stranded for all conductors.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Service Entrance: Type THHN-THWN, XHHW, single conductors in raceway.

B. Exposed Feeders: Type THHN-THWN, single conductors in raceway.

C. Feeders Concealed in Ceilings and Walls, Partitions: Type THHN-THWN, single conductors in raceway.

D. Feeders Below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.

E. Exposed Branch Circuits: Type THHN-THWN, single conductors in raceway.

F. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway. Metal-clad cable is not permitted, except for light fixture connection whips and final equipment connections.

G. Branch Circuits Below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.

H. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit suspended applications.

I. Class 1 Control Circuits: Type THHN-THWN, in raceway.

J. Class 2 Control Circuits: Type THHN-THWN, in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.

B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

3.4 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

3.5 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

B. Tests and Inspections:
   1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

C. Test Reports: Prepare a written report to record the following:
   1. Test procedures used.
   2. Test results that comply with requirements.
   3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

D. Remove and replace malfunctioning materials and retest as specified above.

END OF SECTION 260519

SECTION 260526 – GROUNDNG AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Shall Provide:
      a. Installation of new service grounding electrodes.
      b. Installation of new remote building grounding electrodes.
      c. Installation of new equipment grounding conductors.
      d. Installation of new bonding conductors.
      e. Installation of accessories to bonding and grounding connections.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. All new grounding and bonding materials and equipment shall be listed by a nationally recognized testing agency (NRTL).

PART 2 - PRODUCTS

2.1 CONDUCTORS

A. Insulated Conductors: Copper or tinned-copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:
   1. Solid Conductors: ASTM B 3.
   2. Stranded Conductors: ASTM B 8.
   3. Tinned Conductors: ASTM B 33.
   4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.

5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.2 CONNECTORS

A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.

B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy.

C. Bonding Grounding Bushings:
1. Malleable iron/Steel construction for threaded Rigid Galvanized Steel or IMC Conduit.
2. With bushing insulator rated for 150-degrees Celsius.
3. With Mounting Set Screw.
4. With Lay-In Lug and Clamping Screw.

D. NRTL listed compression connection is acceptable.

2.3 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel; 10’ x 3/4” inches in diameter.

PART 3 - EXECUTION

3.1 APPLICATIONS

A. Conductors: Install stranded conductors unless otherwise indicated.

B. Grounding Conductors: Install bare tinned-copper conductor, No. 8 AWG minimum.
1. Clamp to ground rod.

C. Conductor Terminations and Connections:
1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Bolted connectors.

3.2 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
   1. Feeders and branch circuits.
   2. Lighting circuits.
   3. Receptacle circuits.
   4. Single-phase motor and appliance branch circuits.
   5. Flexible raceway runs.

3.3 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Rods: Drive rods until tops are 12 inches below final grade, unless otherwise indicated.

C. Bonding Grounding Bushings: Furnish and install bonding bushings at each end of conduits enclosing the grounding electrode conductor indicated on the drawing.

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections and prepare test reports:
   1. After installing grounding electrode and grounding conductor, but before permanent electrical circuits have been energized, test for compliance with requirements.
   2. Test completed grounding system at feeder disconnect enclosure grounding terminal, and at ground rod. Make tests at ground rod before any conductors are connected.
      a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
      b. Perform tests by fall-of-potential method according to IEEE 81.
   3. Prepare dimensioned drawings locating ground rod. Include the driven depth, and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

B. Report measured ground resistances that exceed the following values:
   1. Power and Lighting Equipment or System with Capacity 500 kVA and less: 10 ohms.

C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION 260526

SECTION 260529 – HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Shall Provide:
      a. Hangers and supports for electrical equipment and systems.
      b. Stainless steel or non-metallic materials for corrosive atmosphere applications.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 DEFINITIONS

A. EMT: Electrical Metallic Tubing.

B. IMC: Intermediate Metal Conduit.

C. PVC/RNC:Polyvinylchloride/Rigid Non-Metallic Conduit

D. RGC/RMC: Rigid Galvanized Conduit/Rigid Metal Conduit.

1.4 PERFORMANCE REQUIREMENTS

A. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.

B. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

C. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

1.5 QUALITY ASSURANCE

A. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Allied Tube & Conduit.
      b. Cooper B-Line, Inc.; a division of Cooper Industries; Highland, IL.
      c. ERICO International Corporation.
      d. GS Metals Corp.
      e. Thomas & Betts Corporation.
      f. Unistrut; Tyco International, Ltd.
      g. Wesanco, Inc.
   2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
   3. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
   4. Channel Dimensions: Selected for applicable load criteria.
   5. Use stainless steel or fiberglass materials for slotted support systems in corrosive atmosphere applications.

B. Raceway Supports: As described in NECA 1 and NECA 101.

C. Conduit Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway to be supported. Use stainless steel or non-metallic support devices in salt dome applications.

D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.

E. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
   1. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1) Eaton Cooper B-Line, Inc.; a division of Cooper Industries; Highland, IL.
   2) Empire Tool and Manufacturing Co., Inc.
   3) Hilti Inc.
   4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc, Glendale Heights, IL.
   5) MKT Fastening, LLC.

2. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
3. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
4. Toggle Bolts: All-steel springhead type.
5. Hanger Rods: Threaded steel.

2.2 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.

B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as scheduled in NECA 1, where its Table 1 lists maximum spacings less than stated in NFPA 70. Minimum rod size shall be 1/4 inch in diameter.

C. Multiple Raceways: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
   1. Secure raceways to these supports with two-bolt conduit clamps, single-bolt conduit clamps, or single-bolt conduit clamps using spring friction action for retention in support channel.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC, and RMC may be supported by openings through structure members, as permitted in NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
   1. To Wood: Fasten with lag screws or through bolts.
   2. To Existing Concrete: Expansion anchor fasteners.
   3. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.3 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
   1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.

B. Touchup: Comply with requirements in painting Sections for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.

C. Galvanized Surfaces: Clean bolted connections and abraded areas, and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 260529

SECTION 260533 – RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Shall Provide:
      a. Installation of new junction and pull boxes, fittings, enclosures, device outlet boxes, and associated support materials, for electrical wiring.
      b. Installation of conduit and raceways for all new electrical conductors, with associated fittings and accessories.

1.2 RELATED DOCUMENTS

Drawings and other specification sections.

1.3 DEFINITIONS

A. EMT: Electrical metallic tubing.

B. FMC: Flexible metal conduit.

C. IMC: Intermediate metal conduit.

D. LFMC: Liquid tight flexible metal conduit.

E. RNC/PVC: Rigid Non-metallic/poly-vinyl-chloride conduit.

F. RMC/RGS: Rigid metallic conduit/Rigid galvanized steel.

G. MC Cable: Metal-clad cable.

1.4 SUBMITTALS

A. Product Data: For boxes larger than 6”, hinged-cover enclosures and cabinets.

B. Shop Drawings: For floor boxes and enclosures and cabinets, provide drawings with dimensions, conduit entrance points, and attachment locations.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. AFC Cable Systems, Inc.
   2. Alflex Inc.
   3. Allied Tube & Conduit; a Tyco International Ltd. Co.; Harvey, IL.
   4. Anamet Electrical, Inc.; Anaconda Metal Hose; Mattoon, IL.
   5. Electri-Flex Co.; Roselle, IL
   6. O-Z Gedney; a unit of General Signal.
   7. Republic Conduit, Inc. West Chicago, IL
   8. SP Products, Inc.; Elk Grove Village, IL.
   9. Wheatland Tube Company, Chicago, IL.

B. RMC: ANSI C80.1.

C. IMC: ANSI C80.6.

D. EMT: ANSI C80.3.

E. FMC: Zinc-coated steel or aluminum.

F. LFMC: Flexible steel conduit with PVC jacket.

G. Fittings for Conduit (Including all Types and Flexible and Liquidtight), EMT: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
   1. Fittings for EMT: Steel compression type.

2.2 NONMETALLIC CONDUIT AND TUBING

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. AFC Cable Systems, Inc.
   2. Anamet Electrical, Inc.; Anaconda Metal Hose; Mattoon, IL.
   3. Arnco Corporation.
   4. CANTEX Inc.
   5. CertainTeed Corp.; Pipe & Plastics Group.
   6. Condux International, Inc.
   7. ElecSYS, Inc.

8. Electri-Flex Co.; Roselle, IL
9. Lamson & Sessions; Carlon Electrical Products.
10. Manhattan/CDT/Cole-Flex.
11. RACO; a Hubbell Company.
12. Thomas & Betts Corporation.

B. PVC/RNC: NEMA TC 2, Type EPC-40-PVC, unless otherwise indicated.

C. Fittings for RNC: NEMA TC 3; match to conduit or tubing type and material.

2.3 BOXES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Carlon; Thomas & Betts.
2. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.; Lisle, IL.
3. EGS/Appleton Electric; Rosemont, IL.
4. Erickson Electrical Equipment Company; Elk Grove Village, IL.
5. Garvin Industries, Inc.; Chicago, IL
6. Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
7. O-Z/Gedney; a unit of General Signal.
8. RACO; a Hubbell Company.
9. Robroy Industries, Inc.; Enclosure Division.
10. Spring City Electrical Manufacturing Company.
11. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary, Northbrook, IL.

B. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

C. Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy or aluminum, Type FD, with gasketed cover.

D. Non-metallic Outlet and Device Boxes: PVC, Type FD, with gasketed cover.

E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
1. Exposed Conduit: Rigid or Intermediate Metal conduit (RMC/IMC).
2. Concealed Conduit, Aboveground: RNC/PVC.
3. Underground Conduit: RNC, Type EPC-40-PVC, direct buried, unless otherwise specified on drawings.
4. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
5. Connection between buildings: RNC.

B. Comply with the following indoor applications, unless otherwise indicated:
   1. Exposed, Not Subject to Physical Damage: EMT.
   2. Connection to Vibrating Equipment (Including Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC, except use LFNC in damp or wet locations.
   3. Damp or Wet Locations: RNC.
   4. Locations where corrosive atmospheres are present: RNC.
   5. Raceways for Concealed General Purpose Distribution of Low-Voltage conductors: EMT.
   6. Boxes and Enclosures: NEMA 250, Type 4, nonmetallic in damp or wet locations.

C. Conduits/Raceways Not Permitted:
   1. Electrical Nonmetallic Tubing (ENT).

D. Minimum Raceway Size: 3/4-inch trade size, unless noted otherwise.

E. Raceway Fittings: Compatible with raceways and suitable for use and location.

3.2 INSTALLATION

A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.

B. Keep raceways at least 6 inches away from parallel runs of flues.

C. Complete raceway installation before starting conductor installation.

D. Install no more than the equivalent of three 90-degree bends in any conduit run.

E. Conceal conduit within finished walls and floors, for devices on exterior walls, unless otherwise indicated. Route exposed for interior devices and connections.

F. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.

G. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.

H. RNC conduit bends shall be done with factory fittings or with factory approved heat box, specifically intended for PVC conduit bending. Any conduit showing heat damage or reduced capacity at bends, shall be replaced.

I. Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for lighting fixtures, equipment subject to vibration, noise transmission, or movement; and for motors.
   1. Use LFMC in damp or wet locations subject to severe physical damage.
   2. Use LFMC in damp or wet locations not subject to severe physical damage.
   3. Use LFNC in locations with corrosive atmosphere.

3.3 PROTECTION

A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
   1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
   2. Repair damage to paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Shall Provide:
      a. Identification for conductors.
      b. Warning labels and signs.
      c. Equipment identification labels.
      d. Wiring device circuit identification labels.
      e. Miscellaneous identification products.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 QUALITY ASSURANCE

A. Comply with NFPA 70.

B. Comply with 29 CFR 1910.145.

1.4 COORDINATION

A. Coordinate identification names, abbreviations, colors, and other features with requirements in the Contract Documents, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual, and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.

B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

C. Coordinate installation of identifying devices with location of access panels and doors.

PART 2 - PRODUCTS

2.1 WARNING LABELS AND SIGNS

A. Comply with NFPA 70 and 29 CFR 1910.145.

B. Self-Adhesive Warning Labels: Factory printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment, unless otherwise indicated.

C. Baked-Enamel Warning Signs: Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application. 1/4-inch grommets in corners for mounting. Nominal size, 7 by 10 inches.

D. Warning labels and signs shall include, but are not limited to, the following legends:
   1. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."
   2. Arc-Flash Hazard Warning: “WARNING – ARC FLASH HAZARD – APPROPRIATE PPE REQUIRED – FAILURE TO COMPLY CAN RESULT IN DEATH OR INJURY – REFER TO NFPA 70E”

2.2 EQUIPMENT IDENTIFICATION LABELS

A. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a black background. Minimum letter height shall be 3/8 inch.

2.3 BRANCH CIRCUIT CONDUCTOR COLOR CODE LABELS

A. Self-adhesive or engraved label with conductor color code information per NFPA 70 – 210.5(C). Apply to branch circuit electrical panel cover.

2.4 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Cable Ties: Fungus-inert, self-extinguishing, 1-piece, self-locking, Type 6/6 nylon cable ties.
   1. Minimum Width: 3/16 inch.
   2. Tensile Strength: 50 lb, minimum.
   3. Temperature Range: Minus 40 to plus 185 deg F.
   4. Color: Black, except where used for color-coding.

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 APPLICATION

A. Power-Circuit Conductor Identification: For conductors No. 1/0 AWG and larger in pull and junction boxes use color-coding conductor tape marker tape. Identify source and circuit number of each set of conductors. For single conductor cables, identify phase in addition to the above.

B. Branch-Circuit Conductor Identification: Where there are conductors for more than three branch circuits in same junction or pull box, use color-coding conductor tape. Identify each ungrounded conductor according to source and circuit number.

C. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment.
   1. Labeling Instructions:
      a. Indoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high label; where 2 lines of text are required, use labels 2 inches high.
   2. Equipment to Be Labeled:
      a. Panelboards.
      b. Disconnect switches.

D. Provide warning label on panelboard for required clearance/working space.

E. Wiring device circuit identification: Provide machine printed adhesive label on each wiring device cover plate, with clear background and black, minimum 1/8" high, lettering,.

3.2 INSTALLATION

A. Verify identity of each item before installing identification products.

B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

C. Apply identification devices to surfaces that require finish after completing finish work.

D. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.

E. Color-Coding for Phase and Voltage Level Identification, 600 V and Less: Use the colors listed below for ungrounded service, feeder, and branch-circuit conductors.
   1. Color shall be factory applied or, for sizes larger than No. 10 AWG if authorities having jurisdiction permit, field applied.
   2. Colors for 120/240-V Circuits:
      a. Phase A: Black.
      b. Phase B: Red.
   3. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

END OF SECTION 260553

SECTION 262416 – PANELBOARDS

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Shall Provide:
      a. Demolition and removal of existing electrical panelboard and related materials.
      b. Installation of new Lighting and appliance branch-circuit panelboard.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 SUBMITTALS

A. Product Data: For each type of panelboard, switching and overcurrent protective device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: For panelboards and related equipment.

   1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
   2. Detail enclosure types and details for types other than NEMA 250, Type 1.
   3. Detail bus configuration, current, and voltage ratings.
   4. Short-circuit current rating of panelboards and overcurrent protective devices.
   5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
   6. Include wiring diagrams for power, signal, and control wiring.

C. Panelboard Circuit Directories: For installation in panelboards. Submit final versions after load balancing.

D. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals.

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
2. Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Comply with NEMA PB 1.

D. Comply with NFPA 70.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Remove loose packing and flammable materials from inside panelboards.

B. Handle and prepare panelboards for installation according to NECA 407 and NEMA PB 1.

1.6 PROJECT CONDITIONS

A. Environmental Limitations:

1. Rate equipment for continuous operation under the following conditions unless otherwise indicated:

a. Ambient Temperature: Not exceeding plus 104 deg F.

B. Service Conditions: NEMA PB 1, usual service conditions, as follows:

1. Ambient temperatures within limits specified.
2. Altitude not exceeding 6600 feet.

C. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only

after arranging to provide temporary electric service according to requirements indicated:

1. Notify Architect and Owner’s representative no fewer than two weeks in advance of proposed interruption of electric service.
2. Do not proceed with interruption of electric service without the Architect and Owner's written permission.
3. Comply with NFPA 70E.

1.7 COORDINATION

A. Coordinate the demolition, layout, and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARD

A. Enclosure: Surface-mounted cabinet.

1. NEMA 1 enclosure.
2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
3. Directory Card: Inside panelboard door, mounted in transparent card holder.
4. Keys: Two for panelboard cabinet lock.
5. Circuit Breakers: Reference panel schedule for breaker quantities and ratings.

B. Incoming Mains Location: Bottom or top.

C. Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

D. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Main and Neutral Lugs: Mechanical type.
3. Ground Lugs and Bus-Configured Terminators: Mechanical type.

E. Service Equipment Label: NRTL labeled for use as service equipment.

F. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

G. Panelboard Short-Circuit Current Rating: 10,000 amperes, symmetrical, verified with utility service rating.

2.2 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARD

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Eaton – Culter Hammer; Glendale Heights, IL
2. GE
3. Siemens
4. Square D; Schneider Electric; Palatine, IL.

B. Panelboards: NEMA PB 1:
1. Lighting and appliance branch-circuit type.

C. Mains: 100 amp bus, 60 amp/2 pole breaker.

D. Branch Overcurrent Protective Devices: Plug-on or bolt-down circuit breakers, replaceable without disturbing adjacent units.

E. Doors: Concealed hinges; secured with flush latch with tumbler lock. Constructed for NEMA 1 enclosure rating.

2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

A. Manufacturers: Match to panel board:

B. Molded-Case Circuit Breaker (MCCB): Listed with a NRTL, with interrupting capacity to meet listed fault current. Reference drawings for panel schedule and additional information.

1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits.

2. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:

   a. Standard frame sizes, trip ratings, and number of poles.
   b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
   c. Undervoltage Trip: Set to operate at 35 to 75 percent of rated voltage without intentional time delay.
   d. Multipole units enclosed in a single housing or factory assembled to operate as a single unit.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Receive, inspect, handle, and store panelboard according to NECA 407 and NEMA PB 1.1.

B. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.

C. Examine elements and surfaces to receive panelboard for compliance with installation tolerances and other conditions affecting performance of the Work.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install panelboard and accessories according to NECA 407 and NEMA PB 1.1.

B. Mount top of branch panel trim a maximum of 72 inches above finished floor unless otherwise indicated.

C. Mount panelboard cabinet plumb and rigid without distortion of box.

D. Install overcurrent protective devices and controllers not already factory installed.

E. Install filler plates in unused spaces.

F. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing. The ungrounded and grounded circuit conductors of each multi-wire branch circuit shall be grouped by cable ties or similar means in at least one location within the panelboard or other point of origination.

G. Comply with NECA 1.

3.3 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Division 26 Section "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads after balancing panelboard loads; incorporate Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable. Directory must meet requirements of NEC 408.4. Drawing panel schedules are generally not intended to be substitutes for the final panel circuit directories.

C. Panelboard Nameplates: Label panelboard with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Acceptance Testing Preparation:
   1. Test continuity of each circuit.

C. Tests and Inspections:

   1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
   2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

D. Panelboards will be considered defective if they do not pass tests and inspections.

3.5 ADJUSTING

A. Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.

B. Load Balancing: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes.

1. Measure as directed during period of normal system loading.
2. Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed.
3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

END OF SECTION 262416

SECTION 262726 – WIRING DEVICES

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Shall Provide:
      a. Specification Grade receptacles, receptacles with integral GFCI, toggle switches, and associated device plates.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 DEFINITIONS

A. EMI: Electromagnetic interference.

B. GFCI: Ground-fault circuit interrupter.

C. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

D. RFI: Radio-frequency interference.

E. PIR: Passive Infrared

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Field quality-control test reports.

C. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring

devices and associated wall plates from a single manufacturer and one source.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a NRTL, and marked for intended use.

C. Comply with NFPA 70.

1.6 COORDINATION

A. Receptacles for existing equipment or equipment provided under other sections: Match plug configurations.

PART 2 - PRODUCTS

2.1 STRAIGHT BLADE RECEPTACLES

A. Convenience Receptacles, heavy-duty, specification grade, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R.

B. Manufacturers:
1. Cooper-Eaton: #5362
2. Hubbell: #5362
3. Legrand-Pass & Seymour: #5362

2.2 GFCI RECEPTACLES

A. General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, Class A, and include indicator light that is lighted when device is tripped.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

C. Manufacturers:
1. Eaton - Cooper: #WRVGF20
2. Hubbell: #GFR5362
3. Legrand-Pass & Seymour: #PT2095HG

2.3 TOGGLE SWITCHES

A. Heavy-Duty, specification grade, 1-pole and 3-way toggle switch, 277 V, 20 A: Compy with NEMA WD 1, NEMA WD 6.

B. Manufacturers:
1. Eaton - Cooper: 1-pole #AH1221; 3-way #AH1223

2. Hubbell: 1-pole #1221; 3-way #1223
3. Legrand – Pass & Seymour: 1-pole #PS20AC; 3-way #PS20AC3

2.4 WALL PLATES

A. Single and combination types to match corresponding wiring devices.
   1. Plate-Securing Screws: Metal with head color to match plate finish.
   2. Material for Unfinished Spaces: Galvanized steel.
   3. Weatherproof receptacle applications: Cast aluminum or non-metallic ‘while-in-use’ lift cover, and listed and labeled for use in "wet locations." The outlet box hood installed shall be identified as “Extra Duty” and be in accordance with the National Electrical Code NFPA 70 Article 406.9(B)(1).
   4. Weatherproof switch applications on metal box: Cast aluminum with lever type external handle operator and perimeter gasket. The outlet box hood installed shall be identified as “Extra Duty” and be in accordance with the National Electrical Code NFPA 70 Article 404.4(A).
   5. Weatherproof switch applications on non-metallic box: PVC with lever type external handle operator and perimeter gasket. The outlet box hood installed shall be identified as “Extra Duty” and be in accordance with the National Electrical Code NFPA 70 Article 404.4(A).

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.

B. Coordination with Other Trades:
   1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.

C. Conductors:
   1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
   2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.

3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors:
   a. Cut back and pigtail, or replace all damaged conductors.
   b. Straighten conductors that remain and remove corrosion and foreign matter.
   c. Pigtailing existing conductors is permitted provided the outlet box is large enough.

D. Device Installation:
1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:
1. Install ground pin of vertically mounted receptacles up, and on horizontally mounted receptacles to the right.

F. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical.

3.2 IDENTIFICATION

A. Comply with Division 26 Section "Identification for Electrical Systems."

3.3 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

1. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.

B. Tests for Convenience Receptacles:
   1. Line Voltage: Acceptable range is 105 to 132 V.
   2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
   3. Ground Impedance: Values of up to 2 ohms are acceptable.
   4. GFCI Trip: Test for tripping values of 5mA.
   5. Using the test plug, verify that the device and its outlet box are securely mounted.
   6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

END OF SECTION 262726

SECTION 265100 – INTERIOR LIGHTING

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor Shall Provide:
   a. Interior LED lighting fixtures and light engines/drivers.
   b. Lighting fixture supports.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 DEFINITIONS

A. CRI: Color-rendering index.

B. CU: Coefficient of utilization.

C. LER: Luminaire efficacy rating.

D. Luminaire: Complete lighting fixture, including driver housing, if provided.

1.4 SUBMITTALS

A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, finishes, and the following:

1. Physical description of lighting fixture including dimensions.
2. Driver/light engine.
3. Energy-efficiency data (lumens/watt for LED fixtures).
4. Life, output, and energy-efficiency data for light engines.
5. Internet links to Photometric data, in IESNA format, based on laboratory tests of each lighting fixture type and accessories identical to those indicated for the lighting fixture as applied in this Project.

a. For indicated fixtures, photometric data shall be certified by a qualified independent testing agency. Photometric data for remaining fixtures shall be certified by the manufacturer.
b. Photometric data shall be certified by a manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program (NVLAP) for Energy Efficient Lighting Products.

B. Operation and Maintenance Data: For lighting equipment and fixtures to include in emergency, operation, and maintenance manuals.

C. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer Laboratory Accreditation Program for Energy Efficient Lighting Products.

B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

D. Comply with NFPA 70.

1.6 COORDINATION

A. Coordinate layout and installation of lighting fixtures with other construction, including equipment, and partition assemblies.

1.7 WARRANTY

A. Special Warranty for LED fixtures: Manufacturer’s standard form in which fixture manufacturer agrees to repair or replace fixtures failing in materials or workmanship within specified

warranty period (Five years from date of Substantial Completion).

B. Special Warranty for Electronic Drivers: Manufacturer's standard form in which LED driver manufacturer agrees to repair or replace units that fail in materials or workmanship within specified warranty period (Five years from date of Substantial Completion).

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. As defined in lighting fixture schedule, on drawings.

2.2 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS

A. Metal Parts: Free of burrs and sharp corners and edges.

B. Sheet Metal Components: Steel, unless otherwise indicated. Form and support to prevent warping and sagging.

C. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit opening without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during maintenance and when secured in operating position.

D. Reflecting surfaces shall have minimum reflectance as follows, unless otherwise indicated:

1. White Surfaces: 85 percent.

E. Plastic Diffusers:

1. Acrylic Lighting Diffusers: 100 percent virgin acrylic plastic. High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation, impact restistant.

    a. Lens Thickness: At least 0.125 inch minimum unless different thickness is indicated.
    b. UV stabilized.

2. Polycarbonate diffusers:
    a. UV stabilized to prevent yellowing and brittleness.

2.3 LED FIXTURES

A. Minimum lumen output rating listed in fixture schedule descriptions.

B. Maximum input wattage listed in fixture schedule descriptions.

C. Fixture data shall be produced in compliance with IESNA LM70.

D. Color temperature range indicated in fixture schedule descriptions; minimum 70 CRI rating.

E. Electronic driver with surge protection circuitry and universal input voltage (120-277 volts ac).

PART 3 - EXECUTION

3.1 INSTALLATION

A. Lighting fixtures: Set level, plumb, and square with walls.

B. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

END OF SECTION 265100

SECTION 265600 – EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor Shall Provide:
   a. Exterior LED luminaires with light engines and electronic drivers.
   b. Luminaire-mounted photoelectric relays.

1.2 RELATED DOCUMENTS

A. Drawings and other specification sections.

1.3 DEFINITIONS

A. CRI: Color-rendering index.

B. HID: High-intensity discharge.

C. Luminaire: Complete lighting fixture.

1.4 SUBMITTALS

A. Product Data: For each luminaire and support component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:

1. Physical description of luminaire, including materials, dimensions, and verification of indicated parameters.
2. Details of attaching luminaires and accessories.
3. Details of installation and construction.
4. Luminaire materials.
5. Photometric data based on laboratory tests of each luminaire type, complete with indicated and accessories.

   a. For indicated luminaires, photometric data shall be certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.
   b. Photometric data shall be certified by manufacturer's laboratory with a current accreditation under the

National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.

6. Photoelectric relays.
7. Fixture data including: life, output, and energy-efficiency data.
8. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.

B. Operation and Maintenance Data: For luminaires to include in emergency, operation, and maintenance manuals.

C. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer Laboratory Accreditation Program for Energy Efficient Lighting Products.

B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

D. Comply with IEEE C2, "National Electrical Safety Code."

E. Comply with NFPA 70.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.

1. Warranty Period for Luminaires: Five years from date of Substantial Completion.
2. Warranty Period for Metal Corrosion: Five years from date of Substantial Completion.

3. Warranty Period for Color Retention: Five years from date of Substantial Completion.

1.7 MANUFACTURERS

A. As defined in Luminaire Schedule, on drawing Sheet E-1.

1.8 LUMINAIRES, GENERAL REQUIREMENTS

A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.

B. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.

C. Metal Parts: Free of burrs and sharp corners and edges.

D. Sheet Metal Components: Corrosion-resistant aluminum, unless otherwise indicated. Form and support to prevent warping and sagging.

E. Housings: Cast aluminum, weather- and light-tight enclosures that will not warp, sag, or deform in use.

F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to open without use of special tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during opening and when secured in operating position. Doors shall be removable for cleaning or replacing lenses.

G. Exposed Hardware Material: Stainless steel.

H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

I. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

J. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping.

K. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
2. Class I, Color Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.

   a. Color: Dark bronze.

3. Minimum Starting Temperature: Minus 40 deg F.

PART 2 - EXECUTION

2.1 LUMINAIRE INSTALLATION

A. Install lamps in each luminaire.

B. Fasten luminaire to indicated structural supports.

C. Adjust luminaires that require field adjustment or aiming.

2.2 CORROSION PREVENTION

A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

2.3 GROUNDING

A. Attach associated branch circuit equipment grounding conductor to fixture ground screw.

2.4 FIELD QUALITY CONTROL

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Illumination Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.

   1. Verify operation of photoelectric controls.

END OF SECTION 265600

Section 312000 - Earth Moving

PART 1 - GENERAL

1.1 WORK INCLUDE$S

A. Base Bid
   1. General Contractor Provide:
      a. Preparing subgrades for Owner provide/installed slabs-on-grade, walks, aprons, final topsoil, turf and grasses.
      b. Excavating and backfilling for buildings and structures.
      c. Drainage course for concrete slabs-on-grade.
      d. Subbase course for concrete walks and pavements.
      e. Subbase course and base course for asphalt paving.
      f. Excavating and backfilling for any utility trenches (electrical).
      g. Owner will provide all subgrade, base and sub-base compaction testing.
      h. Owner will provide/perform final finish grading, topsoil and turf/seeding. Contractor coordinate and Contractor provide rough grading within tolerances to allow proper topsoil/grading depth/elevations (± 4” of topsoil).

1.2 RELATED WORK

A. Specified Elsewhere:
   1. Geotechnical Data.
   2. 31 23 14 - Excavating, Backfilling, and Compacting for Structures.

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: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. 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 Architect. 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 Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

K. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 QUALITY ASSURANCE

A. Preexcavation Conference: General Contractor to conduct conference at Project site.

1.5 PROJECT CONDITIONS

A. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth moving operations.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, 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.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, 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.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

2.2 ACCESSORIES

A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored to comply with local practice or requirements of authorities having jurisdiction.

B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored to comply with local practice or requirements of authorities having jurisdiction.

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 earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions 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.

3.3 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 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.
   1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

B. Excavations at Edges of Tree- and Plant-Protection Zones:
   1. Excavate by hand to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
   1. Clearance: 12 inches each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
   1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material, 4 inches deeper elsewhere, to allow for bedding course.

D. Trenches in Tree- and Plant-Protection Zones:
   1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
   2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.

3.6 SUBGRADE INSPECTION

A. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired dump truck to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Architect.
   1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.8 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.

3.9 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.

C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03 30 00 "Cast-in-Place Concrete".

D. Trenches under Roadways: Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course. Concrete is specified in Division 03 "Cast-in-Place Concrete".

E. Place and compact initial backfill of subbase material, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.
   1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

F. Place and compact final backfill of satisfactory soil to final subgrade elevation.

G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.10 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 and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

3.11 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 soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil 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 soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 82 percent.
4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.13 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.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
   1. Turf or Unpaved Areas: Plus or minus 1 inch.
   2. Walks: Plus or minus 1 inch.
   3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge. Owner will perform final finish grading and top soil. Coordinate.

3.14 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
   1. Shape subbase course and base course to required crown elevations and cross-slope grades.
   2. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
   3. Compact subbase course and 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 698.

3.15 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
   1. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
   2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.16 FIELD QUALITY CONTROL

A. Testing Agency: Owner shall engage a qualified geotechnical engineering testing agency to perform tests and inspections. Contractor shall coordinate with Owner Rep. and A/E for schedule to tests

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.

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 materials to depth required; recompact and retest until specified compaction is obtained.

3.17 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.

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.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Using Agency's property.

END OF SECTION 312000

Section 321216 - Asphalt Paving

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor Provide patching of existing asphalt pavement:
      a. Prime base course, construct bituminous binder course and bituminous surface course.
      b. Perform compaction tests (Owner Engaged/employed).

1.2 RELATED WORK

A. Specified Elsewhere:
   1. Section 01 45 29 - Testing Laboratory Services.
   2. Section 31 20 00 - Earth Moving.

1.3 REGULATORY REQUIREMENTS

A. American Society for Testing and Materials, ASTM:
   1. ASTM D1557: Tests for Moisture-Density Relationship of Soils. Using 10 lb rammer in 18" drop.

B. State of Illinois Department of Transportation, IDOT:
   1. Standard Specifications for Road and Bridge Construction, 2012.

1.4 SUBMITTALS

A. Product Data:
   1. Submit IDOT approved Mix Designs.

B. Source quality control reports.

C. Field test reports.

PART 2 - PRODUCTS

2.1 ASPHALT PAVEMENT MATERIALS

A. Hot-Mix Asphalt Surface Course: Conform to IDOT Standard Specifications for Road and Bridge Construction, 2012, Section 406.
   1. PG 709-22, IL-9.5, Mix D, N70.

B. Hot-Mix Asphalt Binder Course: Conform to IDOT Standard Specifications for Road and Bridge Construction, Section 406.
   1. PG 64-22, IL-19.0, N70.

C. Bituminous Materials Prime Coat: Conform to IDOT Standard Specifications for Road and Bridge Construction, Article 406.l02.
   1. MC-30.

D. Maintain thorough and uniform mixture.

E. Bring asphalt cement and mineral constituents to specified temperatures before mixing.

F. Ensure aggregates are sufficiently dry so not to cause foaming in mixture.

2.2 SOURCE QUALITY CONTROL

A. Provide Load Tickets from an IDOT approved source.

PART 3 - EXECUTION

3.1 PREPARATION

A. Ensure grading of sub-grade to specified elevation.

3.2 PRIMING PREPARED STABILIZED BASE COURSE

A. Ensure stabilized base course is dry and free of loose or foreign material before priming.

B. Primer Application Rate:
1. Apply primer over prepared stabilizing base course at uniform rate of .35 gal/sq yd.
2. Ensure primer is at temperature recommended by manufacturer.
3. Use clean natural sand to blot excess primer.

C. Similarly prime surface of curbs, gutters, and concrete pavements which will be in contact with asphalt pavement.

D. Coat surfaces of manholes and catch basins which are to remain free of asphalt, with oil to prevent asphalt adhesion.

3.3 PLACEEMNT OF ASPHALT PAVEMENT

A. Conform to IDOT Standard Specifications for Road and Bridge Construction, Section 406.

B. Placement Depth:
1. Place binder course to compacted depth indicated.
2. Place surface source to compacted depth indicated.

C. Temperature:
1. Do not place asphalt pavement when surface temperature is 40 degrees F or lower.
2. Ensure asphalt pavement is minimum 225 degrees F immediately after placing and prior to initial rolling.

D. Compaction:
1. Compact each asphalt paving course to specified density, with approved rolling equipment.
2. Start compaction as soon as pavement will bear equipment without checking or undue displacement
3. Carry out compaction in three operations in pass sequence.
4. Ensure each pass of roller overlaps previous passes to ensure smooth surface free of roller marks.

5. Keep roller wheels sufficiently moist so as not to pick up material.
6. Perform hand tamping in areas not accessible to rolling equipment.

E. Joints:
1. Ensure joints made during paving operations are straight, clean, vertical and free of broken or loose material.
2. Prime vertical surfaces of joints to ensure tight bond.

F. Tolerances:
1. Ensure surface of completed asphalt pavement is true to lines, profiles and elevations indicated.
2. Free from depressions exceeding 1/4" when measured with 10' straightedge.

G. Do not allow vehicular traffic on newly paved areas until surface has cooled to atmospheric temperatures.

3.4 FIELD QUALITY CONTROL

A. Testing laboratory shall be retained/employed by the Owner to perform compaction tests for asphalt pavement courses.
1. Number of Tests: Minimum two at Newman.

B. Contractor shall pay for costs of additional testing beyond the two specified due to improper performance of work.

END OF SECTION 32 12 16

Kellogg & Newman Golf Course Storage Facility

Peoria Park District
Peoria, IL 61614

Work Locations:
Kellogg Golf Course, 7716 N. Radnor Rd., Peoria, IL. 61615
Newman Golf Course, 2021 W. Nebraska Ave., Peoria, IL. 61604

JOB No.
Kellogg Storage Facility - 2015904.16
Newman Storage Facility - 2015904.17

DATE
11 March 2019

ARCHITECT/ENGINEER
apaceDesign ARCHITECTS + ENGINEERS
2112 E. War Memorial Dr.
Peoria, IL 61614
tel 309.685.4722
fax 309.685.4784

INDEX OF DRAWINGS:

LOCATION IN STATE

BUILDING CODE REVIEW - 2012 INTERNATIONAL BUILDING CODE

USE GROUP: S-1 (STORAGE)
TYPE OF CONSTRUCTION: "5B", COMBUSTIBLE, UNPROTECTED

OCCUPANT LOAD: 5 MAX.TOTAL @ KELLOGG & 9 MAX. TOTAL @ NEWMAN (STAFF, PER TABLE 1004.1.2)

BUILDING AREA & HEIGHT:
ACTUAL AREA: KELLOGG 1536 GROSS SQ. FT. ;NEWMAN 2,880 GROSS SQ. FT.

ALLOWABLE AREA (PER TABLE 503): 9,000 SQ. FT. (WITHOUT OPEN FRONTAGE INCREASE)

ACTUAL HEIGHT: 17 FT. @ KELLOGG & 21 FT @ NEWMAN, 1 STORY

ALLOWABLE HEIGHT (PER TABLE 503): 40'-0" ABOVE GRADE, 1 STORY

FIRE SPRINKLER SYSTEM: NONE REQUIRED PER 903.2.9.

ADEQUATE EXIT ARRANGEMENT & ROUTES: YES

MAXIMUM EXIT ACCESS TRAVEL DISTANCE: LESS THAN 200' (TABLE 1016.2)

COMMON PATH OF EGRESS TRAVEL: LESS THAN 100' (TABLE 1014.3)

DEAD-END CORRIDOR LENGTH: N.A.

NOTE: THESE STORAGE BUILDINGS ARE NOT HEATED AND NOT REQUIRED TO MEET THE 2015 ILLINOIS ENERGY CONSERVATION CODE AS FAR AS THERMAL ENVELOPE REUIREMENTS FOR , BUILDING WALL AND ROOF INSULATION, WINDOW AND DOOR REQUIREMENTS OF THE IECC CODE.

ABBREVIATIONS:

A.D.A.	AMERICANS WITH DISABILITIES ACT	L.F.	LINEAR FEET
A.F.F.	ABOVE FINISHED FLOOR	MANUF.	MANUFACTURE (R)
ALT.	ALTERNATE	MAS.	MASONRY
ALUM.	ALUMINUM	MAX.	MAXIMUM
APPROX.	APPROXIMATE	M.B.	MARKER BOARD
ARCH.	ARCHITECT (URAL)	MECH.	MECHANICAL
BRNG.	BEARING	MIN.	MINIMUM
B.O.	BY OWNER	MISC.	MISCELLANEOUS
℄	CENTER LINE	MTL.; MET.	METAL
C/C	CENTER-TO-CENTER	MNTD.	MOUNTED
C.G.	CORNER GUARD	No.	NUMBER
C.R.	CLASSROOM	N.I.C.	NOT IN CONTRACT
CLNG.	CEILING	O.C.	ON CENTER
CLR.	CLEAR (ANCE)	OPNG.	OPENING
C.M.U.	CONCRETE MASONRY UNIT	OPP.	OPPOSITE
COL(S).	COLUMN (S)	O.D.	OUTSIDE DIAMTER
COMP.	COMPRESSED; COMPACTED	O.S.B.	ORIENTED STRAND BOARD
CONC.	CONCRETE	P.LAM.	PLASTIC LAMINATE
CONSTR.	CONSTRUCTION	PLUMB.	PLUMBING
CONT.	CONTINUE (OUS)	PLYWD.	PLYWOOD
COORD.	COORDINATE	PNT.; PT.	PAINT
CPT.	CARPET	P.C.	PORTLAND CEMENT
C.T.	CERAMIC TILE	RAD.	RADIUS
DBL.	DOUBLE	REINF.	REINFORCE (D); (ING)
DP.	DEEP	REQ'D.	REQUIRED
DEMO	DEMOLITION	REF.	REFERENCE
DET.	DETAIL	R.B.	RESILIENT BASE
DIA.	DIAMETER	RM.	ROOM
DR. (S)	DOOR (S)	R.T.U.	ROOF-TOP UNIT
D.S.	DOWNSPOUT	SCHED.	SCHEDULE (D)
DN.	DOWN	SLNT.	SEALANT
EA.	EACH	S.F.	SQUARE FEET
E.F.	EXHAUST FAN	SHT.	SHEET
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM	SIM.	SIMILAR
ELEC.	ELECTRICAL	S.C.WD.	SOLID-CORE WOOD
EL.; ELEV. (S)	ELEVATION (S)	SPEC.	SPECIFICATION (S)
EQ.	EQUAL	SQ.	SQUARE
EQUIP.	EQUIPMENT	S.STL.	STAINLESS-STEEL
EXIST.	EXISTING	STL.	STEEL
EXT.	EXTERIOR	STOR.	STORAGE
F.B.	FACE-BRICK	STRUCT.	STRUCTURAL
F.D.	FLOOR DRAIN; FILE DRAWER	SUSP.	SUSPENDED
FDN.	FOUNDATION	T.	TALL
F.E.C.	FIRE EXTINGUISHER CABINET	T+G	TONGUE-AND-GROOVE
FIN.	FINISHED (ED)	T.B.	TACK BOARD
FLR. (NG)	FLOOR (ING)	T.B.R.	TO BE REMOVED
F.R.P.	FIBERGLASS RE-INFORCED PANEL	THK.	THICK (NESS)
FTG.	FOOTING	T.O.	TOP OF
GA.	GAUGE	TYP.	TYPICAL
GALV.	GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
G.B.	GYPSUM BOARD	V.B.	VINYL BASE
GL.	GLASS; GLAZING	V.C.T.	VINYL COMPOSITION TILE
GYP.	GYPSUM	VERT.	VERTICAL
H.	HIGH	VEST.	VESTIBULE
HGT.	HEIGHT	W.C.	WALL COVERING
HR.	HOUR	W.W.F.	WELDED WIRE FABRIC
HORIZ.	HORIZONTAL	W.	WIDTH
H.M.	HOLLOW METAL	W/	WITH
JNT.	JOINT	WIN. (S)	WINDOW (S)
INSUL.	INSULATION	W/O	WITHOUT
L.	LENGTH	WD.	WOOD

ARCHITECTURAL LEGEND:

MATERIAL DESIGNATIONS:

architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T. 309.685.4722 F. 309.685.4784

Kellogg Golf Course Storage Facility
Peoria Park District
Peoria, IL 61614

TITLE SHEET

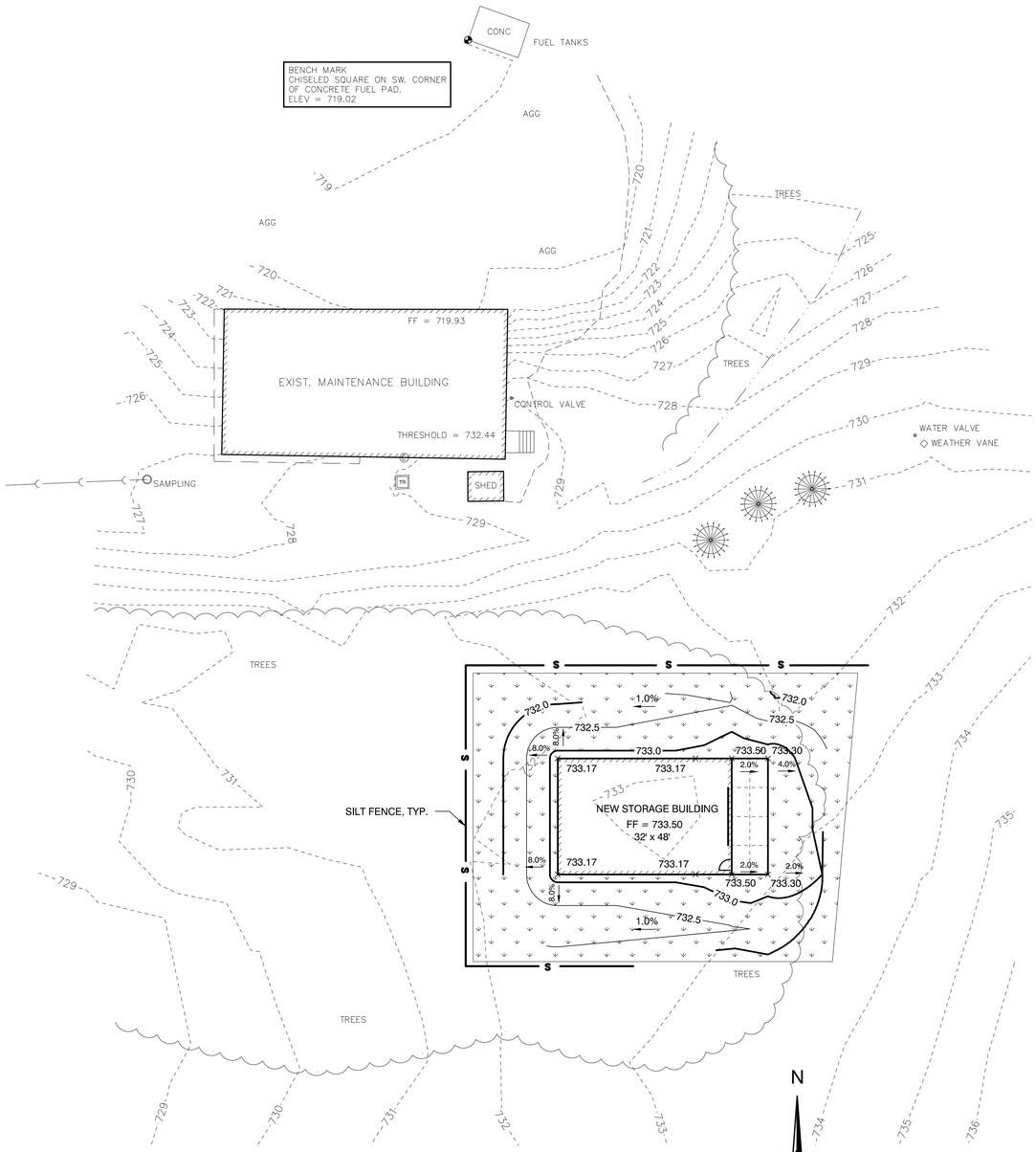
NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

EXPIRES 11.30.20

STATE OF ILLINOIS
STEVEN J. McCONNELL
#11-7065
REGISTERED ARCHITECT
PEORIA

DATE 03.11.19	PROJECT NO. 2015904.16 2015904.17
DRAWN BY DBV	SHEET G000
CHECKED DBV	1 OF 1
APPROVED SJM	

plot @18" = 1'-0"



GRADING AND STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1" = 20'

FLOOD ZONE CLASSIFICATION
ZONE C , AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON FEMA
FLOOD INSURANCE RATE MAPS PANEL NO. 170536 0015 B,
EFFECTIVE DATE FEBURARY 1, 1980.

GENERAL NOTES:

ALL CONSTRUCTION SHALL BE IN ACCORDANCE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, STANDARD SPECIFICATION FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION. REFERENCES TO METHOD OF PAYMENT ARE NOT APPLICABLE.

ALL EXISTING UNDERGROUND UTILITIES SHOWN ON PLANS ARE APPROXIMATE. EXACT LOCATIONS AND DEPTHS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL JULIE AT 811 OR 1-800-892-0123, 48 HOURS PRIOR TO CONSTRUCTION.

IF FIELD TILE ARE ENCOUNTERED DURING CONSTRUCTION, THE TILE SHALL BE REPAIRED AND LOCATION DOCUMENTED. NOTIFY THE ENGINEER PRIOR TO PLACING ANY BACKFILL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES WITHIN THE CONSTRUCTION LIMITS. IF ANY UTILITY IS DAMAGED DURING THE COURSE OF CONSTRUCTION, THE UTILITY OWNER SHALL BE NOTIFIED IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXPENSES INCURRED TO REPAIR THE UTILITY.

IF A UTILITY CONFLICT ARISES WHICH WILL RESULT IN DAMAGE TO A UTILITY OR WILL CAUSE THE DESIGN TO BE REVISED, CONTACT THE ENGINEER.

TRENCH BACKFILL (FA-6 OR APPROVED ON SITE MATERIAL) SHALL BE PLACED IN ALL TRENCHES UNDER PAVEMENT AND WITHIN 2' OF THE BACK OF CURB OR EDGE OF PAVEMENT. TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR.

DRAINAGE AND STORM STRUCTURES SHALL BE KEPT FREE OF DEBRIS AND DIRT DURING THE COURSE OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY ANY STORM SEWER BACKUPS.

PORTLAND CEMENT CONCRETE, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION.

THE SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 301 OF THE STANDARD SPECIFICATIONS

ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES UNLESS OTHERWISE NOTED.

PROVIDE 4" MIN. TOPSOIL ON ALL DISTURBED AREAS. DISTURBED AREAS SHALL BE SEEDED WITH IDOT CLASS 1 SEED MIXTURE AT A RATE OF 200LBS/ACRE. FERTILIZER SHALL BE APPLIED AT A 1:1:1: RATIO AT 270 LBS/ACRE. MULCH SHALL BE PLACED AT 2 TONS/ACRE USING IDOT METHOD 2.

REGARDLESS OF SOURCE, TOPSOIL SHALL BE FREE OF DEBRIS, CONCRETE, ROCKS, ETC. ALL TOPSOIL SHALL BE REDUCED TO A SIZE NOT LARGER THAN 1".

SEED BEDS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 250.05 OF THE IDOT STANDARD SPECIFICATION.

TRAILERS AND STOCK PILES FINAL LOCATION CONTRACTOR TO DETERMINE IN THE FIELD.

SOIL AND AGGREGATE STOCK PILES SHALL BE PROTECTED WITH SILT FENCE TO PREVENT RUNOFF.

CONTRACTOR TO PROVIDE CONCRETE WASH OUT AREA ON SITE. LOCATION TO BE DETERMINED BY A PARK DISTRICT REPRESENATIVE.

AREA DISTURBED AND TEMPORARY SEEDING = 0.18 AC ±

AREAS

TOTAL AREA DISTURBED = 0.18 AC. ±

EROSION CONTROL NOTES

THE CONTRACTOR SHALL HAVE WRITTEN DOCUMENTATION OF ALL INSPECTIONS AND REPAIRS.

THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THE PLAN SHEETS, STANDARD DETAILS, PERMITS AND ALL REPORTS AND RELATED DOCUMENTS.

ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE SWPPP AND BECOME FAMILIAR WITH THE REQUIREMENTS.

CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS CONDITIONS DICTATE AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL LIMIT CLEARING TO THE MINIMUM PRACTICAL EXTENT AND AS REQUIRED BY THE GENERAL PERMIT.

DUST ON THE SITE SHALL BE CONTROLLED AT NO ADDITIONAL COST TO THE OWNER.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL BE TEMPORARILY STOPPED FOR AT LEAST 21 DAYS SHALL BE TEMPORARILY SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENT SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

CONTRACTOR SHALL BE REQUIRED TO REMOVE ANY COLLECTED SEDIMENT FROM DETENTION PONDS, SILT BASINS, AND STORM SEWERS AT NO ADDITIONAL COST TO THE OWNER UNTIL THE SITE IS STABILIZED.

DUE TO GRADE CHANGES DURING THE CONSTRUCTION ACTIVITY, THE CONTRACTOR MAY BE REQUIRED TO ADJUST SILT FENCES, STRAW BALES, ETC. AT NO ADDITIONAL COST TO THE OWNER.

MAINTENANCE

ALL EROSION CONTROL DEVICES AND MEASURES SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL THE SITE OR SECTIONS OF THE SITE ARE STABILIZED. ALL EROSION CONTROL DEVICES AND MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT EXCEEDING 0.5" RAIN. INSPECTION REPORTS SHALL BE MAINTAINED ON SITE AND SHALL BE PRODUCED UPON REQUEST OF ANY LOCAL, STATE OR FEDERAL INSPECTOR. THE FOLLOWING SHALL BE THE MINIMUM MAINTENANCE REQUIREMENTS:

ANY INLET OR PIPE PROTECTION OR PERIMETER EROSION BARRIER THAT SHOWS SIGNS OF DETERIORATION OR UNDERMINING SHALL BE REPLACED OR REPAIRED.

ANY SEEDED AREAS THAT SHOW SIGNS OF GULLYS OR EROSION SHALL BE REGRADED, RESEEDED, WATERED AND FERTILIZED AS REQUIRED TO MAINTAIN A COVER THAT IS ADEQUATE TO PREVENT EROSION.

SEDIMENT SHALL BE REMOVED FROM PERIMETER EROSION BARRIER WHEN SILT REACHES ONE HALF THE HEIGHT OF THE FENCE.

CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT TRACKING OF MUD ONTO THE RIGHT OF WAY OR PUBLIC PARKING LOTS. TOP DRESSING MAY BE REQUIRED ON THE CONSTRUCTION ENTRANCES.

ANY MUD OR DEBRIS TRACKED ON A PUBLIC ROAD SHALL BE REMOVED BY THE CONTRACTOR TO THE SATISFACTION OF THE JURISDICTIONAL BODY OF THE ROAD. THIS SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

VOLUME CONTROL AREA SHALL BE INSPECTED ANNUALLY. ANY WEEDS OR GRUB SHALL BE CLEARED AND UNDERDRAIN CLEANED.

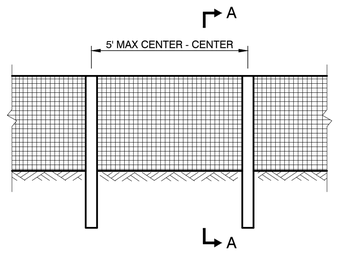
SEQUENCE OF CONSTRUCTION

1. INSTALL PERIMETER EROSION BARRIER
2. CLEAR AND GRUB WITHIN CONSTRUCTION LIMITS
3. GRADE SITE
4. TEMPORARY SEED BARE AREAS
5. CONSTRUCT NEW STRUCTURE
6. COMPLETE GRADING AND FINAL SEED OR SOD
7. REMOVE TEMPORARY EROSION DEVICES ONCE SITE IS STABILIZED

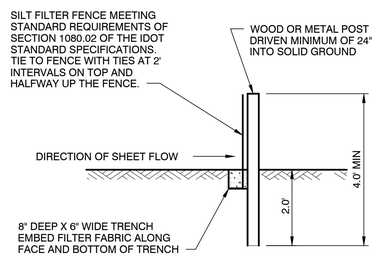
EROSION CONTROL LEGEND

PERIMETER EROSION BARRIER — S —

IDOT CLASS 7 SEEDING (TEMPORARY SEEDING)



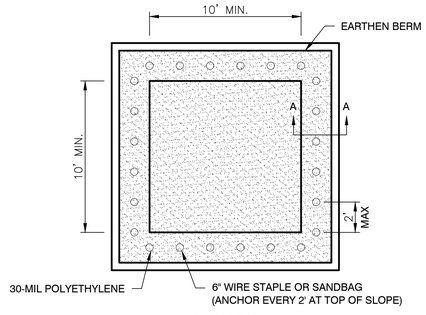
ELEVATION



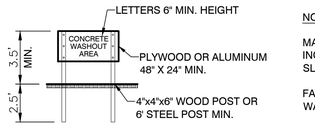
SECTION A-A

SILT FENCE DETAIL

NOT TO SCALE



PLAN VIEW
SCALE: 1:5

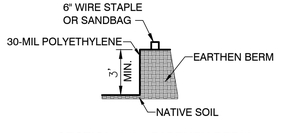


SIGN DETAIL
SCALE: 1:2

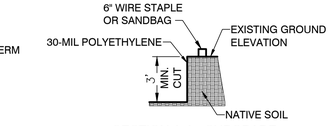
NOTES:

MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND / OR SLURRY AND RETURNING THE FACILITIES TO FUNCTIONAL CONDITION.

FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.



SECTION A-A - EARTHEN BERM
SCALE: 1:2



SECTION A-A - SUBGRADE
SCALE: 1:2

TEMPORARY CONCRETE WASHOUT FACILITY - EARTHEN TYPE

N.T.S.

MOHR & KERR ENGINEERING & LAND SURVEYING, P.C.
5901 N. Prospect Road, Suite 6B
Peoria, Illinois 61614
www.mohrandkerr.com
Office: (309) 692-8500
Fax: (309) 692-8501
Professional Design Firm #184.005091

REV.	DATE	NATURE OF REVISION	CHECKED

FILE NAME: EXIST TOPO APACE KELLOGG 19-011.dwg Mar 11, 2019

SURVEYED	-
DRAWN	DEH
CHECKED	SDK
SCALE	1" = 20'
DATE	03-11-19

CLIENT:
PEORIA PARK DISTRICT
KELLOGG GOLF COURSE
MAINTENANCE BUILDING

TITLE:
GRADING
AND
STORM SEWER POLLUTION PREVENTION PLAN

PROJECT NO. 19-011
SHEET 1 OF 3
DRAWING NO. C1

TRAILERS AND STOCK PILES FINAL LOCATION CONTRACTOR TO DETERMINE IN THE FIELD.

SOIL AND AGGREGATE STOCK PILES SHALL BE PROTECTED WITH SILT FENCE TO PREVENT RUNOFF.

CONTRACTOR TO PROVIDE CONCRETE WASH OUT AREA ON SITE. LOCATION TO BE DETERMINED BY A PARK DISTRICT REPRESENATIVE.

BENCH MARK
CHISELED "X" ON NORTH CAP BOLT ON FIRE HYDRANT.
ELEV. = 605.33

EROSION CONTROL NOTES

THE CONTRACTOR SHALL HAVE WRITTEN DOCUMENTATION OF ALL INSPECTIONS AND REPAIRS.

THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THE PLAN SHEETS, STANDARD DETAILS, PERMITS AND ALL REPORTS AND RELATED DOCUMENTS.

ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE SWPPP AND BECOME FAMILIAR WITH THE REQUIREMENTS.

CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS CONDITIONS DICTATE AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL LIMIT CLEARING TO THE MINIMUM PRACTICAL EXTENT AND AS REQUIRED BY THE GENERAL PERMIT.

DUST ON THE SITE SHALL BE CONTROLLED AT NO ADDITIONAL COST TO THE OWNER.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL BE TEMPORARILY STOPPED FOR AT LEAST 21 DAYS SHALL BE TEMPORARILY SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENT SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

CONTRACTOR SHALL BE REQUIRED TO REMOVE ANY COLLECTED SEDIMENT FROM DETENTION PONDS, SILT BASINS, AND STORM SEWERS AT NO ADDITIONAL COST TO THE OWNER UNTIL THE SITE IS STABILIZED.

DUE TO GRADE CHANGES DURING THE CONSTRUCTION ACTIVITY, THE CONTRACTOR MAY BE REQUIRED TO ADJUST SILT FENCES, STRAW BALES, ETC. AT NO ADDITIONAL COST TO THE OWNER.

MAINTENANCE

ALL EROSION CONTROL DEVICES AND MEASURES SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL THE SITE OR SECTIONS OF THE SITE ARE STABILIZED. ALL EROSION CONTROL DEVICES AND MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT EXCEEDING 0.5" RAIN. INSPECTION REPORTS SHALL BE MAINTAINED ON SITE AND SHALL BE PRODUCED UPON REQUEST OF ANY LOCAL, STATE OR FEDERAL INSPECTOR. THE FOLLOWING SHALL BE THE MINIMUM MAINTENANCE REQUIREMENTS:

ANY INLET OR PIPE PROTECTION OR PERIMETER EROSION BARRIER THAT SHOWS SIGNS OF DETERIORATION OR UNDERMINING SHALL BE REPLACED OR REPAIRED.

ANY SEEDED AREAS THAT SHOW SIGNS OF GULLYS OR EROSION SHALL BE REGRADED, RESEEDED, WATERED AND FERTILIZED AS REQUIRED TO MAINTAIN A COVER THAT IS ADEQUATE TO PREVENT EROSION.

SEDIMENT SHALL BE REMOVED FROM PERIMETER EROSION BARRIER WHEN SILT REACHES ONE HALF THE HEIGHT OF THE FENCE.

CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT TRACKING OF MUD ONTO THE RIGHT OF WAY OR PUBLIC PARKING LOTS. TOP DRESSING MAY BE REQUIRED ON THE CONSTRUCTION ENTRANCES.

ANY MUD OR DEBRIS TRACKED ON A PUBLIC ROAD SHALL BE REMOVED BY THE CONTRACTOR TO THE SATISFACTION OF THE JURISDICTIONAL BODY OF THE ROAD. THIS SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

VOLUME CONTROL AREA SHALL BE INSPECTED ANNUALLY. ANY WEEDS OR GRUB SHALL BE CLEARED AND UNDERDRAIN CLEANED.

GENERAL DEMOLITION NOTES:

FULL DEPTH SAW CUTS SHALL BE REQUIRED FOR THE REMOVAL LIMITS OF SIDEWALKS, DRIVEWAYS, AND PAVEMENT. ALL SAW CUTS SHALL BE TO THE NEAREST CONTROL JOINT. ALL SAW CUTTING OF EXISTING PAVEMENT SHALL BE INCLUDED IN THE PRICE OF THE CONTRACT.

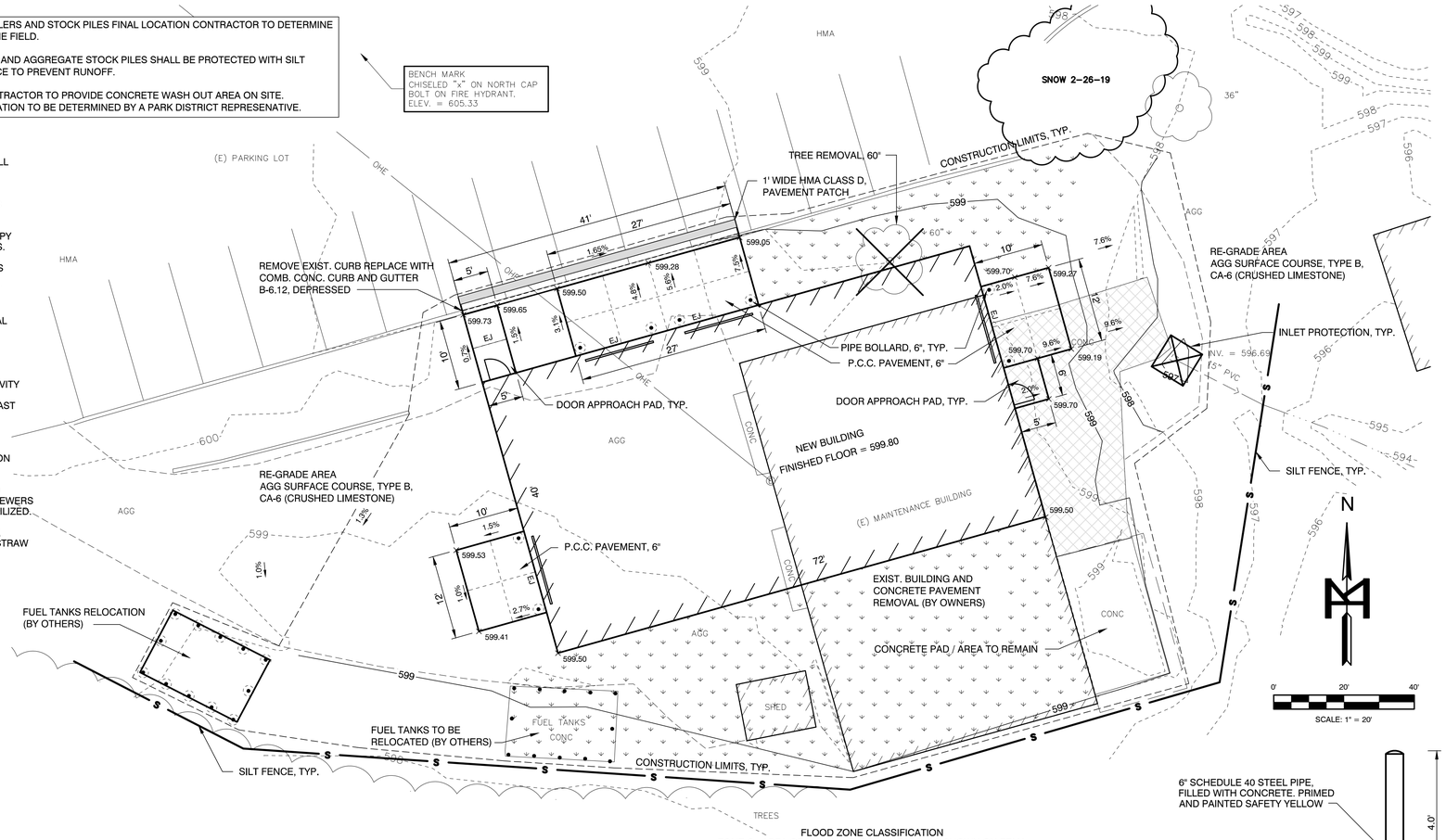
ALL DEMOLITION MATERIAL, BUILDING, TREE REMOVAL, SURPLUS AND UNSUITABLE SOILS TO BE REMOVED FROM SITE PER SECTION 202 OF I.D.O.T. STANDARD SPECIFICATION.

ALL VEGETATION, ROOTS, SOFT SOILS, TOPSOIL AND DEMOLITION DEBRIS SHALL BE STRIPPED AND REMOVED FROM THE SITE.

PLAN IS INTENDED TO SHOW ALL MAJOR REMOVAL ITEMS. SITE SHALL BE CLEARED OF ALL OBSTRUCTIONS, FENCES, WALLS, FOUNDATION, LANDSCAPING, BUILDINGS, RUBBISH, TREES, SHRUBS, STUMPS, ETC. TO ALLOW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND CONFIRMING DEMOLITION PLAN. NO ADDITIONAL PAYMENT SHALL BE MADE TO CLEAR THE SITE.

NEW FILL AND BACKFILL MATERIAL FOR THE PROJECT SHALL BE WELL GRADED GRANULAR OR NON-EXPANSIVE COHESIVE MATERIAL FREE OF ORGANIC DEBRIS.

ALL FILL AREAS SHALL BE COMPACTED TO 95% MIN. DRY DENSITY. THE MATERIAL SHOULD BE COMPACTED BETWEEN - 2% AND 3% OF THE OPTIMUM MOISTURE VALUE.



GRADING AND STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1" = 20'

FLOOD ZONE CLASSIFICATION
ZONE C , AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON FEMA FLOOD INSURANCE RATE MAPS PANEL NO. 170536 0020 B, EFFECTIVE DATE FEBURARY 1, 1980.

EROSION CONTROL LEGEND

CONSTRUCTION LIMITS

PERIMETER EROSION BARRIER — S —

INLET AND PIPE PROTECTION

IDOT CLASS 7 SEEDING (TEMPORARY SEEDING)

SEQUENCE OF CONSTRUCTION

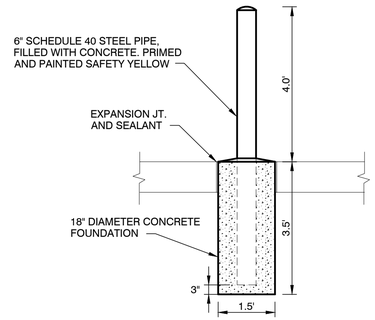
1. INSTALL PERIMETER EROSION BARRIER
2. CLEAR AND GRUB WITHIN CONSTRUCTION LIMITS
3. GRADE SITE
4. TEMPORARY SEED BARE AREAS
5. CONSTRUCT NEW STRUCTURE
6. COMPLETE GRADING AND FINAL SEED OR SOD
7. REMOVE TEMPORARY EROSION DEVICES ONCE SITE IS STABILIZED

AREA TEMPORARY SEEDING = 0.05 AC ±

AREAS

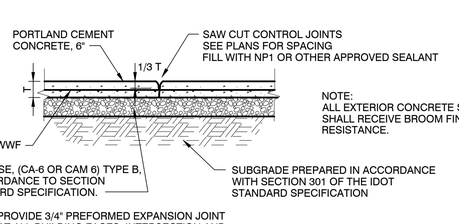
TOTAL AREA DISTURBED = 0.21 AC. ±

SEE SHEET C3 FOR EROSION CONTROL DETAILS



PIPE BOLLARD, 6"

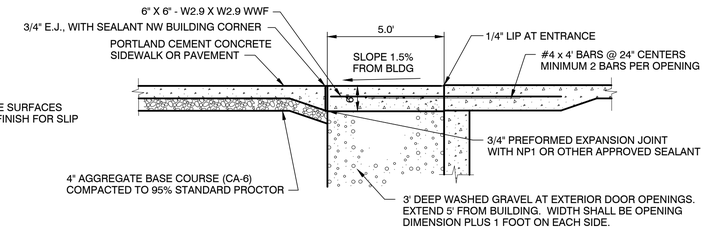
NOT TO SCALE



NOTE:
ALL EXTERIOR CONCRETE SURFACES SHALL RECEIVE BROOM FINISH FOR SLIP RESISTANCE.

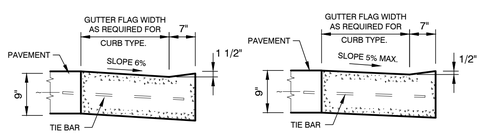
P.C.C. PAVEMENT, 6"

NOT TO SCALE



SIDEWALK / DOORWAY DETAIL AT ENTRANCE APPROACH PAD

N.T.S.



DEPRESSED CURB (TYPICAL)

DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED

COMBINATION CONCRETE CURB AND GUTTER DETAIL

NOT TO SCALE

GENERAL NOTES:

ALL CONSTRUCTION SHALL BE IN ACCORDANCE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, STANDARD SPECIFICATION FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION. REFERENCES TO METHOD OF PAYMENT ARE NOT APPLICABLE.

ALL EXISTING UNDERGROUND UTILITIES SHOWN ON PLANS ARE APPROXIMATE. EXACT LOCATIONS AND DEPTHS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL JULIE AT 811 OR 1-800-892-0123, 48 HOURS PRIOR TO CONSTRUCTION.

IF FIELD TILE ARE ENCOUNTERED DURING CONSTRUCTION, THE TILE SHALL BE REPAIRED AND LOCATION DOCUMENTED. NOTIFY THE ENGINEER PRIOR TO PLACING ANY BACKFILL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES WITHIN THE CONSTRUCTION LIMITS. IF ANY UTILITY IS DAMAGED DURING THE COURSE OF CONSTRUCTION, THE UTILITY OWNER SHALL BE NOTIFIED IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXPENSES INCURRED TO REPAIR THE UTILITY.

IF A UTILITY CONFLICT ARISES WHICH WILL RESULT IN DAMAGE TO A UTILITY OR WILL CAUSE THE DESIGN TO BE REVISED, CONTACT THE ENGINEER.

TRENCH BACKFILL (FA-6 OR APPROVED ON SITE MATERIAL) SHALL BE PLACED IN ALL TRENCHES UNDER PAVEMENT AND WITHIN 2' OF THE BACK OF CURB OR EDGE OF PAVEMENT. TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR.

DRAINAGE AND STORM STRUCTURES SHALL BE KEPT FREE OF DEBRIS AND DIRT DURING THE COURSE OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY ANY STORM SEWER BACKUPS.

PORTLAND CEMENT CONCRETE, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATION.

THE SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 301 OF THE STANDARD SPECIFICATIONS

ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES UNLESS OTHERWISE NOTED.

PROVIDE 4" MIN. TOPSOIL ON ALL DISTURBED AREAS. DISTURBED AREAS SHALL BE SEEDED WITH IDOT CLASS 1 SEED MIXTURE AT A RATE OF 200LBS/ACRE. FERTILIZER SHALL BE APPLIED AT A 1:1:1: RATIO AT 270 LBS/ACRE. MULCH SHALL BE PLACED AT 2 TONS/ACRE USING IDOT METHOD 2.

REGARDLESS OF SOURCE, TOPSOIL SHALL BE FREE OF DEBRIS, CONCRETE, ROCKS, ETC. ALL TOPSOIL SHALL BE REDUCED TO A SIZE NOT LARGER THAN 1".

SEED BEDS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 250.05 OF THE IDOT STANDARD SPECIFICATION.

LEGEND

- 594 — EXIST. CONTOUR LINE
- 594 — NEW CONTOUR LINE
- Ⓔ — EXIST. ELECTRIC METER
- — EXIST. DECIDUOUS TREE
- — EXIST. EVERGREEN TREE
- AGG — AGGREGATE SURFACE
- CONC — CONCRETE
- HMA — HOT MIX ASPHALT

MOHR & KERR ENGINEERING & LAND SURVEYING, P.C.
5901 N. Prospect Road, Suite 6B
Peoria, Illinois 61614
www.mohrandkerr.com
Office: (309) 692-8500
Fax: (309) 692-8501
Professional Design Firm #184.005091

REV.	DATE	NATURE OF REVISION	CHECKED

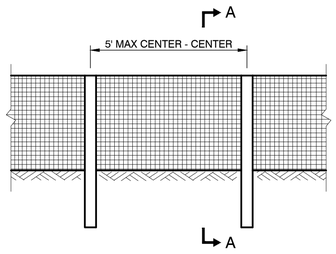
FILE NAME: DESIGN APACE NEWMAN 19-011.dwg Mar 11, 2019

SURVEYED	-
DRAWN	DEH
CHECKED	SDK
SCALE	1" = 10'
DATE	03-11-19

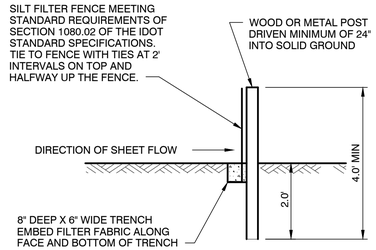
CLIENT: PEORIA PARK DISTRICT
NEWMAN GOLF COURSE
MAINTENANCE BUILDING

TITLE: GRADING AND STORM SEWER POLLUTION PREVENTION PLAN

PROJECT NO. 19-011
SHEET 2 OF 3
DRAWING NO. C2



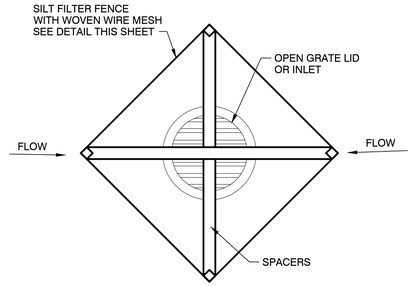
ELEVATION



SECTION A-A

SILT FENCE DETAIL

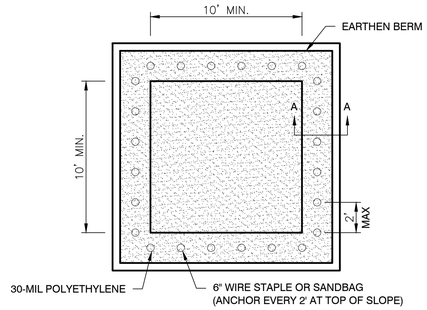
NOT TO SCALE



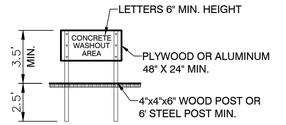
APPROVED INLET BAGS ARE ACCEPTABLE
INLET BAGS SHALL BE MAINTAINED AFTER EVERY RAINFALL

INLET PROTECTION

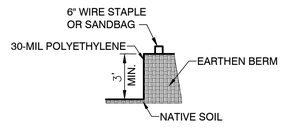
NOT TO SCALE



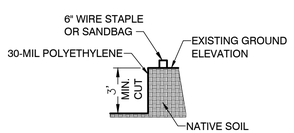
PLAN VIEW
SCALE: 1:5



SIGN DETAIL
SCALE: 1:2



SECTION A-A - EARTHEN BERM
SCALE: 1:2



SECTION A-A - SUBGRADE
SCALE: 1:2

NOTES:

MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND / OR SLURRY AND RETURNING THE FACILITIES TO FUNCTIONAL CONDITION.

FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.

TEMPORARY CONCRETE WASHOUT FACILITY - EARTHEN TYPE

N.T.S.

MOHR & KERR ENGINEERING & LAND SURVEYING, P.C.
5901 N. Prospect Road, Suite 6B
Peoria, Illinois 61614
www.mohrandkerr.com
Office: (309) 692-8500
Fax: (309) 692-8501
Professional Design Firm #184.005091

REV.	DATE	NATURE OF REVISION	CHECKED

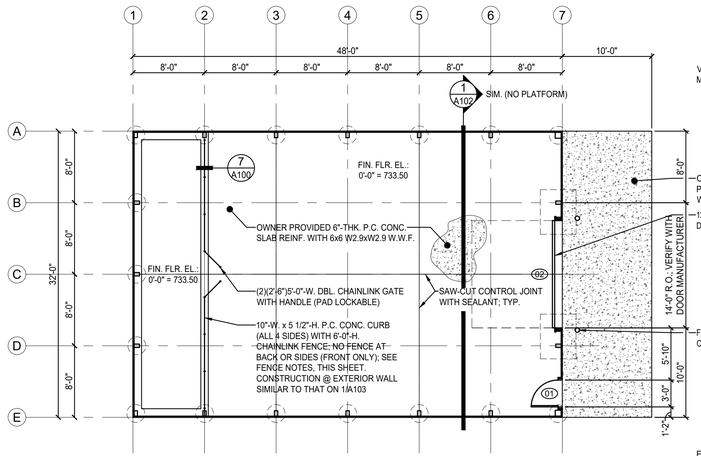
FILE NAME: DESIGN APACE NEWMAN 19-011.dwg Mar 11, 2019

SURVEYED	-
DRAWN	DEH
CHECKED	SDK
SCALE	1" = 10'
DATE	03-11-19

CLIENT:
PEORIA PARK DISTRICT
NEWMAN GOLF COURSE
MAINTENANCE BUILDING

TITLE:
STORM SEWER POLLUTION PREVENTION PLAN DETAILS

PROJECT NO. 19-011
SHEET 3 OF 3
DRAWING NO. C3



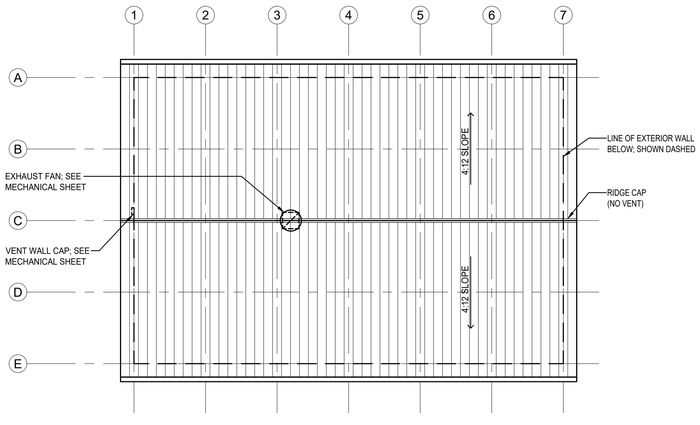
1 A100 **Kellogg Storage Facility Floor Plan**
1/8" = 1'-0"

PLAN NORTH

NOTE: OWNER WILL PROVIDE AND INSTALL CONCRETE FLOOR, SLAB AND APRONS, INCLUDING SAW-CUT CONTROL JOINTS AND SEALANT. COORDINATE TIMING WITH OWNER'S REP.

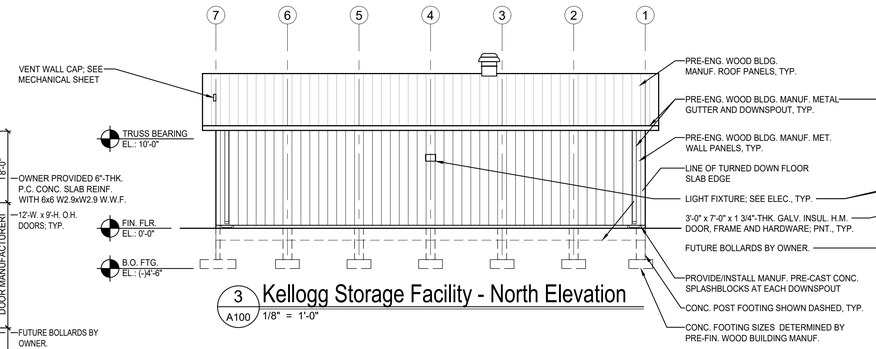
72" H. FENCE SPECIFICATIONS AS FOLLOWS (LINE POSTS MAX. 8'-0" C.C.):

- FABRIC: 72" 9-GA. GAW (2" MESH) KK CHAIN LINK FABRIC ALUMINIZED
- TOP RAIL/INTERMEDIATE RAILS (AT MIDPOINT): 1-5/8" O.D. LG-40 PIPE, 1.83 LBS./FT. RAILS JOINED WITH 1-5/8" 6" LONG SLEEVE
- LINE POST: 2-1/2" O.D. LG-40 PIPE POST, 3.12 LBS./FT. LINE POST SET 10'-0" C/C MAXIMUM SPACING
- TERMINAL POST: 2-1/2" O.D. LG-40 PIPE POST, 3.12 LBS./FT.
- GATE POST: 2-1/2" O.D. LG-40 PIPE POST, 3.12 LBS./FT.
- FITTINGS: REGULAR BRACE BRAND AND CARRIAGE BOLT, PRESSED STEEL RAIL END, PRESSED STEEL LOOP CAP, PRESSED STEEL DOME CAP, 3/16" X 3/4" STEEL TENSION BAR, PRESSED GALVANIZED STEEL
- TIE WIRE: 8-1/4" ALUMINUM 9-GA. TIE WIRE AND 6" STEEL W3 RAIL TIE. TIE WIRE SPACED 15" C/C FOR LINE POSTS AND 24" C/C FOR RAILS

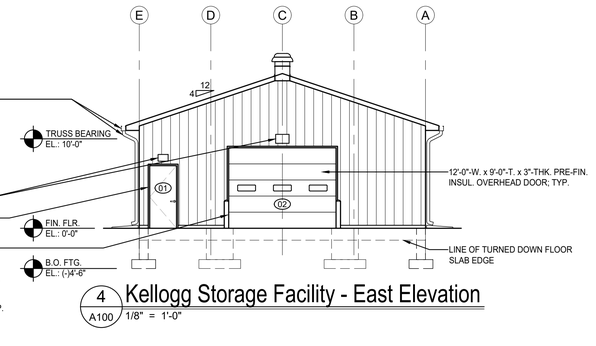


2 A100 **Kellogg Storage Facility Roof Plan**
1/8" = 1'-0"

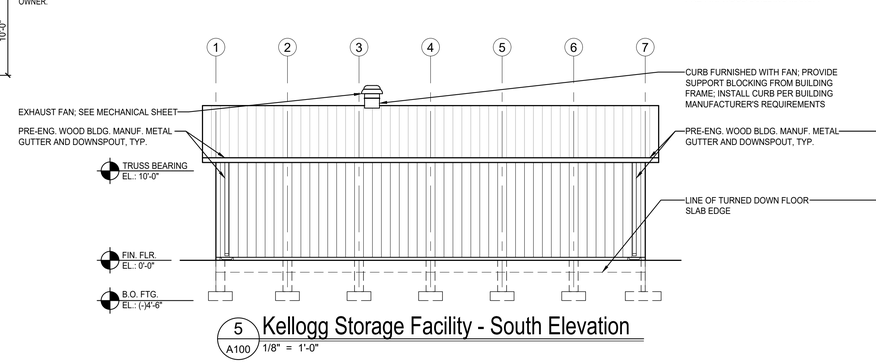
PLAN NORTH



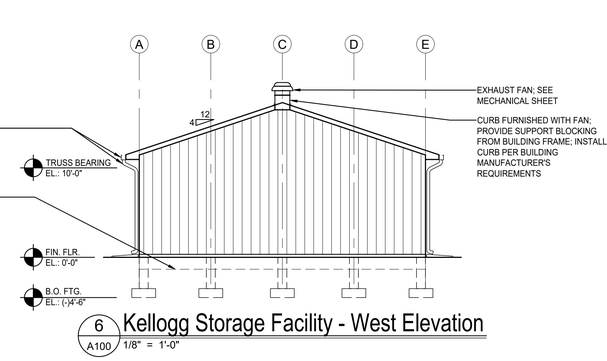
3 A100 **Kellogg Storage Facility - North Elevation**
1/8" = 1'-0"



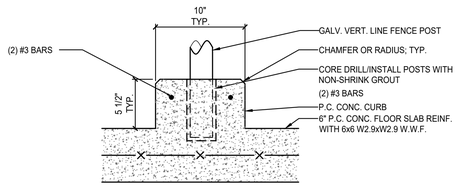
4 A100 **Kellogg Storage Facility - East Elevation**
1/8" = 1'-0"



5 A100 **Kellogg Storage Facility - South Elevation**
1/8" = 1'-0"



6 A100 **Kellogg Storage Facility - West Elevation**
1/8" = 1'-0"



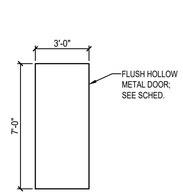
7 A100 **Typical Interior Curb/Fence Detail**
1 1/2" = 1'-0"

DOOR SCHEDULE

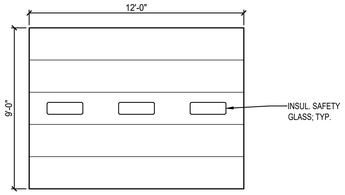
DOOR No.	MATERIAL/ FINISH	WIDTH	HEIGHT	THICKNESS	TYPE		REMARKS
					DOOR	FRAME/FINISH	
01	H.M. / PNT.	3'-0"	7'-0"	1 3/4"	D1	N.	GALV. FRAME; INSUL. DOOR
02	SLT. / MANUF.	12'-0"	9'-0"	2"	D2	INSUL.	PRE-FIN. METAL OVERHEAD DOOR (MANUAL OPERATED)

DOOR TYPES

1/4" = 1'-0"



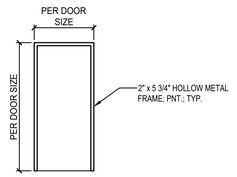
D1



D2

HOLLOW METAL DOOR FRAME TYPE

1/4" = 1'-0"



1

architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T. 309.685.4124 F. 309.685.4184

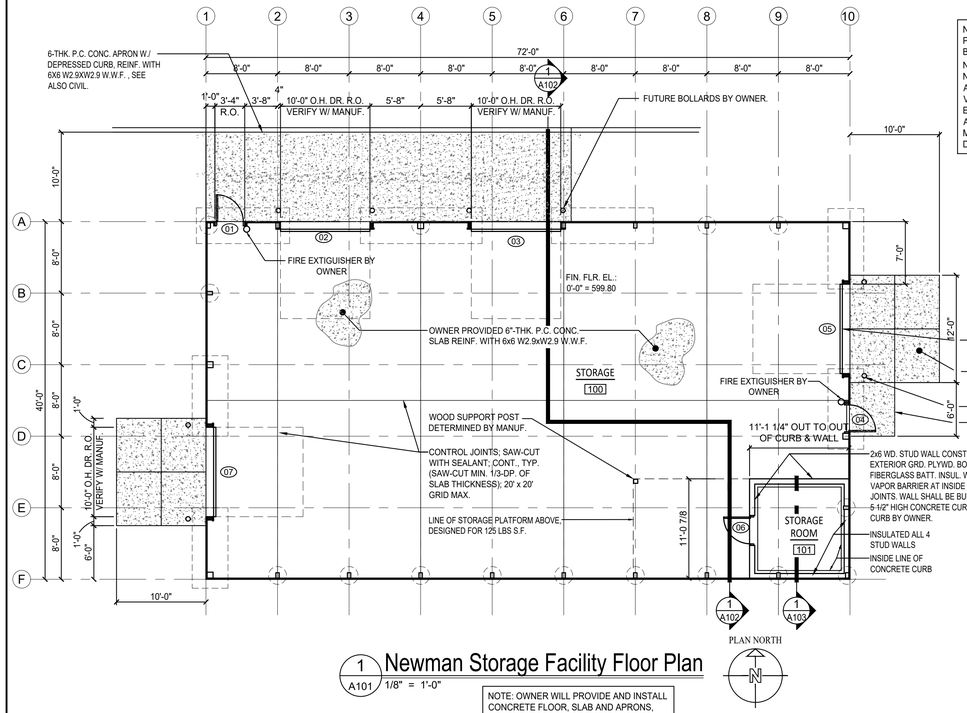
PLANS, ELEVATIONS & SCHEDULE - KELLOGG

Kellogg Golf Course Storage Facility
Peoria Park District
Peoria, IL

NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

DATE 03.11.19
PROJECT NO. 2015904.16
DRAWN BY DBV
CHECKED DBV
APPROVED SJM
SHEET A100
1 OF 5

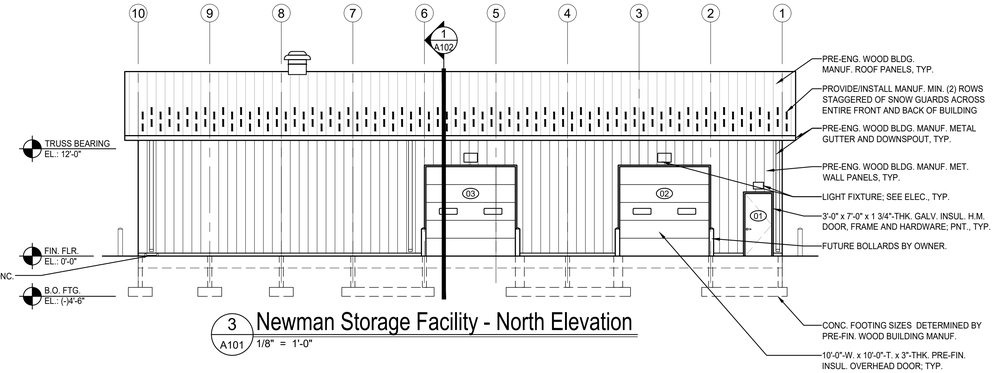
24x36 @ 1/8" = 1'-0"



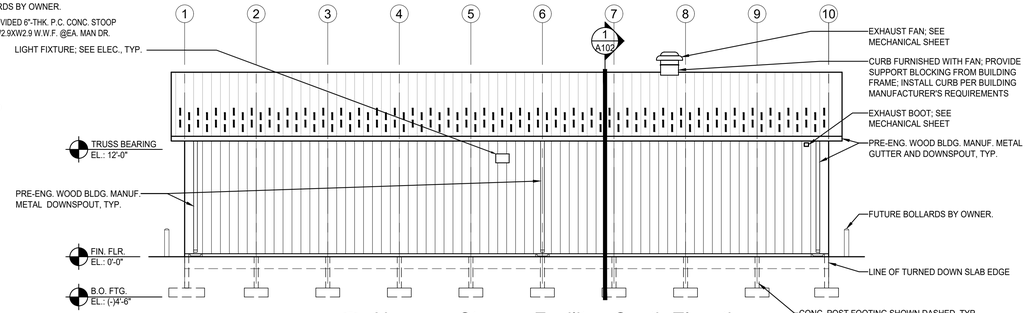
1 A101 Newman Storage Facility Floor Plan
1/8" = 1'-0"

NOTE: OWNER WILL PROVIDE AND INSTALL CONCRETE FLOOR, SLAB AND APRONS, INCLUDING SAW-CUT CONTROL JOINTS AND SEALANT. COORDINATE TIMING WITH OWNER'S REP.

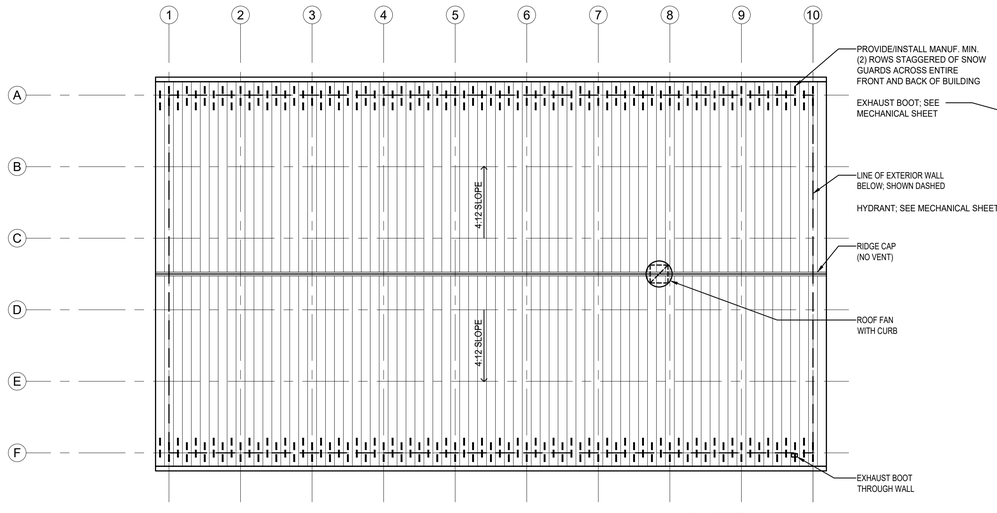
NOTE: GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ADDITIONAL WOOD BLOCKING CONTINUOUS OR NON-CONTINUOUS AND OR ¾" PLYWOOD NECESSARY FOR ATTACHMENT OF ACCESSORIES, PANELS, OUTLETS, VENTILATION, LIGHTING, POWER, DEVICES, ETC. AS NECESSARY FOR SECURE ATTACHMENT UNLESS ANOTHER SPECIFIC METHOD IS CALLED OUT WITHIN THESE DOCUMENTS OR PROJECT MANUAL.



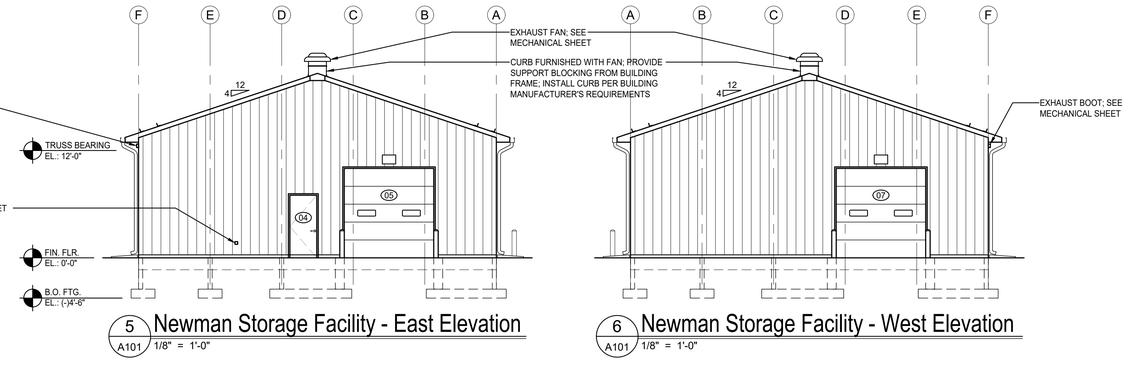
3 A101 Newman Storage Facility - North Elevation
1/8" = 1'-0"



4 A101 Newman Storage Facility - South Elevation
1/8" = 1'-0"



2 A101 Newman Storage Facility Roof Plan
1/8" = 1'-0"



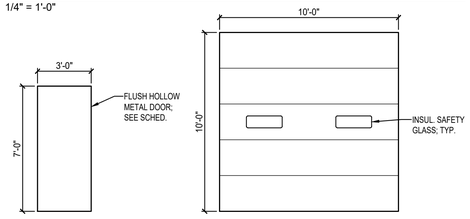
5 A101 Newman Storage Facility - East Elevation
1/8" = 1'-0"

6 A101 Newman Storage Facility - West Elevation
1/8" = 1'-0"

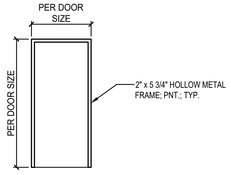
DOOR SCHEDULE

DOOR No.	MATERIAL/ FINISH	WIDTH	HEIGHT	THICKNESS	TYPE		REMARKS
					DOOR	FRAME/FINISH	
01	H.M. / PNT.	3'-0"	7'-0"	1 3/4"	D1	N.	GALV. FRAME; INSUL. DOOR
02	SLT. / MANUF.	10'-0"	10'-0"	2"	D2	INSUL.	PRE-FIN. METAL OVERHEAD DOOR (MANUAL OPERATED)
03	SLT. / MANUF.	10'-0"	10'-0"	2"	D2	INSUL.	PRE-FIN. METAL OVERHEAD DOOR (MANUAL OPERATED)
04	H.M. / PNT.	3'-0"	7'-0"	1 3/4"	D1	N.	GALV. FRAME; INSUL. DOOR
05	SLT. / MANUF.	10'-0"	10'-0"	2"	D2	INSUL.	PRE-FIN. METAL OVERHEAD DOOR (MANUAL OPERATED)
06	H.M. / PNT.	3'-0"	7'-0"	1 3/4"	D1	N.	GALV. FRAME; INSUL. DOOR
07	SLT. / MANUF.	10'-0"	10'-0"	2"	D2	INSUL.	PRE-FIN. METAL OVERHEAD DOOR (MANUAL OPERATED)

DOOR TYPES
1/4" = 1'-0"



HOLLOW METAL DOOR FRAME TYPE
1/4" = 1'-0"



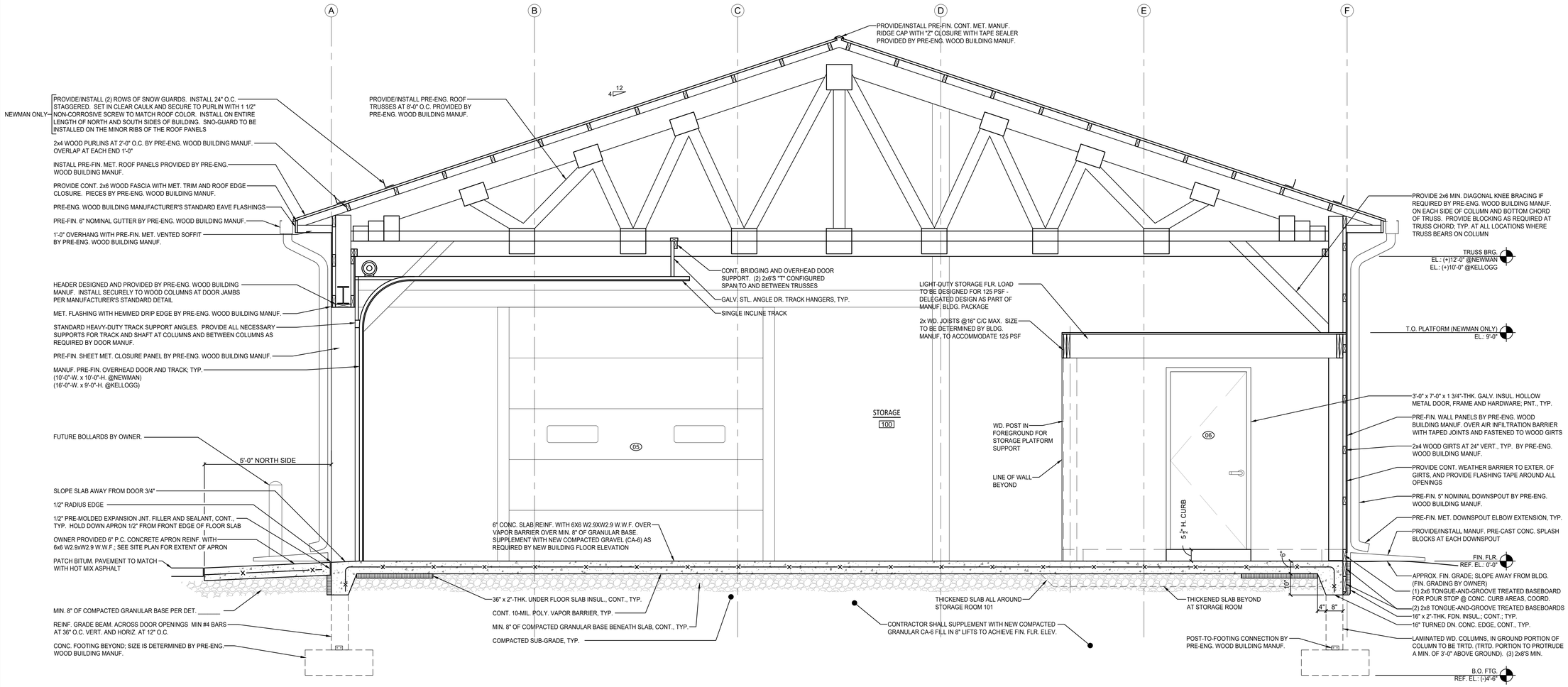
architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T: 309.685.4124 F: 309.685.4184

PLANS, ELEVATIONS & SCHEDULE - NEWMAN
Newman Golf Course Storage Facility
Peoria Park District
Peoria, IL

NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

DATE 03.11.19
DRAWN BY DBV
CHECKED DBV
APPROVED SJM
PROJECT NO. 2015904.17
SHEET A101
2 OF 5

plot @1/8" = 1'-0"



Newman Storage Section - Looking East
(Kellogg Sim., Except 10'-0" Truss Brng., No Platform & 10'-0" Apron)

1 / A102 — 1/2" = 1'-0"

architects
engineers
designers
apaceDesign
2112 East Wo Memorial Drive
Peoria, IL 61614
T: 309.685.4721 F: 309.685.4784

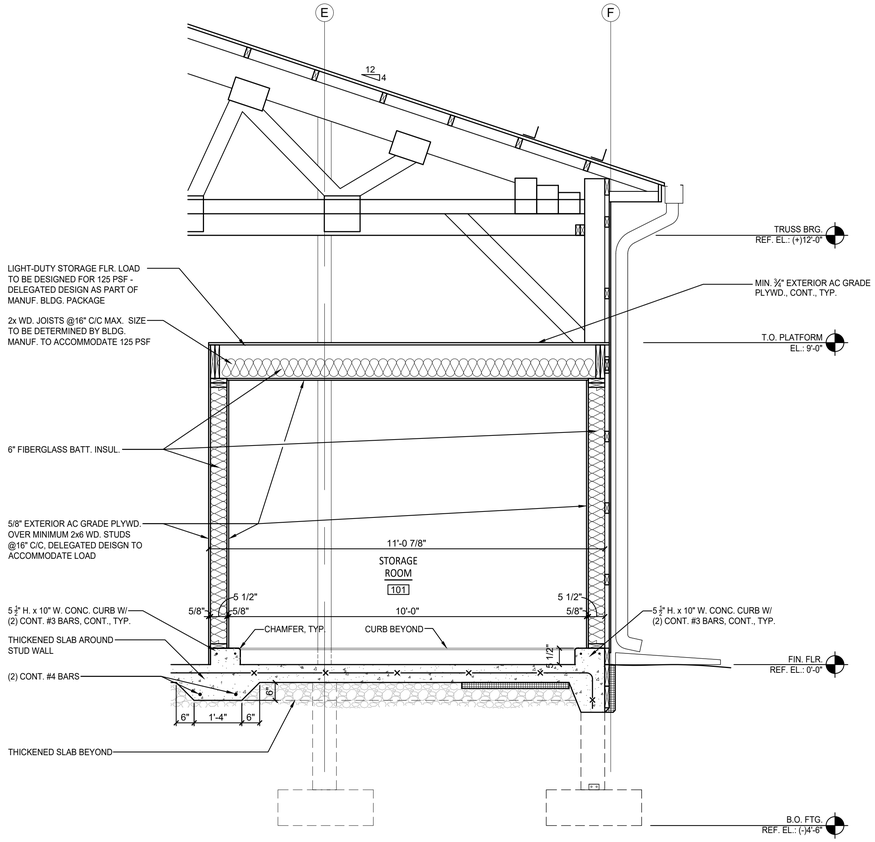
NEWMAN SECTION - LOOKING EAST - (KELLOGG SIM)

Newman Golf Course Storage Facility
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

DATE	03.11.19
PROJECT NO.	2015904.17
DRAWN BY	DBV
CHECKED	DBV
APPROVED	SJM
SHEET	A102
	3 OF 5

plot @1/2" = 1'-0"



1 A103 Newman Storage Partial Section - Looking East
1/2" = 1'-0"

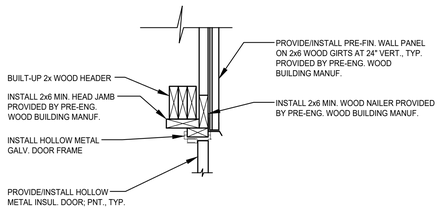
architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T. 309.685.4727 F. 309.685.4784

NEWMAN PARTIAL SECTION - LOOKING EAST

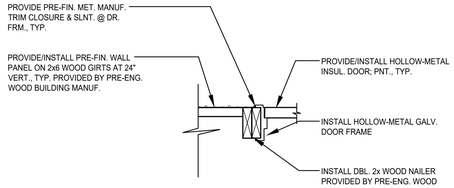
Newman Golf Course Storage Facility
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

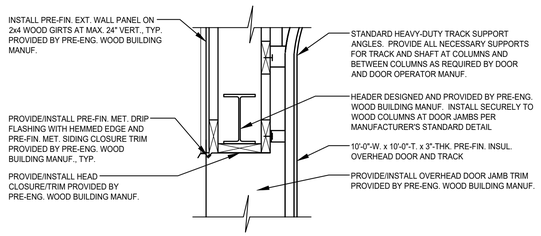
DATE 03.11.19	PROJECT NO. 2015904.17
DRAWN BY DBV	SHEET
CHECKED DBV	A103
APPROVED SJM	4 OF 5



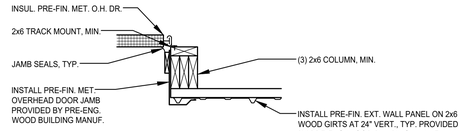
1 A104 **Typical Hollow Metal Man Door Head Detail**
1 1/2" = 1'-0"



2 A104 **Typical Hollow Metal Man Door Jamb Detail**
1 1/2" = 1'-0"

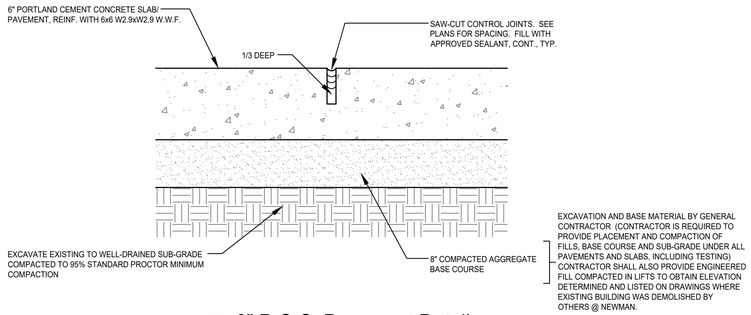


3 A104 **Typical Overhead Door Head Detail**
1 1/2" = 1'-0"



4 A104 **Typical Overhead Door Jamb Detail**
1 1/2" = 1'-0"

5 A104 **NOT USED**



6 A104 **6" P.C.C. Pavement Detail**
1/2" = 1'-0"

architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T. 309.685.4721 F. 309.685.4784

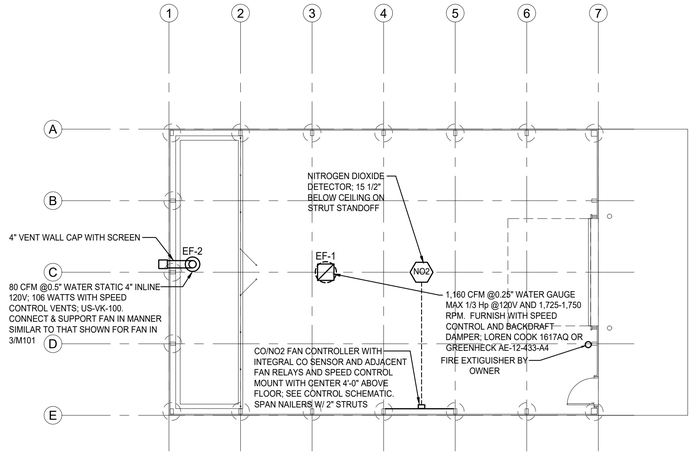
TYPICAL DETAILS - NEWMAN & KELLOGG

Newman Golf Course Storage Facility
Peoria Park District
Peoria, IL

NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

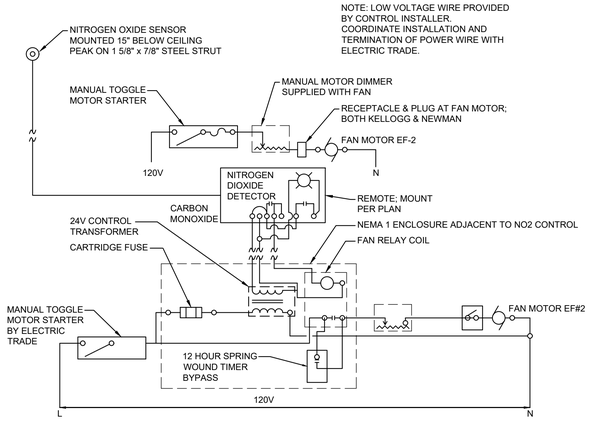
DATE 03.11.19
PROJECT NO. 2015904.16 2015904.17
DRAWN BY DBV
CHECKED DBV
APPROVED SJM
SHEET A104
5 OF 5

plot @1" = 1'-0"



1 M100 Kellogg Storage Facility Floor Plan

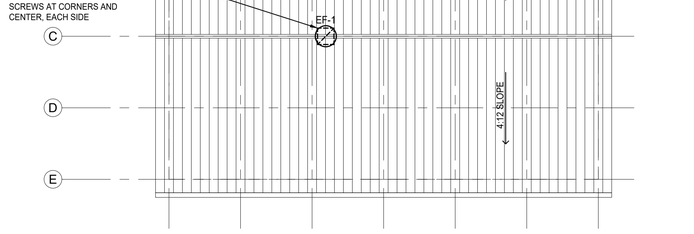
1/8" = 1'-0"



3 M100 Exhaust Fan Control Diagram

not to scale

TYPICAL OF BOTH BUILDINGS; SEE PLANS.



2 M100 Kellogg Storage Facility Roof Plan

1/8" = 1'-0"

architects
engineers
designers

apaceDesign

2112 East War Memorial Drive
Peoria, IL 61614
T. 309.685.4728 F. 309.685.4784

PLANS & DETAIL - KELLOGG

Kellogg Golf Course Storage Facility
Peoria Park District
Peoria, IL

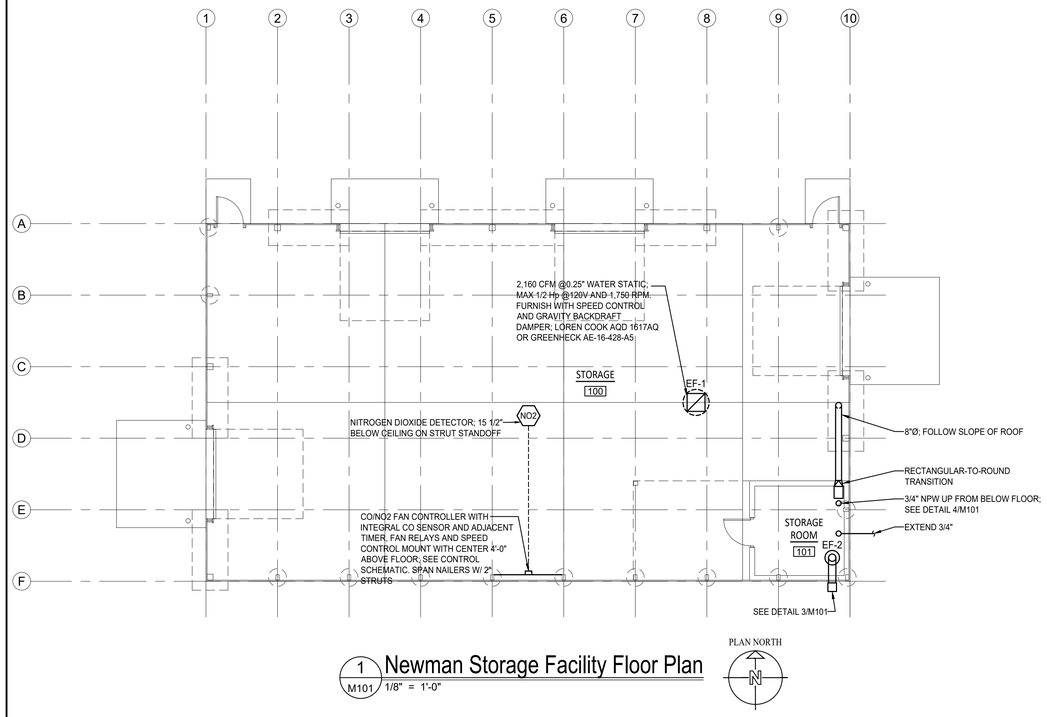
NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

MARK A. CORDES
062-039301
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

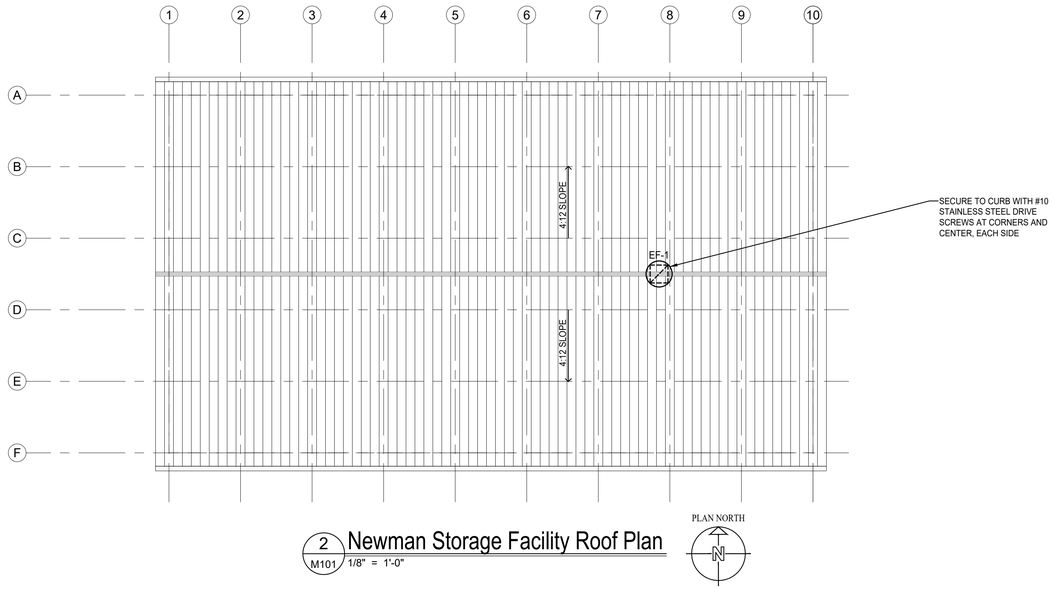
EXPIRES: 11.30.19

DATE 03.11.19	PROJECT NO. 2015904.16
DRAWN BY BAW	SHEET M100
CHECKED MAC	
APPROVED MAC	1 OF 2

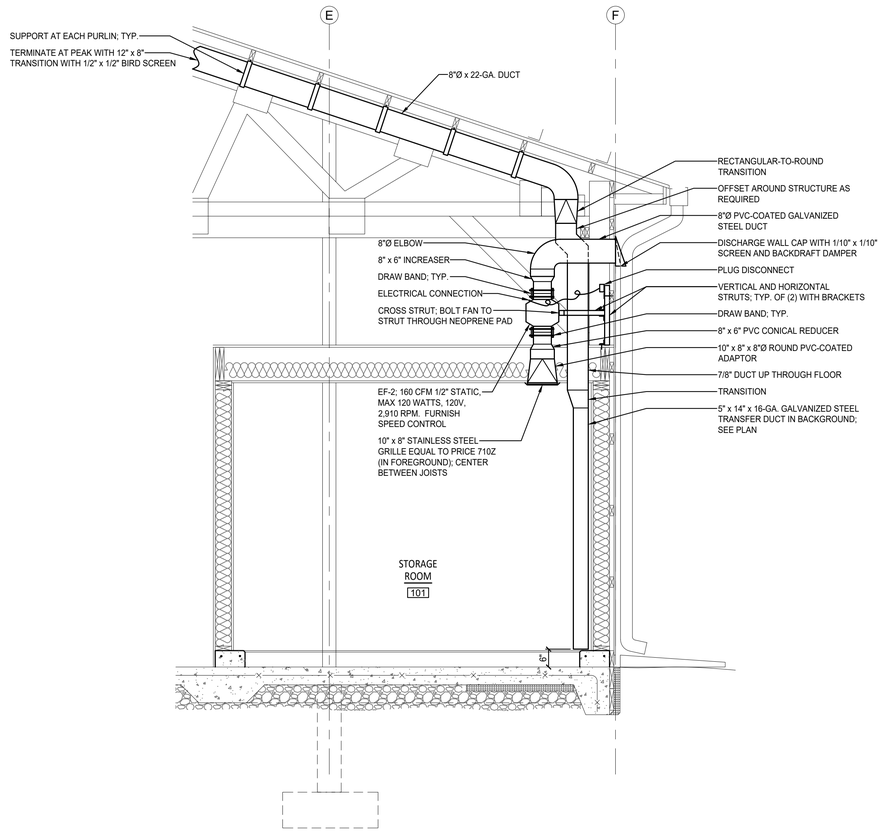
plot @1/8" = 1'-0"



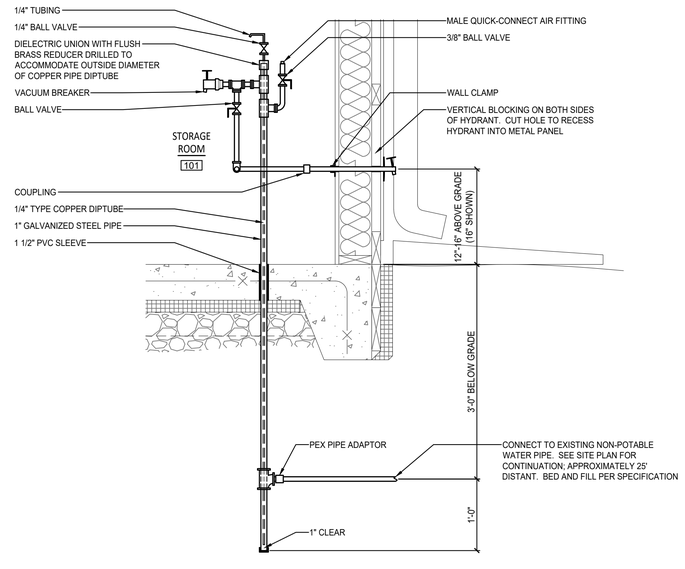
1 M101 **Newman Storage Facility Floor Plan**
1/8" = 1'-0"



2 M101 **Newman Storage Facility Roof Plan**
1/8" = 1'-0"



3 M101 **Newman Storage Partial Section - Looking East**
1/2" = 1'-0"



4 M101 **Non - Potable Water Service Detail**
1" = 1'-0"

DISCLAIMER
MARK A. CORDES ELECTRONIC DIGITAL SEAL AND SIGNATURE IS EFFECTIVE ONLY AS TO THAT VERSION OF THIS DOCUMENT AS ORIGINALLY PUBLISHED ON DATE INCLUDED. MARK A. CORDES IS NOT RESPONSIBLE FOR ANY SUBSEQUENT MODIFICATION, CORRUPTION, OR UNAUTHORIZED USE OF SUCH DOCUMENT. TO VERIFY THE VALIDITY OR APPLICABILITY OF THE SEAL OR SIGNATURE, CONTACT MARK A. CORDES.

architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T. 309.685.4724 F. 309.685.4784

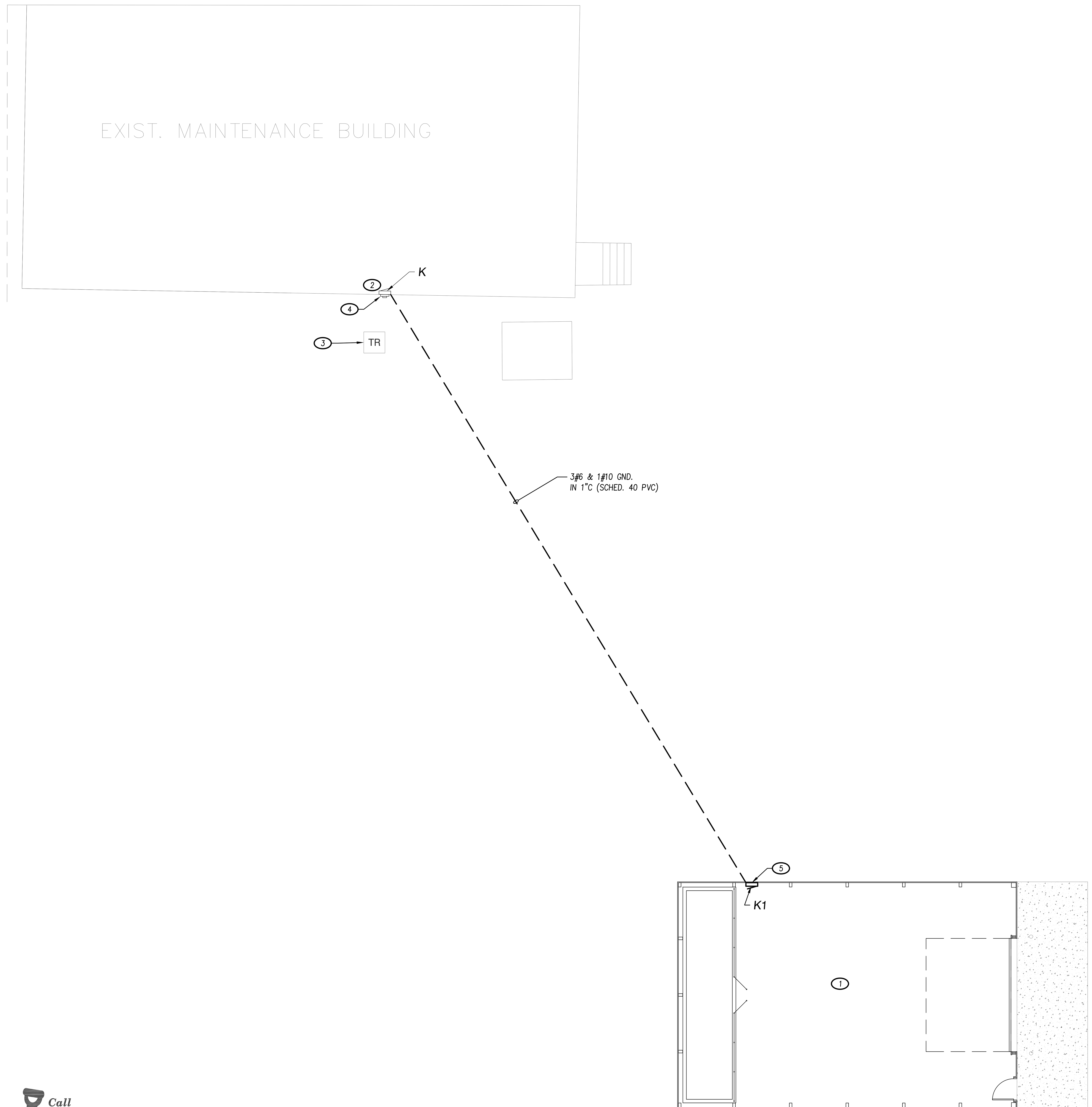
PLANS, SECTION & DETAIL - NEWMAN
Newman Golf Course Storage Facility
Peoria Park District
Peoria, IL

NO.	ISSUE	DATE
1	Bidding Documents	03.11.19

MARK A. CORDES
062-039301
LICENSED PROFESSIONAL ENGINEER
OF ILLINOIS
EXPIRES: 11.30.19

DATE 03.11.19	PROJECT NO. 2015904.17
DRAWN BY BAW	SHEET
CHECKED MAC	M101
APPROVED MAC	2 OF 2

24" @ 1/8" = 1'-0"



KEYED ELECTRICAL NOTES (THIS SHEET):

1. NEW UTILITY BUILDING; SEE ELECTRICAL PLAN 1/E100.
2. ADJUST EXISTING PANEL BREAKERS AS REQUIRED FOR ADDITION OF NEW 60A/2P BREAKER TO FEED NEW BUILDING. SEE PANEL SCHEDULES AND DIAGRAM ON SHEET E200 FOR ADDITIONAL INFORMATION.
3. EXISTING PAD MOUNTED UTILITY TRANSFORMER TO REMAIN.
4. EXISTING UTILITY METER CABINET TO REMAIN. DISCONNECT AND REPLACE EXISTING DAMAGED SERVICE CONDUCTOR PVC CONDUIT WITH NEW RGC CONDUIT TO BELOW GRADE BEFORE CONVERTING BACK TO PVC. COORDINATE WITH UTILITY COMPANY.
5. ROUTE FEEDER TO COME UP INTO BOTTOM OF NEW PANEL IN BUILDING SLAB. IF FEEDER RISE IS OUTSIDE OF BUILDING, PROVIDE RGC FROM BELOW GRADE, METAL LB FITTING, AND NIPPLE THROUGH BUILDING SIDING.

ELECTRICAL GENERAL NOTE

IN ALL CASES, UNLESS NOTED OTHERWISE, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".

AMEREN COORDINATION NOTE:

ANY FEES AND/OR CHARGES FROM AMEREN–ILLINOIS, RESULTING FROM PLANNED SERVICE CHANGES SHALL BE BILLED DIRECTLY TO THE OWNER. CONTRACTOR SHALL NOT INCLUDE AMEREN FEES/CHARGES IN THEIR BID.

Call Before You Dig
JULIE
Simply Call 811

1 KELLOGG STORAGE FACILITY SITE PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

NORTH

apaceDesign
architects
engineers
designers
2112 East War Memorial Drive
Peoria Illinois 61614
T: 309.685.4722 F: 309.685.4784

KEITH Engineering Design
www.kedmep.com
707 NE Jefferson Ave
Peoria, IL : 61603
309 / 938-4005 : office
309 / 214-0063 : fax

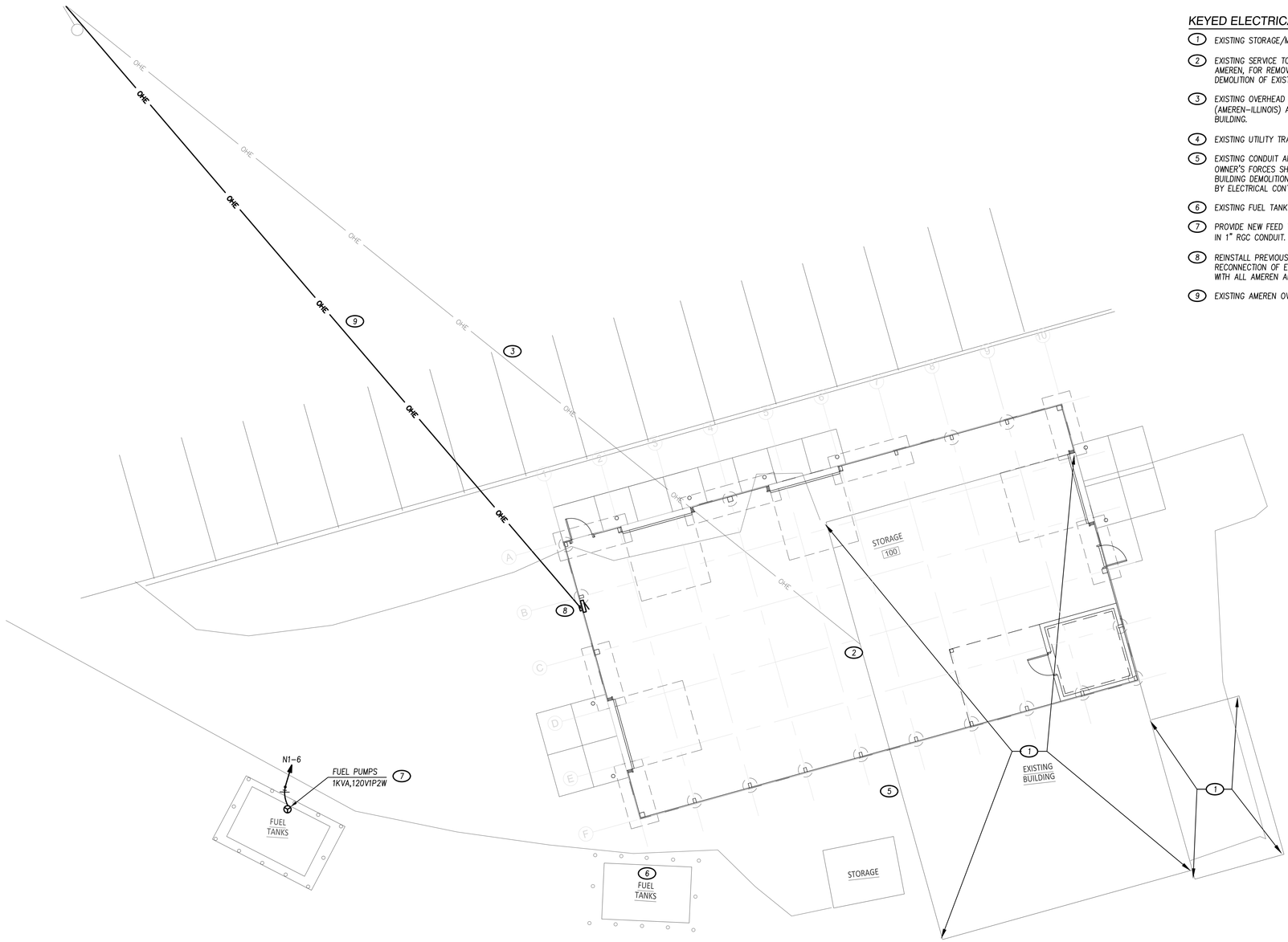
KELLOGG STORAGE FACILITY SITE PLAN - ELECTRICAL

Kellogg Golf Course Storage Facility
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

DATE: 3/11/2019

DATE 3.11.19	PROJECT NO. 2015904.16
DRAWN BY JWH	SHEET
CHECKED TDC	E001
APPROVED BRK	1 OF 8



KEYED ELECTRICAL NOTES (THIS SHEET):

1. EXISTING STORAGE/MAINTENANCE BUILDING TO BE DEMOLISHED BY OWNER AND OWNER'S FORCES.
2. EXISTING SERVICE TO BE DISCONNECTED AND REMOVED BY OWNER'S FORCES. COORDINATION WITH AMEREN, FOR REMOVAL OF EXISTING METER CABINET AND MAST, SHALL BE COMPLETED PRIOR TO DEMOLITION OF EXISTING BUILDING, BY OWNER.
3. EXISTING OVERHEAD SERVICE DROP CONDUCTORS SHALL BE DISCONNECTED BY POWER UTILITY (AMEREN–ILLINOIS) AS COORDINATED BY OWNER AND OWNER'S FORCES FOR RECONNECTION TO NEW BUILDING.
4. EXISTING UTILITY TRANSFORMER/LIGHT POLE TO REMAIN.
5. EXISTING CONDUIT AND CONDUCTORS ROUTED FROM EXISTING BUILDING TO FUEL PUMPS; OWNER AND OWNER'S FORCES SHALL DISCONNECT AND REMOVE FROM EXISTING BUILDING, AS REQUIRED FOR BUILDING DEMOLITION. CONDUCTORS SHALL BE COMPLETELY REMOVED FOR REPLACEMENT WITH NEW BY ELECTRICAL CONTRACTOR DURING RE–FEED FROM NEW BUILDING PANEL.
6. EXISTING FUEL TANKS, PUMPS, AND ASSOCIATED EQUIPMENT TO BE RELOCATED BY OWNER.
7. PROVIDE NEW FEED TO EXISTING FUEL PUMPS FROM NEW BUILDING. ROUTE 4#12 AND 1#12 GROUND IN 1" RGC CONDUIT. PROVIDE SEAL FITTING ON OUTSIDE OF BUILDING BEFORE PENETRATING SIDING.
8. REINSTALL PREVIOUSLY REMOVED METER CABINET (FURNISHED BY OWNER) AND COORDINATE RECONNECTION OF EXISTING SERVICE DROP TO NEW SERVICE MAST. INSTALLATION SHALL COMPLY WITH ALL AMEREN AND NEC REQUIREMENTS.
9. EXISTING AMEREN OVERHEAD SERVICE DROP, RECONNECTED. COORDINATE WITH UTILITY.

1 SITE ELECTRICAL PLAN

SCALE: 1/8" = 1'–0"

NORTH

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
Simply Call 811

AMEREN COORDINATION NOTE:

ANY FEES AND/OR CHARGES FROM AMEREN–ILLINOIS, RESULTING FROM PLANNED SERVICE CHANGES SHALL BE BILLED DIRECTLY TO THE OWNER. CONTRACTOR SHALL NOT INCLUDE AMEREN FEES/CHARGES IN THEIR BID.

AMEREN COORDINATION NOTE:

COORDINATE ANY/ALL SERVICE MODIFICATION WORK WITH AMEREN–ILLINOIS. SCHEDULE TO MINIMIZE SERVICE INTERRUPTIONS, BOTH IN QUANTITY AND DURATION. COORDINATE AMEREN WORK WITH TIM GARDNER (309) 693–4836.

ELECTRICAL GENERAL NOTE

IN ALL CASES, UNLESS NOTED OTHERWISE, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".

apaceDesign
architects engineers designers
2107 East War Memorial Drive
Peoria, Illinois 61614
T: 309.685.4722 F: 309.685.4784
www.keithmep.com
KEITH Engineering Design
707 NE Jefferson Ave
Peoria, IL : 61603
309 / 938-4005 : office
309 / 214-10063 : fax

NEWMAN STORAGE FACILITY SITE PLAN - ELECTRICAL

Newman Golf Course Storage Facility

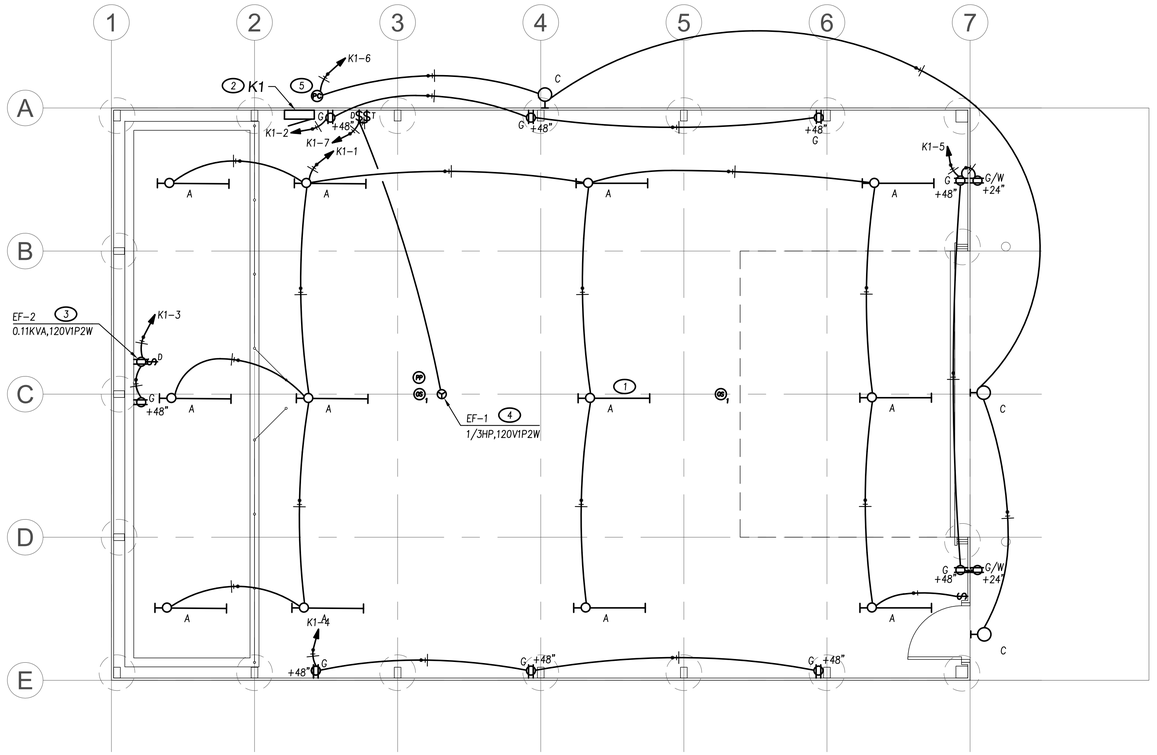
Peoria Park District

Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

DATE: 3/11/2019

DATE	PROJECT NO.
3.11.2019	2015904.17
DRAWN BY: JWH	SHEET
CHECKED: TDC	E002
APPROVED: BRK	2 OF 8



1 KELLOGG STORAGE FACILITY FLOOR PLAN - ELECTRICAL

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

NORTH

KEYED ELECTRICAL NOTES (THIS SHEET):

1. SUPPORT FIXTURE FROM 2X4 SPANNING ACROSS TOP OF BOTTOM TRUSS CHORD. BOTTOM OF FIXTURE SHALL NOT BE BELOW BOTTOM EDGE OF TRUSS. (TYPICAL)
2. SEE SITE ELECTRICAL PLAN, PANEL SCHEDULES, AND ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE RECEPTACLE FOR FAN PLUG-IN. INSTALL SPEED CONTROL/DIMMER SWITCH FURNISHED WITH FAN AHEAD OF RECEPTACLE. COORDINATE RECEPTACLE MOUNTING HEIGHT WITH MECHANICAL TRADE. INSTALL SPEED CONTROL SWITCH AT 48" AFF.
4. INSTALL FAN DISCONNECT SWITCH, FURNISHED WITH FAN, UNDER FAN HOOD. INSTALL SPEED CONTROL/DIMMER SWITCH AND TIME SWITCH, FURNISHED WITH FAN ON WALL ADJACENT TO CO/NO2 SENSORS. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

ELECTRICAL GENERAL NOTE

IN ALL CASES, UNLESS NOTED OTHERWISE, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".

NOTE:

WHERE DEVICES ARE NOT LOCATED AT COLUMNS OR OTHER FRAMING, PROVIDE 2x4 WOOD BLOCKING AS REQUIRED FOR SECURE MOUNTING.

architects
engineers
designers

apaceDesign
2112 East War Memorial Drive
Peoria, IL 61614
T: 309.685.4721 F: 309.685.4784

KEITH Engineering Design
www.kedmep.com
707 NE Jefferson Ave
Peoria, IL 61603
309 / 938-4005 : office
309 / 214-0063 : fax

KELLOGG STORAGE FACILITY FLOOR PLAN - ELECTRICAL

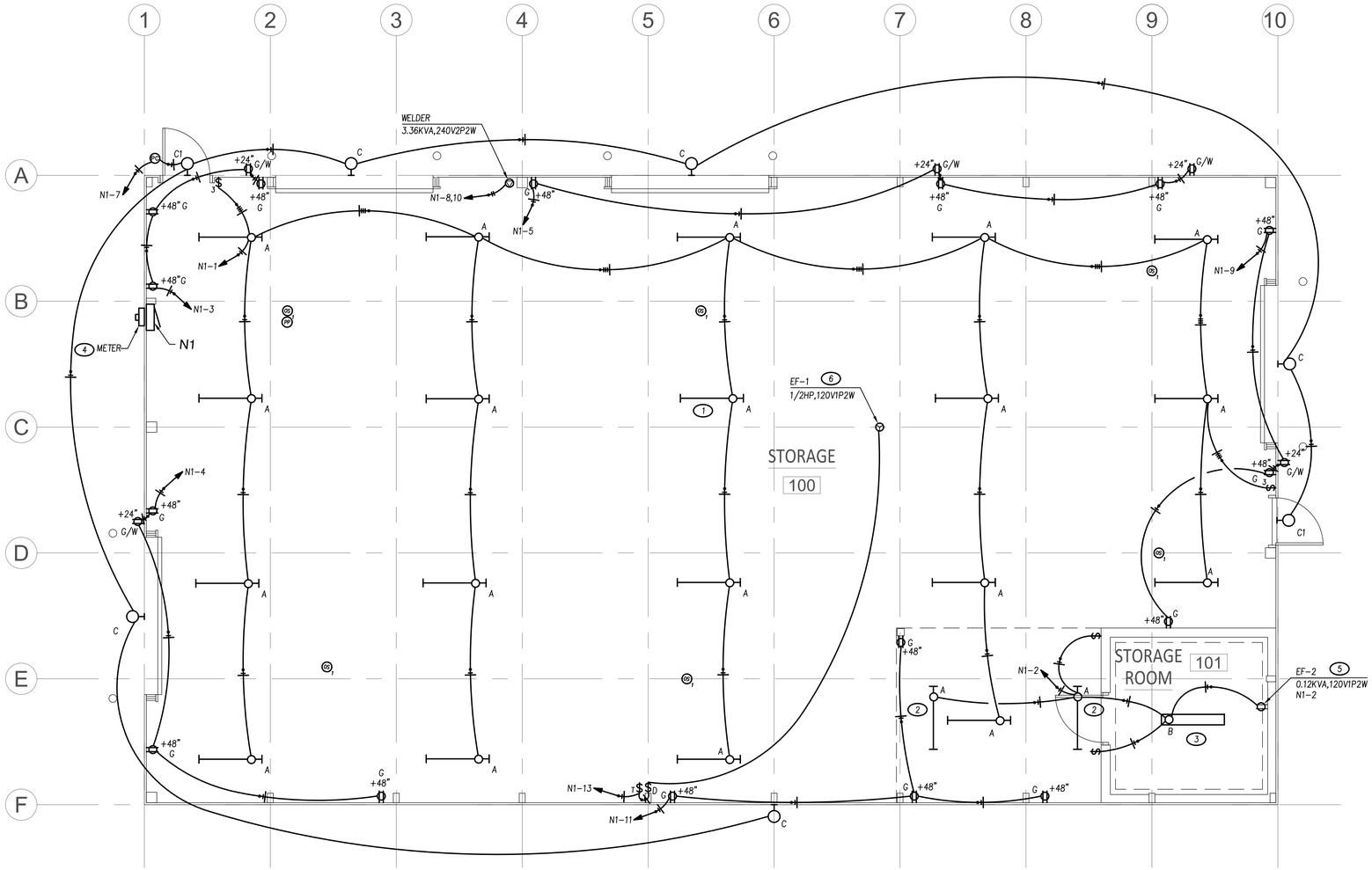
Kellogg & Newman Golf Course Storage Facilities
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

LICENSED PROFESSIONAL ENGINEER
BRIAN R. KITTLE
062-050306
EXPIRES: 30NOV19
STATE OF ILLINOIS

DATE: 3/11/2019

DATE 3.11.19	PROJECT NO. 2015904.16/17
DRAWN BY JWH	SHEET
CHECKED TDC	E100
APPROVED BRK	3 OF 8



KEYED ELECTRICAL NOTES (THIS SHEET):

1. SUPPORT FIXTURE FROM 2X4 SPANNING ACROSS TOP OF BOTTOM TRUSS CHORD. BOTTOM OF FIXTURE SHALL NOT BE BELOW BOTTOM EDGE OF TRUSS. (TYPICAL)
2. MOUNT BETWEEN STORAGE MEZZANINE JOISTS SO THAT BOTTOM EDGE OF FIXTURE IS EVEN WITH BOTTOM EDGE OF JOISTS
3. PROVIDE CONDUIT SEALING FITTINGS TO PREVENT VAPOR TRANSFER THROUGH CONDUIT TO SWITCH.
4. REINSTALL METER CABINET PREVIOUSLY REMOVED BY OWNER. PROVIDE NEW 2" RIGID CONDUIT MAST AND WEATHERHEAD FOR AMEREN RECONNECTION OF PREVIOUSLY REMOVED SERVICE DROP. COORDINATE WITH AMEREN. SEE ELECTRICAL SITE PLAN ON SHEET E002.
5. PROVIDE RECEPTACLE FOR EF-2 PLUG-IN ABOVE STORAGE ROOM. INSTALL SPEED CONTROL/DIMMER SWITCH FURNISHED WITH FAN AHEAD OF RECEPTACLE. COORDINATE RECEPTACLE HEIGHT ABOVE STORAGE ROOM WITH MECHANICAL TRADE. SPEED CONTROL SWITCH SHALL BE MOUNTED AT 48" AFF. REFERENCE MECHANICAL DETAILS FOR ADDITIONAL INFORMATION.
6. INSTALL FAN DISCONNECT SWITCH, FURNISHED WITH FAN, UNDER FAN HOOD. INSTALL SPEED CONTROL/DIMMER SWITCH AND TIME SWITCH, FURNISHED WITH FAN, ON WALL ADJACENT TO CO/NO2 SENSORS. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

1 NEWMAN STORAGE FACILITY FLOOR PLAN - ELECTRICAL
SCALE: 1/4" = 1'-0"

NORTH

ELECTRICAL GENERAL NOTE

IN ALL CASES, UNLESS NOTED OTHERWISE, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".

NOTE:
WHERE DEVICES ARE NOT LOCATED AT COLUMNS OR OTHER FRAMING, PROVIDE 2x4 WOOD BLOCKING AS REQUIRED FOR SECURE MOUNTING.

architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, Illinois 61614
T: 309.685.4122 F: 309.685.4784

KEITH
Engineering
Design
www.keitmep.com
707 NE Jefferson Ave
Peoria, IL : 61603
309 / 938-4005 : office
309 / 214-1063 : fax

NEWMAN STORAGE FACILITY FLOOR PLAN - ELECTRICAL

Newman Golf Course Storage Facility

Peoria Park District

Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

BRIAN R. KEITH
062-050306
EXPIRES: 11/30/19
STATE OF ILLINOIS
LICENSED PROFESSIONAL ENGINEER

DATE: 3/11/2019

DATE: 3.11.2019	PROJECT NO.: 2015904.17
DRAWN BY: JWH	SHEET
CHECKED: TDC	E101
APPROVED: BRK	4 OF 8

PANEL: (E) K | ROOM: | MOUNTING: SURFACE | FED FROM: UTILITY | NOTE: | VOLTS: 240/120V 2P 3W | BUS AMPS: 225 | NEUTRAL: 100% | AIC: 10,000 | MAIN: 225 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.5	EXISTING LOAD	a	2	20/1	0.5	EXISTING LOAD
3	20/1	0.5	EXISTING LOAD	b	4	20/1	0.5	EXISTING LOAD
5	20/1	0.5	EXISTING LOAD	a	6	20/1	0.5	EXISTING LOAD
7	20/1	0.5	EXISTING LOAD	b	8	20/1	0.5	EXISTING LOAD
9	60/2	1	EXISTING LOAD	a	10	20/1	0.5	EXISTING LOAD
11	|			b	12	20/1	0.5	EXISTING LOAD
ML 13	30/2	1	EXISTING LOAD	a	14	20/1	0.5	EXISTING LOAD
15	|			b	16	20/1	0.5	EXISTING LOAD
17	20/1	0.5	EXISTING LOAD	a	18	20/1	0.5	EXISTING LOAD
19	20/1	0.5	EXISTING LOAD	b	20	20/1	0.5	EXISTING LOAD
21	20/1	0.5	EXISTING LOAD	a	22	20/1	0.5	EXISTING LOAD
23	20/1	0.5	EXISTING LOAD	b	24	20/1	0.5	EXISTING LOAD
25	20/1	0.5	EXISTING LOAD	a	26	20/1	0	EXISTING LOAD
27	30/2	1	WATER HEATER	b	28	20/1	0	GAS PUMPS
29	|			a	30	20/1	0	SPARE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0	0	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	13.5	11.8	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
				NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	13.5	11.8	

BALANCED PHASE AMPS 49

PHASE BALANCE PERCENT: PHASE A 104% PHASE B 96.3%

ML = MODIFIED LOAD. REMOVE EXISTING 2-POLE, 30-AMPERE BREAKER. SEE REVISED PANEL SCHEDULE FOR ADDITIONAL INFORMATION.

EXISTING PANEL TO REMAIN

PANEL: K | ROOM: EXISTING KELLOGG | MOUNTING: SURFACE | FED FROM: UTILITY | NOTE: | VOLTS: 240/120V 2P 3W | BUS AMPS: 225 | NEUTRAL: 100% | AIC: 10,000 | MAIN: 225 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.5	EXISTING LOAD	a	2	20/1	0.5	EXISTING LOAD
3	20/1	0.5	EXISTING LOAD	a	4	20/1	0.5	EXISTING LOAD
5	20/1	0.5	EXISTING LOAD	a	6	20/1	0.5	EXISTING LOAD
7	20/1	0.5	EXISTING LOAD	b	8	20/1	0.5	EXISTING LOAD
9	60/2	1	EXISTING LOAD	a	10	20/1	0.5	EXISTING LOAD
11	|			b	12	20/1	0.5	EXISTING LOAD
NB 13	60/2	4.63	PANEL K1	a	14	20/1	0.5	EXISTING LOAD
15	|			b	16	20/1	0.5	EXISTING LOAD
17	20/1	0.5	EXISTING LOAD	a	18	20/1	0.5	EXISTING LOAD
19	20/1	0.5	EXISTING LOAD	b	20	20/1	0.5	EXISTING LOAD
21	20/1	0.5	EXISTING LOAD	a	22	20/1	0.5	EXISTING LOAD
23	20/1	0.5	EXISTING LOAD	b	24	20/1	0.5	EXISTING LOAD
25	20/1	0.5	EXISTING LOAD	a	26	20/1	0	EXISTING LOAD
27	30/2	1	WATER HEATER	b	28	20/1	0	GAS PUMPS
29	|			a	30	20/1	0	SPARE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0.96	1.2	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0.864	1.08	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0.106	0.106	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	15.2	12.6	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
				NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	17.1	15	

BALANCED PHASE AMPS 62.4

PHASE BALANCE PERCENT: PHASE A 102% PHASE B 98.2%

NB = FURNISH AND INSTALL A NEW CIRCUIT BREAKER, SIZE AND TYPE TO MATCH EXISTING BRANCH CIRCUIT BREAKERS. REARRANGE EXISTING CIRCUIT BREAKERS AS NECESSARY TO ACCOMMODATE NEW CIRCUIT BREAKER.

NEW BRANCH PANEL

PANEL: K1 | ROOM: NEW KELLOGG BLDG. | MOUNTING: SURFACE | FED FROM: (E) K | NOTE: | VOLTS: 240/120V 2P 3W | BUS AMPS: 100 | NEUTRAL: 100% | AIC: 10,000 | MAIN: 60 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.768	LIGHTING	a	2	20/1	0.54	RECEPTACLE
3	20/1	1.01	EF-2, RECEPTACLE	b	4	20/1	0.54	RECEPTACLE
5	20/1	0.72	RECEPTACLE	a	6	20/1	0.192	LIGHTING
7	20/1	0.864	EF-1	b	8	20/1	0	SPARE
9	20/1	0	SPARE	a	10	20/1	0	SPARE
11	20/1	0	SPARE	b	12	20/1	0	SPARE
13	20/1	0	SPARE	a	14	20/1	0	SPARE
15	20/1	0	SPARE	b	16	20/1	0	SPARE
17	20/1	0	SPARE	a	18	20/1	0	SPARE
19	20/1	0	SPARE	b	20	20/1	0	SPARE

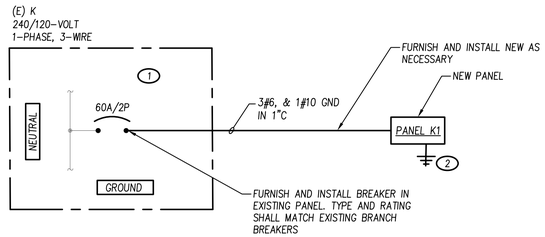
	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0.96	1.2	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0.864	1.08	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0.106	0.106	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	2.7	2.7	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
				NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	4.63	5.09	

BALANCED PHASE AMPS 21.2

PHASE BALANCE PERCENT: PHASE A 95.9% PHASE B 104%

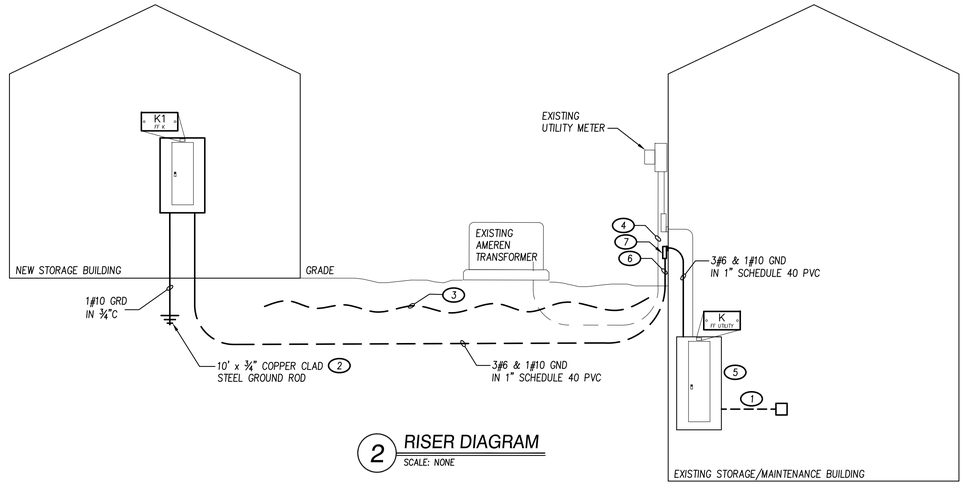
KEYED ELECTRICAL NOTES (THIS SHEET):

1. DISCONNECT WELDING RECEPTACLE, REMOVE ASSOCIATED CONDUCTORS AND 30A/2P BREAKER IN EXISTING PANEL. REPLACE BREAKER WITH NEW 60A/2P FOR FEED TO NEW BUILDING.
2. PROVIDE GROUNDING ELECTRODE AT NEW BUILDING IN COMPLIANCE WITH NFPA 70-250.32.
3. PROVIDE WARNING RIBBON ABOVE FEEDER TO NEW BUILDING DURING TRENCH BACKFILL.
4. CONTRACTOR SHALL REMOVE AND REPLACE DAMAGED PVC CONDUIT FOR POWER SERVICE CONDUCTORS. REPLACE ABOVE GRADE SECTION WITH RGC.
5. EXISTING PANEL 'K' TO REMAIN; PROVIDE NEW PANEL CIRCUIT DIRECTORY AND NAME TAG. CONTRACTOR SHALL VERIFY EXISTING CIRCUITS. DIRECTORY AND TAG SHALL COMPLY WITH NFPA 70-408.4.
6. CONVERT 1" PVC TO 1" RGC BEFORE COMING ABOVE GRADE.
7. FEEDER FOR NEW PANEL 'K1' SHALL RISE ABOVE GRADE BEFORE PENETRATING EXTERIOR OF EXISTING BUILDING TO PREVENT WATER PATH TO EXISTING PANEL. PROVIDE EXTERIOR LB FITTING AT PENETRATION. SEAL OPENING COMPLETELY WITH UV RESISTANT, WEATHERPROOF SILICONE CAULKING.



1 PARTIAL ONE-LINE DIAGRAM
SCALE: NONE

NOTES:
1. REARRANGE EXISTING BRANCH CIRCUIT BREAKERS AS NECESSARY TO ACCOMMODATE NEW CIRCUIT BREAKER.



2 RISER DIAGRAM
SCALE: NONE

architects
engineers
designers
apaceDesign
2112 East War Memorial Drive
Peoria, Illinois 61615
T: 309.685.4784 F: 309.685.4784

KEITH
Engineering
Design
www.keithmep.com
707 NE Jefferson Ave
Peoria, IL 61603
309 / 338-4005 : office
309 / 214-0063 : fax

KELLOGG ELECTRICAL PANEL SCHEDULES & SERVICE DIAGRAMS

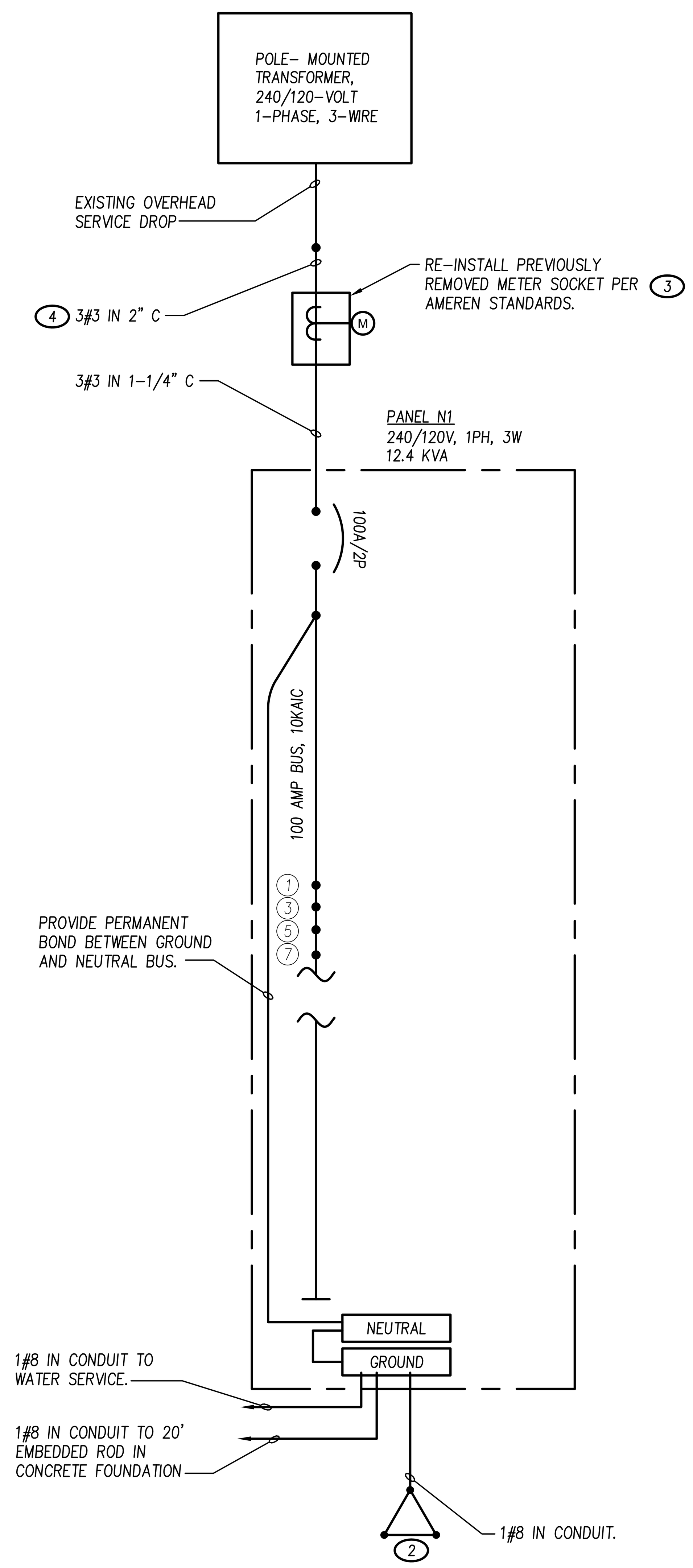
Kellogg Golf Course Storage Facility
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

LICENSED PROFESSIONAL ENGINEER
BRIAN R. KEITH
062-050306
EXPIRES: NOV. 30, 2020
STATE OF ILLINOIS

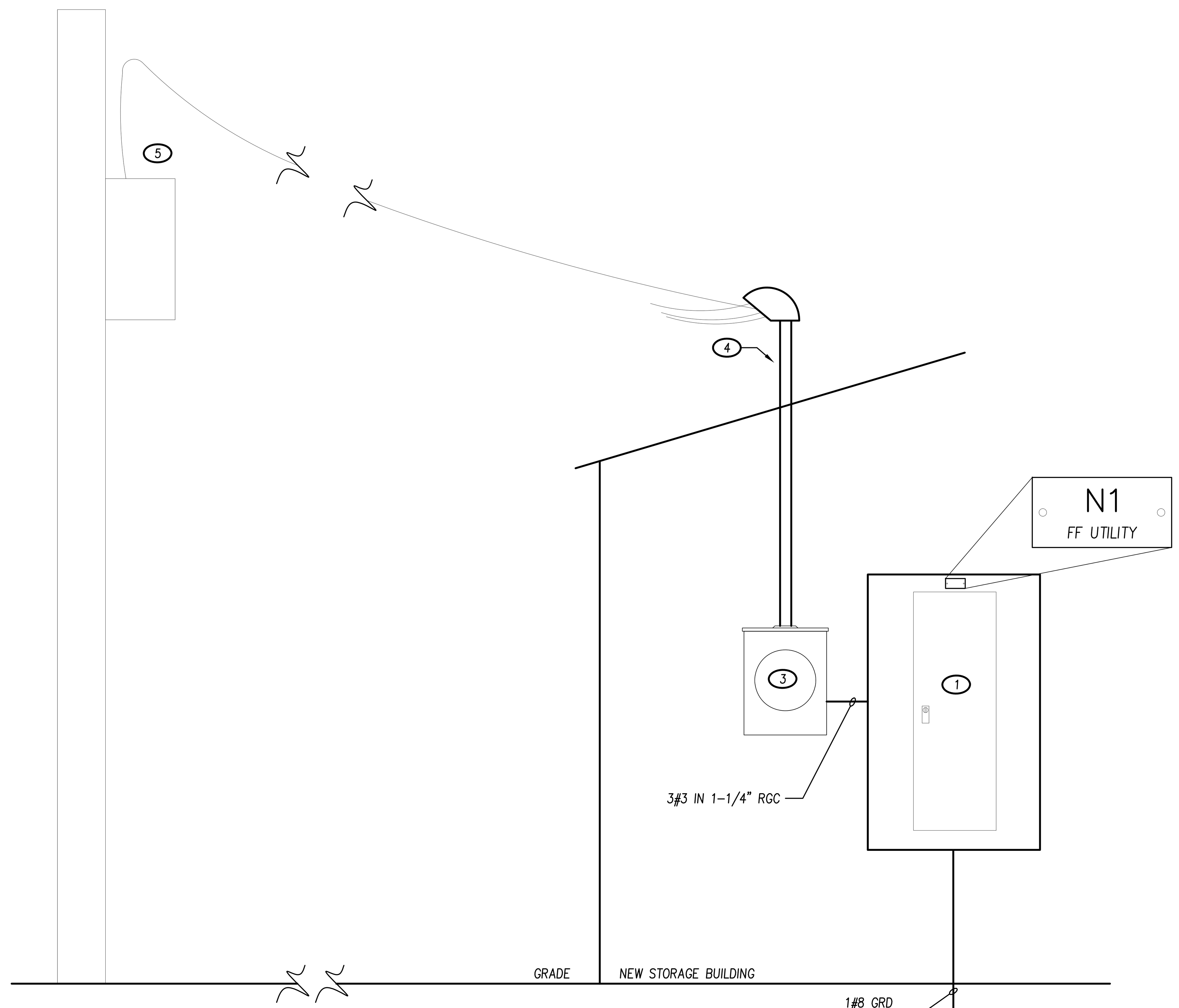
DATE: 3/11/2019

DATE 3.11.19	PROJECT NO. 2015904.16
DRAWN BY JWH	SHEET
CHECKED TDC	E200
APPROVED BRK	5 OF 8

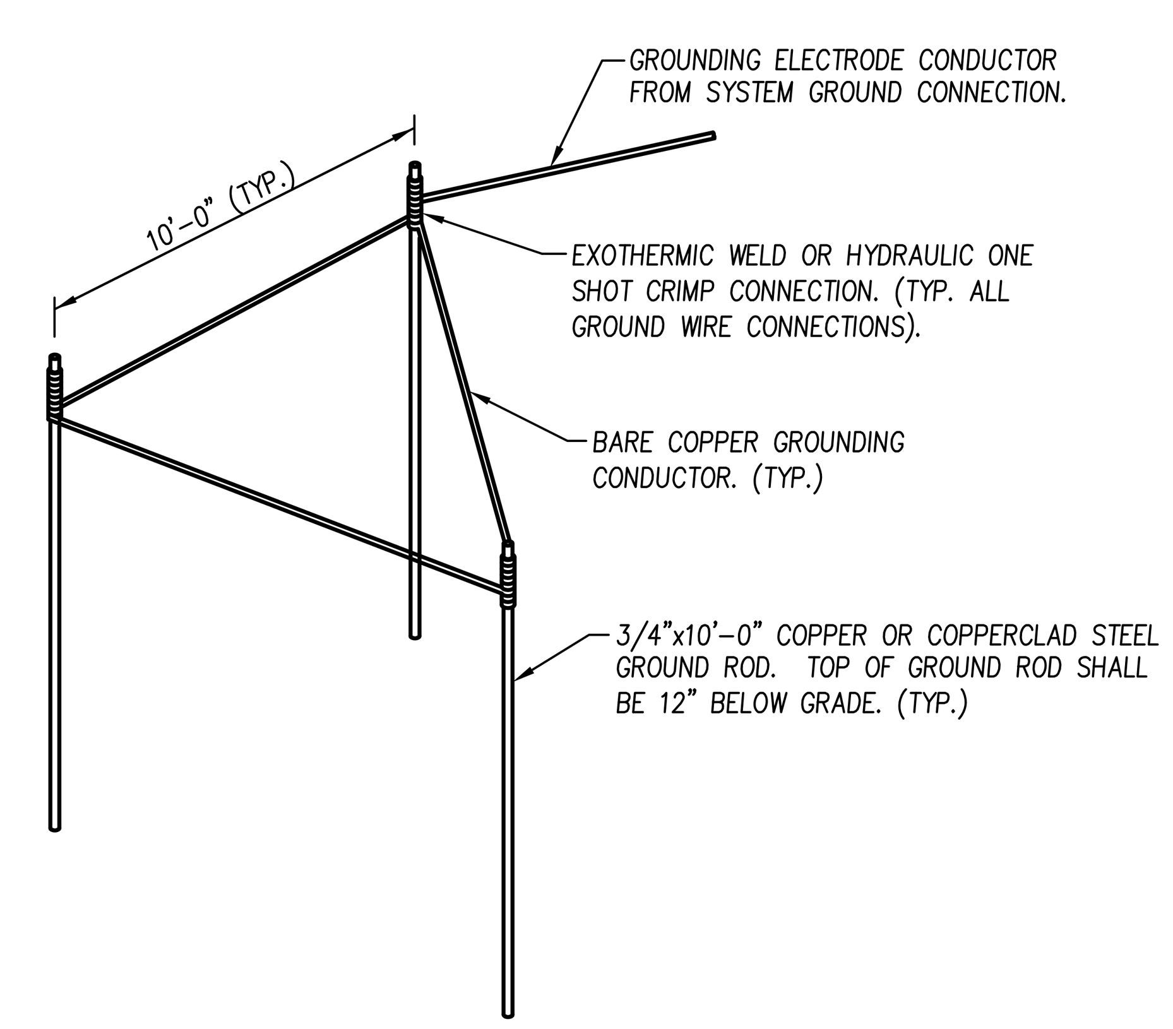


1 ONE-LINE DIAGRAM
SCALE: NONE

NOTE:
REFERENCE PANEL SCHEDULES FOR ADDITIONAL INFORMATION.



2 DISTRIBUTION RISER DIAGRAM
SCALE: NONE



3 GROUND GRID DETAIL
SCALE: NONE

ONE-LINE & DISTRIBUTION DIAGRAMS - KEYED NOTES

1. FURNISH AND INSTALL NEW 100 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANEL.
2. SEE DETAIL 3 THIS SHEET FOR GROUND GRID DETAIL.
3. REINSTALL PREVIOUSLY REMOVED METER CABINET, FURNISHED BY OWNER. COORDINATE WITH AMEREN-ILLINOIS FOR REQUIREMENTS
4. SERVICE CONDUCTOR RISER CONDUIT AT BUILDING SHALL COMPLY WITH AMEREN-ILLINOIS OVERHEAD SERVICE STANDARDS. RISER CONDUIT AND WEATHERHEAD SHALL BE SIZED PER AMEREN SERVICE MANUAL INFORMATION. REFERENCE SERVICE MANUAL FOR REQUIRED CLEARANCES. FINAL TERMINATIONS AT WEATHERHEAD ARE BY AMEREN.
5. COORDINATE RECONNECTION OF EXISTING SERVICE DROP CONDUCTORS, ROUTED FROM EXISTING POLE MOUNTED TRANSFORMER.

NEW PANEL

PANEL: N1
ROOM: STOR. BLDG — VOLTS: 240/120V 2P 3W — AIC: 10,000
MOUNTING: SURFACE — BUS AMPS: 100 — MAIN: 100
FED FROM: UTILITY — NEUTRAL: 100% — LUGS: STANDARD
NOTE:

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.855	LIGHTING	a	2	20/1	0.255	EF-2, LIGHTING
3	20/1	0.72	RECEPTACLE	b	4	20/1	0.72	RECEPTACLE
5	20/1	0.9	RECEPTACLE	a	6	20/1	1	FUEL PUMPS
7	20/1	0.284	LIGHTING	b	8	20/2	3.36	WELDER
9	20/1	0.72	RECEPTACLE	a	10	|		
11	20/1	0.72	RECEPTACLE	b	12	20/1	0	SPARE
13	20/1	1.18	EF-1	a	14	20/1	0	SPARE
15	20/1	0	SPARE	b	16	20/1	0	SPARE
17	20/1	0	SPARE	a	18	20/1	0	SPARE
19	20/1	0	SPARE	b	20	20/1	0	SPARE
21	20/1	0	SPARE	a	22	20/1	0	SPARE
23	20/1	0	SPARE	b	24	20/1	0	SPARE
25	20/1	0	SPARE	a	26	20/1	0	SPARE
27	20/1	0	SPARE	b	28	20/1	0	SPARE
29	20/1	0	SPARE	a	30	20/1	0	SPARE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	1.79	2.24	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	1.18	1.47	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	1.51	1.51	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	7.14	7.14	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
				NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	11.6	12.4	

BALANCED PHASE AMPS 51.5
PHASE BALANCE PERCENT: PHASE A 127% PHASE B 72.7%

apace Design
architects engineers designers
2112 East War Memorial Drive
Peoria Illinois 61614
T: 309.685.4722 F: 309.685.4784

KEITH Engineering Design
www.kedmep.com
707 NE Jefferson Ave
Peoria, IL : 61603
309 / 938-4005 : office
309 / 214-0063 : fax

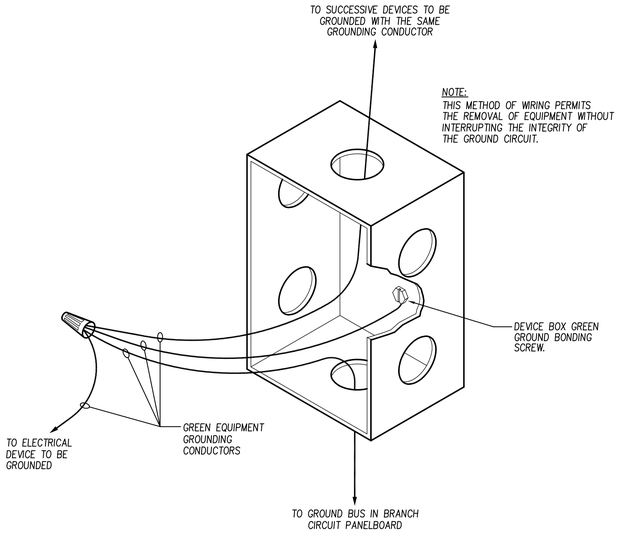
NEWMAN ELECTRICAL PANEL SCHEDULE & SERVICE DIAGRAMS

Newman Golf Course Storage Facility
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

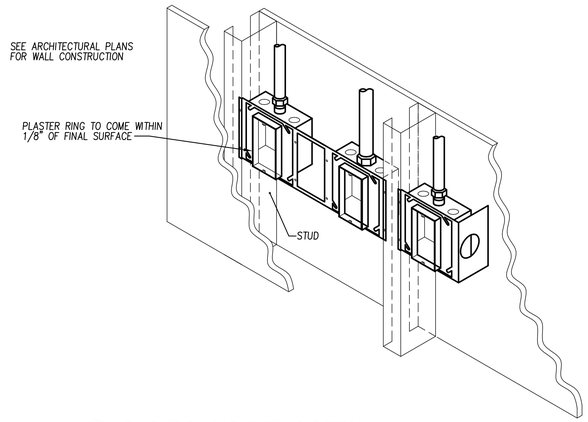
DATE: 3/11/2019

DATE 3.11.2019	PROJECT NO. 2015904.17
DRAWN BY JWH	SHEET
CHECKED TDC	E201
APPROVED BRK	6 OF 8



1 NON-INTERRUPTABLE EQUIPMENT GROUNDING CONDUCTOR

SCALE: NONE

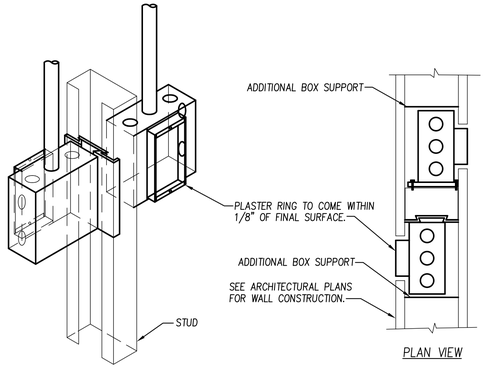


2 BACKBOX MOUNTING DETAIL

SCALE: NONE

NOTES:

1. THE INTENT OF THE DETAIL IS TO ENSURE DEVICE ROUGH-INS ARE SOLIDLY MOUNTED AND THE SURFACE OF THE TRIM IS EITHER FLUSH WITH THE WALL SURFACE OR WITHIN 1/8" OF THE WALL SURFACE. JUNCTION BOXES LARGER THAN 4" SQUARE SHALL BE MOUNTED IN A MANNER THAT IS SIMILAR TO THE SYSTEM NOTED ABOVE OR ACHIEVES THE SAME RESULTS.
2. PLASTER RINGS DEPTH SHALL BE 1/8" SHALLOWER THAN THE GYP BOARD APPLIED TO THE WALL.
3. MOUNTING BRACKET SHALL BE BY CADDY OR EQUAL.
4. ALL BACK BOXES SHALL BE A MINIMUM OF 2-1/8" DEEP.

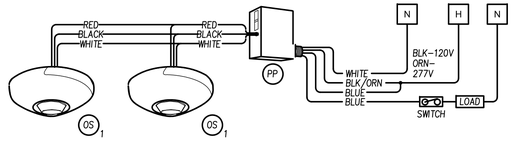


3 DEVICE OPENINGS SIDE BY SIDE DETAIL

SCALE: NONE

NOTES:

1. HORIZONTAL CONDUIT CONNECTION BETWEEN BOXES LESS THAN 2'-0" NOT PERMITTED. SEE SPECIFICATIONS AND DRAWING NOTES FOR ADDITIONAL SPACE REQUIREMENTS BETWEEN DEVICES.
2. ALL BACK BOXES SHALL BE A MINIMUM 2-1/8" DEEP.



4 POWER PACK & OCCUPANCY SENSOR (TYPICAL)

SCALE: NONE

architects
engineers
designers
apaceDesign
2107 East War Memorial Drive
Peoria, IL 61614
T: 309.685.4727 F: 309.685.4784
www.keithmep.com
KEITH
Engineering
Design
707 NE Jefferson Ave
Peoria, IL : 61603
309 / 938-4005 : office
309 / 214-10063 : fax

ELECTRICAL DETAILS

Kellogg & Newman Golf Course Storage Facilities
Peoria Park District
Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

LICENSED PROFESSIONAL ENGINEER
BRIAN R. KEITH
062-050306
EXPIRES: 30/NOV/19
STATE OF ILLINOIS

DATE: 3/11/2019

DATE	PROJECT NO.
3.11.19	2015904.16/17
DRAWN BY: JWH	SHEET
CHECKED: TDC	E300
APPROVED: BRK	7 OF 8

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MODEL	INPUT WATTS
A		SURFACE/SUSPENDED MOUNT, LINEAR, 4', LENSED LED STRIP LIGHT WITH WHITE STEEL HOUSING, UNIVERSAL VOLTAGE ELECTRONIC DRIVER, MINIMUM 4500 INITIAL LUMENS AT 4000 DEG K AND 80CRI, MINIMUM 110 LUMENS/WATT, MINIMUM 50,000 HR LIFE AT 70% LIGHT OUTPUT, FROSTED LENS, AND 5-YEAR WARRANTY. MOUNT WITH FIXTURE NO LOWER THAN THE BOTTOM EDGE OF ROOF TRUSS OR JOIST.	HE WILLIAMS #75R4 L50 840 DRV UNV LITHONIA #CDS L48 MVOLT 40K 80CRI WH METALUX #4ST2L4040R APPROVED EQUIVALENT	45
B		SURFACE/SUSPENDED MOUNT, 4' LINEAR LED WITH GASKETED, VAPORTIGHT HOUSING, UNIVERSAL VOLTAGE ELECTRONIC DRIVER, NOMINAL 4000 INITIAL LUMENS AT 4000 DEGK, 80CRI, MINIMUM 110/LUMENS/WATT, MINIMUM 50,000 HR LIFE AT 70% LIGHT OUTPUT, AND FROSTED LENS. MINIMUM 5-YEAR WARRANTY	HE WILLIAMS #96 4 L40 840 HIAFR DRV UNV LITHONIA #XVML L48 5000LM MVOLT 40K 80CRI METALUX #4APVTLD 40L840 APPROVED EQUIVALENT	45
C		EXTERIOR WALL MOUNTED LED WALL PACK WITH DARK BRONZE CAST ALUMINUM HOUSING, GASKETED BOROSILICATE GLASS LENS, UNIVERSAL VOLTAGE ELECTRONIC DRIVER, MINIMUM 4000 LUMENS AT 5000 DEG K, 70 CRI, MINIMUM 85 LUMENS/WATT. 5-YEAR WARRANTY	HE WILLIAMS #WP1 L44/850 DIM UNV LITHONIA #TWR1 LED P3 50K MVOLT DDBTXD LUMARK #WKP4BLEDEDGL APPROVED EQUIVALENT	50
C1		EXTERIOR LOW-PROFILE, WALL MOUNTED LED WALL PACK WITH DARK BRONZE CAST ALUMINUM HOUSING, UNIVERSAL VOLTAGE ELECTRONIC DRIVER, MINIMUM 1400 LUMENS AT 5000 DEG K, 70 CRI, MINIMUM 85 LUMENS/WATT. 5-YEAR WARRANTY	HE WILLIAMS #VVMV L17/750 TL DBZ CGL DIM UNV LITHONIA #OLWX1 LED 13W 50K LUMARK #XTOR1B APPROVED EQUIVALENT	17

LUMINAIRE SCHEDULE NOTES

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, MECHANICAL SYSTEM PLANS, DETAILS, SECTIONS, AND ELEVATIONS FOR AID IN COORDINATION OF FIXTURE LOCATIONS AND ANY INTERFERENCES.
2. CONTRACTOR SHALL PROVIDE COPIES OF COMPLETE FIXTURE SCHEDULES, LIGHTING PLANS, AND LIGHTING SPECIFICATIONS TO ALL SUPPLIERS OR MANUFACTURERS' REPRESENTATIVES INVOLVED IN FIXTURE PRICING OR ORDERING, PRIOR TO BID.
3. FIXTURES SHALL BE PROVIDED WITH FEATURES, OPTIONS, AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION AND THOSE LISTED IN FIXTURE MODEL NUMBERS PROVIDED, SPECS., AND WRITTEN DESCRIPTION. IF CONFLICTS EXIST BETWEEN THESE, NOTIFY A/E FOR CLARIFICATION PRIOR TO BIDDING OR ORDERING.
4. CONTRACTOR SHALL VERIFY LUMINAIRE TYPES INDICATED ARE COMPATIBLE WITH MANUFACTURERS' CURRENT MODEL FIXTURES SUBMITTED. NOTIFY A/E IMMEDIATELY OF DISCREPANCIES AND MAKE NECESSARY CORRECTIONS PRIOR TO BIDDING.
5. PROVIDE #10 AWG CONDUCTORS FOR ALL EXTERIOR BUILDING LIGHTING CIRCUITS.
6. PROVIDE #8 AWG CONDUCTORS FOR ALL EXTERIOR SITE LIGHTING CIRCUITS.
7. ALL LUMINAIRE COMBINATIONS SHALL BE CEE CERTIFIED.
8. ALL INTERIOR LED FIXTURES TEMPERATURE COLOR SHALL BE 4000'K UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ALL EXTERIOR LED FIXTURES TEMPERATURE COLOR SHALL BE 5000'K UNLESS SPECIFICALLY NOTED OTHERWISE.

MATERIAL SCHEDULE

ITEM:	SYMBOL:	DESCRIPTION:	MANUFACTURER:
1	COVER PLATES	ALL COVER PLATES FOR DEVICES SHALL BE GALVANIZED STEEL CONSTRUCTION. ALL DEVICE PLATES SHALL INCLUDE A PRE-PRINTED LABEL INDICATING THE PANEL AND CIRCUIT NUMBER SERVING THE DEVICE. THE LABEL SHALL HAVE A CLEAR BACK GROUND WITH BLACK LETTERING.	HUBBELL LEVTON LEGRAND EATON
2	$	SINGLE POLE SWITCH, TOGGLE HANDLE, MAINTAINED CONTACT, 20 AMP, 120/277 VOLT. SIDE AND BACK WIRED.	HUBBELL 1221 LEVTON LEGRAND-P&S EATON-COOPER
3	$3	THREE-WAY SWITCH, TOGGLE HANDLE, MAINTAINED CONTACT, 20 AMP, 120/277 VOLT. SIDE AND BACK WIRED.	HUBBELL 1223 LEVTON LEGRAND-P&S EATON-COOPER
4	ⓥ	SPECIAL RECEPTACLE, SPECIFICATION GRADE, 240 VOLT, 30 AMP, 3 WIRE GROUNDING, VERIFY RECEPTACLE TYPE WITH OWNER PRIOR TO INSTALLATION.	HUBBELL LEVTON LEGRAND-P&S EATON-COOPER
5	ⓨ	ELECTRICAL EQUIPMENT CONNECTION; SIZE CONNECTION PER THE NATIONAL ELECTRICAL CODE, UNLESS LARGER CAPACITY IS NOTED OTHERWISE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.	
6	$D	FAN SPEED CONTROL (DIMMER) SWITCH, FURNISHED WITH FAN BY MECHANICAL TRADE, INSTALLED BY EC.	FURNISHED BY HVAC TRADE
7	$T	FAN TIME CONTROL SWITCH, FURNISHED WITH FAN BY MECHANICAL TRADE, INSTALLED BY EC.	FURNISHED BY HVAC TRADE
8	(OS)1	DUAL TECHNOLOGY (PASSIVE INFRARED (PIR) AND MICROPHONIC OR ULTRASONIC), EXTENDED RANGE CEILING SENSOR, 360 DEGREE COVERAGE OF 28 FEET RADIUS, LOW- VOLTAGE, TIME DELAY ADJUSTMENT FROM 30-SECONDS TO 30-MINUTES, COMPATIBLE WITH ALL ELECTRONIC DRIVERS. MOUNT AT BOTTOM OF TRUSS	SENSORSWITCH CM-PDT-10 WATTSTOPPER LUTRON HUBBELL
9	(PP)	LIGHTING SWITCH POWER PACK, 120-VOLT INPUT, 24-VDC OUTPUT, SUITABLE FOR MOUNTING TO A STANDARD JUNCTION BOX.	SENSORSWITCH PP-20 WATTSTOPPER LUTRON HUBBELL
10	Φ	DUPLEX RECEPTACLE, SPECIFICATION GRADE, 125 VOLT, 20 AMP, 3 WIRE GROUNDING, NEMA 5-20R, WITH TEST AND RESET BUTTONS. SIDE AND BACK WIRED.	HUBBELL #5300 SERIES LEVITON LEGRAND-P&S EATON-COOPER
11	ΦG/W	WEATHER RESISTANT, GROUND FAULT DUPLEX RECEPTACLE, STRAIGHT BLADE, 20 AMPERE, SPECIFICATION GRADE, 3 WIRE GROUNDING TYPE, IMPACT RESISTANT THERMOPLASTIC FACE, TEST AND RESET BUTTONS IN FACE, IN A CAST ALUMINUM, WEATHERPROOF OUTLET BOX, WITH A WHILE-IN-USE HINGED COVER. FEDERAL SPECIFICATION AND U.L. LISTED, 2003 U.L. 943 COMPLIANT.	HUBBELL #GFR 5352ST/ WP826MP LEVITON LEGRAND-PASS & SEYMOUR EATON – COOPER
12	ΦG	GROUND FAULT DUPLEX RECEPTACLE, STRAIGHT BLADE, 20 AMPERE, SPECIFICATION GRADE, 3 WIRE GROUNDING TYPE, IMPACT RESISTANT THERMOPLASTIC FACE, TEST AND RESET BUTTONS IN FACE. FEDERAL SPECIFICATION AND U.L. LISTED, 2003 U.L. 943 COMPLIANT. ("A" WOULD INDICATE ABOVE COUNTER INSTALLATION.)	HUBBELL #GFR 5352ST LEVITON LEGRAND-PASS & SEYMOUR EATON – COOPER
13	PANEL (E) K	EXISTING PANEL BOARD TO REMAIN, 240/120 VOLT, SINGLE PHASE, 3 WIRE, SEE PLANS FOR ADDITIONAL INFORMATION. PROVIDE NEW BREAKERS AS INDICATED ON PLAN AND DETAIL DRAWINGS.	EXISTING SQUARE 'D' NQOB
14	PANEL K1, N1	NEW PANEL BOARD, 240/120 VOLT, SINGLE PHASE, 3 WIRE, SURFACE MOUNT NEMA 1 ENCLOSURE, HINGED COVER, COPPER BUS, COPPER GROUND AND NEUTRAL BUS, SEE PLANS FOR ADDITIONAL INFORMATION.	SQUARE D NQ SERIES SIEMENS EATON – CUTLER HAMMER GE
15	METER	EXISTING METER CABINET TO REMAIN AT KELLOGG. EXISTING METER CABINET TO BE REMOVED BY OWNER AND REINSTALLED BY ELECTRICAL CONTRACTOR AT NEWMAN. SEE PLANS NOTES FOR ADDITIONAL INFORMATION	EXISTING
16	⊛	PHOTOCELL, 120/277-VOLT, 1800 VA RATING, SINGLE-POLE, SINGLE-THROW CONTACT, WEATHERPROOF, MOUNT TO ROOF SOFFIT AND ADJUST FOR PROPER OPERATION, BASED ON OWNER INPUT. PHOTOCELL SHALL BE COMPATIBLE FOR USE WITH LIGHTING TIME CLOCK CONTACTOR FOR EXTERIOR LIGHTING CONTROL. SEE DRAWINGS FOR LOCATION AND ADDITIONAL WORK REQUIRED.	PARAGON #CW-201-70 TORK INTERMATIC

GENERAL ELECTRICAL NOTES:

1. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES INCLUDING BUT NOT LIMITED TO THE NATIONAL ELECTRICAL CODE, THE INTERNATIONAL BUILDING CODE, AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES AND ASHORE 90.1. THE AUTHORITY HAVING JURISDICTION SHALL HAVE THE FINAL DECISION ON ALL INSTALLATIONS AND PRACTICES.
2. REFER TO THE MATERIAL SCHEDULE, LUMINAIRE SCHEDULE, AND OTHER ASSOCIATED SCHEDULES FOR MANUFACTURERS AND COMPLETE DESCRIPTIONS OF ALL EQUIPMENT.
3. ALL ELECTRICAL CONDUCTORS SHALL BE STRANDED COPPER WITH TYPE THHN INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE. THE MINIMUM WIRE SIZE SHALL BE #12 AWG.
4. CIRCUIT IDENTIFICATION NUMBERS ARE TO COORDINATE CIRCUITING WITH THE ASSOCIATED PANEL. THE CIRCUIT NUMBERS SHALL BE FIELD MODIFIED TO BALANCE THE ELECTRICAL LOAD ON ALL THREE PHASES AS EVENLY AS POSSIBLE.
5. ALL CIRCUITS SHALL HAVE DEDICATED NEUTRALS.
6. A GREEN GROUNDING CONDUCTOR SHALL BE CONNECTED TO ALL LOADS SERVED. THE CONDUCTOR SHALL BE SIZED PER THE NATIONAL ELECTRICAL CODE TO ACCOMMODATE THE LOAD SERVED. ALL GROUNDING CONDUCTORS SHALL BE INSTALLED IN CONDUIT.
7. ALL BUILDING WIRING SHALL BE INSTALLED IN CONDUIT. MINIMUM SIZE SHALL BE 3/4".
8. MC CABLING IS NOT PERMITTED.
9. ALL CONDUITS SHALL BE CONCEALED IN WALLS, ABOVE CEILINGS, ETC. WHERE POSSIBLE. ALL CONDUIT ROUTED EXPOSED SHALL BE A PRE-MANUFACTURED SURFACE RACEWAY (IE. WIREMOLD OR EQUAL) WITH THE EQUIVALENT USABLE AREA OF THE CONDUIT IT IS USED IN THE PLACE OF. ALL EXPOSED SURFACE RACEWAY SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO WALLS AND CEILINGS.
10. COORDINATE THE EXACT LOCATION OF ALL DEVICES LOCATED ABOVE OR BELOW COUNTERS, ETC. WITH OTHER TRADES, ARCHITECTURAL ELEVATIONS, AND REVIEWED SUBMITTALS PRIOR TO ROUGH-IN.
11. ALL CUTTING AND PATCHING REQUIRED FOR CONDUITS, DEVICES OR OTHER ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
12. ALL PENETRATIONS THROUGH FIRE-RATED WALLS, FLOORS, AND CEILINGS SHALL BE SEALED WITH AN APPROVED FIRE-RATED SYSTEM EQUAL TO OR EXCEEDING THE RATING OF THE MATERIAL PENETRATED.
13. COORDINATE LOCATIONS OF ALL ELECTRICAL ITEMS INCLUDING LIGHTING FIXTURES, CEILING MOUNTED DEVICES (OCCUPANCY SENSORS, FIRE ALARM DETECTORS, SPEAKERS, ETC.) WITH ALL SPRINKLER HEADS, AIR SUPPLY AND AIR RETURN DIFFUSERS.
14. COORDINATE ALL MOUNTING OF ELECTRICAL EQUIPMENT REQUIRED FOR EQUIPMENT SUPPLIED BY OTHERS. EQUIPMENT SHALL BE MOUNTED TO AVOID ANY INTERFERENCE WITH OTHER EQUIPMENT OPERATION OR ACCESS. ALL INSTALLATIONS OF ELECTRICAL EQUIPMENT TO EQUIPMENT SUPPLIED BY OTHERS SHALL BE COORDINATED AND APPROVED BY SUPPLYING CONTRACTOR PRIOR TO ROUGH-IN.
15. BOXES LOCATED ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" OR A FIRE RATED MATERIAL EQUAL TO OR GREATER THAN THE FIRE WALL MATERIAL RATING SHALL BE INSTALLED AROUND THE BOX. BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM 6".
16. REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED TO PERFORM ALL ELECTRICAL WORK REQUIRED. ALL CEILING TILES WHICH ARE DAMAGED SHALL BE REPLACED WITH NEW TILE OF THE SAME MANUFACTURER AND MODEL AS EXISTING TILE.
17. FLUSH MOUNT ALL TOGGLE SWITCHES AND FIRE ALARM MANUAL PULL STATIONS 42" ABOVE THE FINISHED FLOOR TO THE CENTER OF THE DEVICE UNLESS OTHERWISE NOTED. MOUNT FIRE ALARM VISUAL AND AUDIBLE/VISUAL UNITS +80" ABOVE FINISHED FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
18. FLUSH MOUNT ALL RECEPTACLES AND TELECOMMUNICATIONS OUTLETS 18" ABOVE THE FINISHED FLOOR TO THE CENTER OF THE DEVICE UNLESS OTHERWISE NOTED.
19. 'A' SUBSCRIPT NEXT TO A DEVICE INDICATES INSTALLATION ABOVE COUNTER.
'B' SUBSCRIPT NEXT TO A DEVICE INDICATES INSTALLATION BELOW COUNTER. COORDINATE ALL LOCATIONS WITH ARCHITECTURAL DRAWINGS AND SUBMITTALS. FIELD VERIFY ALL LOCATIONS PRIOR TO ROUGH-IN.
20. LINE TYPE KEY:
    a. ——— NEW WORK BY THE ELECTRICAL CONTRACTOR
    b. ——— NEW WORK BY OTHERS OR EXISTING WORK TO REMAIN
    c. - - - - - - EXISTING WORK TO BE DEMOLISHED BY THE ELECTRICAL CONTRACTOR
21. INDICATES THE TYPE OF CONDUCTORS IN THE CONDUIT. VERIFY QUANTITY FOR EACH SPECIFIC LOAD SERVED.
    - GROUND CONDUCTOR
    - PHASE CONDUCTOR
    - NEUTRAL CONDUCTOR
22. CONDUCTOR TICK MARKS INDICATED ON CONDUITS DO NOT REPRESENT THE QUANTITY OF CONDUCTORS IN THE CONDUIT, BUT THE TYPE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE REQUIRED QUANTITY OF GROUND, NEUTRAL, PHASE, AND SWITCH LEGS IN EACH CONDUIT.
23. ALL REQUEST FOR CHANGES ON THIS PROJECT SHALL INCLUDE A DETAILED BREAKDOWN OF MATERIALS, LABOR AND SUBCONTRACTORS. SUPPLIER BACK-UP PRICING SHALL BE INCLUDED ON THE SUPPLIER'S LETTERHEAD. ALL LABOR UNITS ASSOCIATED WITH THE NEW MATERIALS SHALL NOT EXCEED 75% OF THE NECA 1 LABOR RATES.

architects engineers designers
apaceDesign
2102 East War Memorial Drive
Peoria, Illinois 61614
T: 309.685.4722 F: 309.685.4784

KEITH Engineering Design
707 NE Jefferson Ave
Peoria, IL : 61603
309 / 938-4005 : office
309 / 214-0063 : fax
www.keitmep.com

LUMINAIRE & MATERIAL SCHEDULES & GENERAL NOTES

Kellogg & Newman Golf Course Storage Facilities

Peoria Park District

Peoria, IL 61614

NO.	ISSUE	DATE
1	BID DOCUMENTS	3.11.19

LICENSED PROFESSIONAL ENGINEER
BRIAN R. KEITH
062-050306
EXPIRES: 30/NOV/19
STATE OF ILLINOIS

DATE: 3/11/2019

DATE	PROJECT NO.
3.11.19	2015904.16/17
DRAWN BY: JWH	SHEET
CHECKED: TDC	E500
APPROVED: BRK	8 OF 8

ATTACHMENT A.6
INSURANCE REQUIREMENTS
ROUTINE CONSTRUCTION, MAINTENANCE AND REPAIR PROJECTS

Contractor shall obtain 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 $1,000,000 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 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.

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.

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 $1,000,000 each occurrence for at least one (1) year following substantial 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 $1,000,000 each accident. 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.

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.

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 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 provide certified copies of all insurance policies required above within 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 type specified above. When requested by the Owner, Contractor shall furnish copies of certificates of insurance evidencing coverage for each subcontractor.

F. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect and their officers, officials, employees, volunteers and agents from and against all claims, damages, losses and expenses including but not limited legal fees (attorney's and paralegal's fees and court costs), arising

out of or resulting from the performance of the Contractor's work, provided that any such claim, damage, loss or expense (1) 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 therefrom and (2) is caused in whole or I 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, except to the extent 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. Contractor shall similarly protect, indemnify and hold and save harmless the Owner, its officers, officials, employees, volunteers and agents against and from any and all claims, costs, causes, actions and expenses including but not limited to legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of, any provision of the Contract.

SAMPLE LIABILITY INSURANCE ENDORSEMENT

The following spaces preceded by an asterisk (*) need not be completed if this endorsement and policy have the same inception date.

ATTACHED TO AND FORMING PART OF POLICY NUMBER	*EFFECTIVE DATE OF ENDORSEMENT	*ISSUED TO

This endorsement changes the policy. Please read it carefully.

AUTOMATIC ADDITIONAL INSUREDS

The following provision is added to (SECTION II), Who Is An Insured.

5. Any entity you are required in a written contract (hereinafter called Additional Insured) to name as an insured is an insured but only with respect to liability arising out of your premises, "your work" for the Additional Insured, or acts or omissions of the Additional Insured in connection with the general supervision of "your work" to the extent set forth below.

a. The Limits of Insurance provided on behalf of the Additional Insured are not greater than those required by such contract.

b. The coverage provided to the Additional Insured(s) is not greater than that customarily provided by the policy forms specified in and required by the contract.

c. All insuring agreements, exclusions and conditions of this policy apply.

d. In no event shall the coverages or Limits of Insurance in this Coverage Form be increased by such contract.

Except when required otherwise by contract, this insurance does not apply to:

1) "Bodily injury" or "property damage" occurring after

a) All work on the project (other than service, maintenance or repairs) to be performed by or on behalf of the Additional Insured(s) at the site of the covered operations has been completed; or

b) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

2) "Bodily injury" or "property damage" arising out of any act or omission of the Additional Insured(s) or any of their employees, other than the general supervision of work performed for the Additional Insured(s) by you.

3) "Property damage" to

a) Property owned, used or occupied by or rented to the Additional Insured(s);

b) Property in the care, custody or control of the Additional Insured(s) or over which the Additional Insured(s) is for any purpose exercising physical control; or

c) “Your work” for the Additional Insured(s).

With respect to Additional Insureds who are architects, engineers or surveyors, this insurance does not apply “bodily injury”, “property damage”, “personal injury” or “advertising injury” arising out of the rendering of or the failure to render any professional services by or for you, including:

a) The preparing, approving, or failing to prepare or approve maps, drawings, opinions, reports, surveys, change orders, designs or specifications; and

b) Supervisory, inspection or engineering services.

Any coverages provided hereunder shall be excess over any other valid and collectible insurance available to the Additional Insured(s) whether primary, excess, contingent or on any other basis unless a contract specifically requires that this insurance be primary or you request that it apply on a primary basis.

No person or organization is an Additional Insured with respect to the conduct of any current or past partnership or joint venture that is not shown as a Named Insured in the Declarations.

END OF ATTACHMENT A.6