



Project Manual for:

Bock Park Phase One

**17500 Lorenz Avenue
Lansing, Illinois 60438**

January 8, 2025

22 E. Chicago Avenue
Suite 200 A
Naperville, Illinois 60540
630.961.1787

hitchcockdesigngroup.com

Prepared for:

**Lan-Oak Park District
2550 178th Street
Lansing, Illinois 60438**

In association with:

**Civiltech Engineering, Inc.
30 North LaSalle Street
Suite 3220
Chicago, Illinois 60602**

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END OF SECTION 000010

SECTION 000015 – LIST OF DRAWINGS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Graphic documents bound separately from the project manual entitled BOCK PARK PHASE ONE, dated January 8, 2025 are hereby made a part of the Contract Documents. The drawings include:

<u>Sheet Number</u>	<u>Sheet Name</u>
L-Series	
-	Cover
L1.0	Existing Conditions Plan
L2.0	Site Preparation and Removals Plan
L3.0	Layout and Materials Plan
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PRODUCTS (Not Used)

PART 2 - EXECUTION (Not Used)

END OF SECTION 000015

SECTION 000020 – LEGAL NOTICE

Lan-Oak Park District
2550 178th Street
Lansing, Illinois 60438

Bock Park Phase One

Lan-Oak Park District does hereby invite sealed bids for Bock Park Phase One. Work will include site preparation, construction fencing, temporary erosion control measures, site removals and clearing, earth work operations, storm sewer utilities, cast-in-place concrete footings, sporting equipment installation, shelter installation, pedestrian asphalt paving, sport court paving, concrete walks & curbs, parking lot lighting, site furnishings, native planting, and seeding.

Project manuals, including bid form and specifications, and construction documents are available after 10:00 AM on January 8, 2025 from the Accurate Reprographics 2368 Corporate Lane, Suite 100, Naperville, Illinois 60563 at phone: 630.428.4433, website: www.hitchcockplanroom.com. Bidding documents are free to download and available at the non-refundable cost of reproduction to print.

Bids will be accepted at the Lan-Oak Park District, 2550 178th Street, Lansing, Illinois 60438, during regular office hours. All bids must be submitted in a sealed envelope marked with the Contractor's name and address, and "BID FOR BOCK PARK PHASE ONE," on the face of the envelope. Bids must be received no later than 10:00 AM on January 29, 2025. Bids will be opened at 10:01 AM on January 29, 2025 at Lan-Oak Park District, 2550 178th Street, Lansing, Illinois 60438. All bidders will be required to submit Bid Security in the form of a Bid Bond, Certified Check, Cashier's Check in the amount of 10% of the Base Bid, payable to the Lan-Oak Park District.

The successful bidder, as determined by the Lan-Oak Park District, shall be required to pay, and to agree to pay no less than the Prevailing Rate of Wages, pursuant to the Illinois Prevailing Wage Act (820 ILCS 130) for the locality of the Lansing (Cook County, IL), to each laborer worker, or mechanic needed or used to complete the work as detailed in the contract to be let. The successful contractor, and all subcontractors shall be required to submit, to the Lan-Oak Park District, certified payrolls no later than the tenth day of each calendar month for the immediately preceding month.

Lan-Oak Park District reserves the right to reject any and all proposals, parts of any and all proposals, or to waive technical errors or omissions in submitted proposals. No submitted bid may be withdrawn until a period of sixty (60) days after the bid opening date, without written consent of the Lan-Oak Park District. The Lan-Oak Park District encourages minority business firms to submit bids on this project and the successful contract bidder to utilize minority businesses as sub-contractors for supplies, equipment, services, and construction.

Questions should be directed in writing to Doug Fair, dfair@hitchcockdesigngroup.com or Laura Huggler, lhuggler@hitchcockdesigngroup.com at Hitchcock Design Group.

END OF SECTION 000020

BIDDING REQUIREMENTS

SECTION 000100 – INVITATION TO BID

Bid Let Date: January 8, 2025

Project Name: Bock Park Phase One
Location: 17500 Lorenz Avenue
Lansing, Illinois 60438

Owners: Lan-Oak Park District
2550 178th Street
Lansing, Illinois 60438

Description: Work will include site preparation, construction fencing, temporary erosion control measures, site removals and clearing, earthwork operations, storm sewer utilities, cast-in-place concrete footings, sporting equipment installation, shelter installation, pedestrian asphalt paving, sport court paving, concrete walks & curbs, parking lot lighting, site furnishings, native planting, and seeding.

Bid Documents
& Plan Holders List: Available from Accurate Reprographics:
2368 Corporate Lane, Suite 100, Naperville, Illinois 60563
(630.428.443) www.hitchcockplanroom.com

Plan Fee: Free to Download; Cost of Reproduction to print (Non-refundable)

Cut off for Questions: January 24, 2025 – 5:00 PM

Bids Due: January 29, 2025 – 10:00 AM at Lan-Oak Park District

Bid Opening: January 29, 2025 – 10:01 AM at Lan-Oak Park District

Bids Submitted to: Lan-Oak Park District
2550 178th Street
Lansing, Illinois 60438

Award Notification: February 18, 2025

Begin Construction: As soon as weather and conditions allow

Completion Deadline: June 20, 2025 – Substantial Completion
July 1, 2025 – Final Acceptance

Questions to: Doug Fair, dfair@hitchcockdesigngroup.com or
Laura Huggler, lhuggler@hitchcockdesigngroup.com at
Hitchcock Design Group (630) 961-1787

END OF SECTION 000100

SECTION 000200 – INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Submit bids in accordance with these Instructions to Bidders.

1.2 PRE-QUALIFICATIONS

- A. The Owner will consider bids from Contractors who:
 1. Have at least 5 years' experience as a General Contractor with 5 examples and 3 references for similar types and sizes of projects.
 2. Have sufficient forces and equipment available during the construction of the work to make consistent progress, meet the required sequencing standards and complete the work by the completion date.
 3. Have sufficient financial resources to administer the work.
 4. Have project managers and superintendents with experience on similar projects that will be assigned to this project.

1.3 DOCUMENTS

- A. Bid documents may be obtained at the location and for the cost identified in 000100 Invitation for Bid.
- B. Material suppliers and others requiring drawings and specifications may purchase such drawings, sheets, and specification sections at the actual cost of reproduction. Such costs are not refundable and the responsibility of selecting the proper Bidding Documents for a given trade is that of the requester.

1.4 EXAMINATION

- A. Carefully examine the Bidding Documents and the construction site. Bids shall include all costs required to execute the work under the existing conditions.
- B. Direct inquiries and questions in writing, refer to 000100 Invitation to Bid
- C. Modifications to the Bidding Documents will be issued to all bidders as Addenda to the Drawings and Specifications and will become part of the Contract. The Owner's Representative and the Owner shall not be held responsible for oral clarifications.
- D. All questions must be submitted in writing to the identified contact person(s). Questions will not be answered after the time indicated in Section 000100 Invitation to Bid.
- E. Payments will not be made for unauthorized extra work that can be avoided by examining the documents and the site.

1.5 STANDARDS AND SUBSTITUTIONS

- A. Bid materials and equipment shown or specified.
- B. Bidders may suggest substitutions of materials or equipment for consideration. If the substitution is deemed accepted by the Owner's Representative, the information may be issued as an addendum or taken under consideration at the time of signing the contract. The Owner reserves the right to accept or reject any or all proposed substitutions. Substitutions may not be accepted subsequent to award of the Contract unless approved by the Owner's Representative.

1.6 BASIS OF BIDS

- A. Submit the Lump Sum Base Bid, Alternate Bids, and requested Schedule of Values and Unit Prices for all the work indicated. Segregated bids will not be accepted.

1.7 BID SECURITY

- A. Submit bid security with the Bid Proposal as described in 000435-Bid Security.

1.8 BIDS

- A. Submit bids on unaltered Bid Forms furnished in the Bidding Requirements. Fill in all blank spaces and sign where indicated. Submit two copies of all Bid Forms.
- B. State qualifications or explanations of the bid, if any, on bidder's stationary with letterhead and submit two copies with the Bid Form.
- C. Include all forms listed in 000405-Bid Submittal Checklist.
- D. Submit bids in a sealed opaque envelope plainly marked on the outside with the title of Project and name of bidder. Deliver bids in accordance with the requirements of the 000100-Invitation to Bid. The bidder assumes the responsibility for late delivery of the mail. Any bid submitted (by mail or otherwise) after the specified time shall be considered late and may not be opened.

1.9 MODIFICATION AND WITHDRAWAL

- A. Bids may not be modified after submittal.
- B. Bidders may withdraw bids at any time before bid opening but may not resubmit bids except to comply with any addenda issued by Owner.
- C. No Bidder may withdraw his proposal for a period of (60) days after scheduled bid opening date.

1.10 AWARD OF CONTRACT

- A. The Owner will award a single lump sum contract based on the base bid for the work. The Owner, however, reserves the right to assemble the Contract(s) to best serve the Owner's interests.
- B. The Contract will be awarded on the basis of lowest responsible bid; however, the Owner reserves the right to accept any bid and/or alternates, or to reject any and all bids or alternates or to negotiate Contract terms with the various Bidders when such is deemed to be in the best interest of the Owner. The Owner reserves the right to waive technicalities.

1.11 EXECUTION OF CONTRACT

- A. The successful Bidder shall execute a written contract with the Owner and furnish any required bonds within 10 days after receipt of notice of Award and commence work immediately following receipt of the Owner's written notice to proceed or on a date stipulated in the authorization to proceed.
- B. The successful Bidder shall assist and cooperate with the Owner in preparing the Owner-Contractor Agreement.
- C. If the successful Bidder fails to execute a contract with the Owner, the next lowest responsible Bidder, as determined by the Owner, shall be awarded the Contract. Remaining bids, if any, may be rejected and the appropriate work rebid.

1.12 FORM OF CONTRACT

1.13 Form of Contract to be per 000520-Agreement Between Owner and Contractor.

1.14 CONTRACT CONDITIONS

- A. Items listed under Contracting Requirements, Drawings indicated in 000015-List of Drawings, Specification Sections 01 through 33 and 000445-Schedule of Values all become part of the Contract. The Introductory Information and Bidding Requirements are not part of the Contract Agreement unless specifically indicated here or in the Agreement Between Owner and Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000200

SECTION 000300 – INFORMATION AVAILABLE TO BIDDERS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Items available to bidders:
 - 1. Geotechnical report

- B. Items above are available for review and have been included at the end of this manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000300

SECTION 000405 – BID SUBMITTAL CHECKLIST

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Bid Submittal hard copies shall consist of **one original and one copy** of the following items to be submitted as described in Section 00200-Instructions to Bidders. Failure to submit all of the information listed is grounds for disqualification of the bid.
- B. Please remove documents from the project manual if using originals.
 - 1. 000410 - Bid Form
 - 2. 000415 - Schedule of Values
 - 3. 000416 - Schedule of Unit Prices
 - 4. 000420 - Substitution Sheet
 - 5. 000435 - Bid Security
 - 6. 000440 - Material Sources and Sub-Contracted Work
 - 7. 000455 - Contractor's Qualifications
 - 8. 000460 - Equal Employment Opportunity
 - 9. 000470 - Affidavit of Compliance
 - 10. 000476 - Sexual Harassment Policy Certification
 - 11. 000477 - Drug Free Workplace Certification
 - 12. 000478 - Tax Compliance Affidavit

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000405

SECTION 000410 – BID FORM

CONTRACTOR: _____

Street Address

City, State, Zip

Phone #

Fax #

TO: Lan-Oak Park District
2550 178th Street
Lansing, Illinois 60438

PROJECT: BOCK PARK PHASE ONE
17500 Lorenz Avenue
Lansing, Illinois 60438

Having read the Specifications and examined the Drawings entitled: **BOCK PARK PHASE ONE**

Prepared by **Hitchcock Design Group** for the construction of said Project and having also received, read, and taken into account all ADDENDA thereto as follows: ** (LIST IN THE FOLLOWING SPACES, THE NUMBER OF AND DATE OF EACH ADDENDUM RECEIVED.)

ADDENDUM NOS.: _____

and having inspected the site and the conditions affecting and governing the construction of the Project Work, the undersigned proposes to furnish all material and perform all labor, as specified and described in the Specifications and as shown in the Drawings, for the following stipulated lump sums:

(ENTER AMOUNTS FROM 000415-SCHEDULE OF VALUES – round base bid and alternate amounts to nearest whole dollar)

BASE BID:

TOTAL MATERIALS AND LABOR FOR THE SUM OF:

** _____ DOLLARS (** \$ _____)

ALTERNATE BID #1 – SHELTER LIGHTING & ELECTRICAL CONNECTION:

TOTAL ADD OR DEDUCT (circle one) FOR MATERIALS AND LABOR FOR THE SUM OF:

** _____ DOLLARS (** \$ _____)

ALTERNATE BID #2 – REUSE EXISTING PARKING LOT BASE FOR SPORT COURT:

TOTAL ADD OR DEDUCT (circle one) FOR MATERIALS AND LABOR FOR THE SUM OF:

** _____ DOLLARS (** \$ _____)

In submitting the bid, the undersigned agrees:

1. To enter into a lump sum Contract agreement with the Owner and to construct the work as drawn and specified for the stated lump sum amounts regardless of quantity discrepancies. No additional payments will be made due to quantity discrepancies.
2. To hold the bid open for 60 days after bid opening.
3. To enter into a Contract within 14 days of Notice of Award.
4. To furnish a Performance Bond and a Labor and Material Payment Bond for the full amount of the Contract in accordance with 000800-Supplementary Conditions, within 20 days of Contract Award.
5. To furnish evidence of insurance in accordance with 000800-Supplementary Conditions prior to signing the Contract.
6. To furnish a preliminary Construction Schedule in accordance with Section 001310-Project Management and Coordination prior to signing the Contract.
7. To forfeit the Bid Security to the Owner as payment of damages due to delay if the undersigned fails to execute a Contract as required.
8. To begin the work no later than the date specified in the Contract, and to substantially complete the work no later than December 31st, 2024.

ACKNOWLEDGED AND AGREED TO:

By: _____
Authorized Signature / Title

Company: _____

(SEAL - If by Corporation)

Subscribed and sworn to before me this

_____ day of _____, 2024

Notary Public

END OF SECTION 000410

SECTION 000415 - SCHEDULE OF VALUES

Date: January 8, 2025
 RE: Bock Park Phase One

NOTES:

1. Bidder to complete Section 000415-Schedule of Values and enter total amount in appropriate space in Section 000410-Bid Form.
2. Bidder is responsible for performing all quantity take-offs necessary to complete the work as drawn and specified.
3. The successful bidder will be required to enter into a lump sum contract agreement with the owner. No additional payments will be made due to discrepancies between bidder's estimated quantities, owner's estimated quantities, and the actual installed quantities to construct the work as drawn and specified .
4. This Schedule of Values form will become part of the Contract Documents and will be used as a basis for reviewing the Contractor's Applications for Payment. The Schedule of Values Unit Prices and 000416-Unit Price Schedule will be used to establish change orders for additions or deductions to the project as approved by the Owner.
5. This Schedule of Values form is available in Microsoft Excel format from the landscape architect upon request.

Section	Description	Bidder's Est. Qty.	Unit	Unit Cost	Extended Cost	Subtotal
Division 1 General Requirements						
	contracting requirements		LS			
	general requirements		LS			
	layout and as-built survey		LS			
	SWPPP monitoring & reporting		LS			
Section Subtotal:						
15000 Temporary Facilities and Controls						
	inlet protection		LS			
	silt fence		LF			
	concrete washout		LS			
	temporary construction fence		LF			
	stabilized construction entrance		LS			
Section Subtotal:						
033000 Cast-in-Place Concrete						
	shelter footings		EA			
	parking lot solar light pole footing		EA			
Section Subtotal:						
101400 Signage						
	ADA vehicular sign		EA			
Section Subtotal:						
116800 Play Field Equipment and Structures						
	basketball outfit - installation		EA			
	shelter - installation		LS			
Section Subtotal:						

265600	Exterior Lighting						
	parking lot solar pole & fixtures - installation			LS			
							Section Subtotal:
311000	Site Clearing						
	remove and dispose asphalt paving and base			CY			
	remove and dispose gravel paving and base			CY			
	remove and dispose concrete paving and base			CY			
	remove and dispose of existing shelter, posts, footings, and all base materials			LS			
							Section Subtotal:
312000	Earth Moving						
	earthwork & excavation - site grading			CY			
	topsoil strip & respread			SY			
	excess material haul off			LS			
							Section Subtotal:
321216	Asphalt Paving						
	asphalt paving - vehicular			SY			
	asphalt paving - sport court			SY			
	pavement markings			LS			
	sawcut & patch at existing asphalt surface			LS			
	removal and replacement to 12" depth of any areas that fail the proof roll	4520		SY			
							Section Subtotal:
321313	Concrete Paving and Curbs						
	concrete paving - pedestrian			SF			
	concrete paving - shelter pad			SF			
	concrete curb & gutter			LF			
	concrete depressed curb			LF			
	tactile warning			LS			
							Section Subtotal:
327000	Native Planting						
	native slope mix			SY			
	basin bottom mix (plugs)			EA			
	erosion control blanket			SY			
							Section Subtotal:
329200	Turf and Grasses						
	turf seed			SY			
	erosion control blanket			SY			
							Section Subtotal:
329300	Plants						
	shade trees			EA			
	shrubs			EA			
	perennials			EA			
	grasses			EA			
	mulch			CY			
							Section Subtotal:

334100 Storm Utility Drainage Piping

biofiltration aggregate		CY		
mwrdr filtration media - furnish & install		CY		
inlets - ta t3f&g		EA		
10" pvc sdr-26		LF		
12" pvc sdr-26		LF		
8" pvc sdr-26		LF		
4" pvc sdr-26		LF		
cleanout		EA		
curb opening		EA		
flared end section - 12"		EA		
flared end section - 10"		EA		
manholes - type a, 4'-diam, type 3 frame & grate		EA		
outlet control structure		EA		
pipe underdrains - type 1, 4"		LF		

Section Subtotal:

Base Bid Project Total:

Alternate #1 - Shelter Lighting and Electrical Connection

add electrical connection to shelter		LS		
add shelter light - furnish and install		LS		
add gfi receptacles - furnish and install		EA		

Section Subtotal:

Alternate #2 - Reuse Existing Parking Lot Base for Sport Court

deduct new base material from asphalt paving - sport court		LS		
add modification/adjustments to existing base material for use as base below asphalt paving - sport court		LS		
import/export material		ALLOW		

Section Subtotal:

END OF SECTION 000415

SECTION 000416 - SCHEDULE OF UNIT PRICES

Date: 1/8/2025
RE: Bock Park Phase One

NOTES:

1. Bidder to enter the unit cost for each item on a basis of the unit given. See Section 001270-Unit Prices for specific information.
2. This Schedule of Unit Prices will become part of the Contract Documents and will be used as a basis for payment and to substantiate Change Order requests.
3. This Schedule of Unit Prices form is available in Microsoft Excel format from the landscape architect upon request.

Item	Description	Qty.	Unit	Unit Cost
	Over excavate and backfill with structural fill	1	CY	

END OF SECTION 000416

SECTION 000420 – SUBSTITUTION FORM

Bidders may suggest substitutions of materials or equipment for consideration. If the substitution is deemed accepted by the Owner’s Representative, the information may be issued as an addendum or taken under consideration at the time of signing the contract. The Owner reserves the right to accept or reject any or all proposed substitutions. Substitutions may not be accepted subsequent to award of the Contract unless approved by the Owner’s Representative.

List all “Substitutions” for which consideration is desired, showing the addition or reduction in price to be made, for each, if the substitution is accepted, or stating “No Change in Price” if none is proposed.

MATERIALS/EQUIPMENT	SUBSTITUTION	ADD	DEDUCT
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

It is understood and agreed that the proposals indicated above are based on furnishing materials and equipment shown or specified and entitles the Owner to require that such names, materials, and methods be incorporated in the Work, except as substitutions for same based on the supplementary quotations entered above and as accepted by the Owner’s Representative and are subsequently made a part of the written Contract.

ACKNOWLEDGED AND AGREED TO:

By: _____
 Authorized Signature / Title

Subscribed and sworn to before me this
 _____ day of _____, 2025

 Notary Public

END OF SECTION 000420

SECTION 000435 – BID SECURITY

Attached to this Proposal is a bid bond for 10% of the total Base Bid made payable to Lan-Oak Park District.

Insert amount:

_____ DOLLARS
(\$ _____)

If this Proposal is accepted and the Bidder fails to execute a Contract with the Owner, the full amount of the security will be forfeited to the Owner as payment of damage due to delay. If this Proposal is not accepted, the security will be returned to the Bidder within 60 days of the execution of the Contract with the successful Bidder.

END OF SECTION 000435

SECTION 000440 – MATERIAL SOURCES and/or SUB-CONTRACTED WORK FORM

List the sources, manufacturers and/or (sub)contractors for the following items:

Trade	Source/Mfg.	(Sub) Contractor
Asphalt Paving	_____	_____
Concrete Paving	_____	_____
Storm Sewerage/ Subdrainage Systems	_____	_____
Playfield Equipment	_____	_____
Landscaping	_____	_____
Electrical	_____	_____
Sport Court Surfacing	_____	_____

END OF SECTION 000440

SECTION 000447 – WAGE RATES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The Contractor shall comply with the requirements of 820 ILCS 130/1-12 inclusive with reference to prevailing rates of wages. The Contractor shall pay or cause to be paid not less than the prevailing rates of wages as found by the Owner or Department of Labor or as determined by the Court on Review to all laborers, workers, and mechanics.
- B. The Illinois Department of Labor website (<http://www.state.il.us/agency/idol/>) will list the current edition of the prevailing wages for the county where the Work is being performed.
 - 1. Contractor is responsible to verify that prevailing wages listed are current.
 - 2. Contractor must pay current wages in effect at time Work is being carried out.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

ACKNOWLEDGED AND AGREED TO:

By: _____
Authorized Signature / Title

Subscribed and sworn to before me this
_____ day of _____, 2025

Notary Public

END OF SECTION 000447

SECTION 000455 – CONTRACTOR’S QUALIFICATIONS FORM

1.1 PRE-QUALIFICATIONS

A. The Bidder holds current prequalification status with:

1. Illinois Department of Transportation \$ _____
2. Capital Development Board \$ _____

1.2 PROJECT EXPERIENCE

A. List below the projects of similar nature that you have successfully completed:

1. Project Name: _____
Project Location: _____
Project Budget: _____
Completion Date: _____
Owner’s Name: _____
Contact Person: _____
Phone: _____

-
2. Project Name: _____
Project Location: _____
Project Budget: _____
Completion Date: _____
Owner’s Name: _____
Contact Person: _____
Phone: _____

-
3. Project Name: _____
Project Location: _____
Project Budget: _____
Completion Date: _____
Owner’s Name: _____
Contact Person: _____
Phone: _____

1.3 PROJECTS IN PROGRESS

A. List below projects currently in progress:

1. Project Name: _____
Project Location: _____
Project Budget: _____
Completion Date: _____
Owner's Name: _____
Contact Person: _____
Phone: _____

2. Project Name: _____
Project Location: _____
Project Budget: _____
Completion Date: _____
Owner's Name: _____
Contact Person: _____
Phone: _____

3. Project Name: _____
Project Location: _____
Project Budget: _____
Completion Date: _____
Owner's Name: _____
Contact Person: _____
Phone: _____

1.4 PROJECT MANAGEMENT

A. List name of probable Project Manager or Job Superintendent: _____

B. List below similar projects managed:

1. Project Name: _____

Contact Person: _____

Phone: _____

2. Project Name: _____

Contact Person: _____

Phone: _____

3. Project Name: _____

Contact Person: _____

Phone: _____

ACKNOWLEDGED AND AGREED TO:

By: _____
Authorized Signature / Title

Subscribed and sworn to before me this

_____ day of _____, 2025

Notary Public

END OF SECTION 000455

SECTION 000460 – EQUAL EMPLOYMENT OPPORTUNITY

In the event of the contractor's noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Fair Employment Practices Act or the Fair Employment Practices Commission's Rules and Regulations for Public Contracts, the contractor may be declared not responsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivision or municipal corporations, and the contract may be canceled or avoided in whole or in part, and such other sanctions or penalties may be imposed or remedies involved as provided by statute or regulation.

During the performance of this contract, the contractor agrees as follows:

- (1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- (2) That, if it hires additional employees in order to perform this contract, or any portion hereof, it will determine the availability (in accordance with the Commission's Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit, and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- (3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin or ancestry.
- (4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Fair Employment Practices Act and the commission's Rules and Regulations for Public Contract. 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 Illinois Fair Employment Practices Commission and the contracting agency and will recruit employees from other sources when necessary, to fulfill its obligations thereunder.
- (5) That it will submit reports as required by the Illinois Fair Employment Practices Commission's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Commission or the contracting agency, and in all respects comply with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every such subcontractor; and that it will also so include the provisions of paragraphs 1, 5, 6 and 7 in every supply subcontract as defined in Section 2.10 (a) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every 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 all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Fair Employment Practices Commission in the event any subcontractor fails or refuses to comply therewith. In addition, no contractor will utilize any subcontractor declared by the Commission to be not responsible and therefore ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

With respect to the two types of subcontracts referred to under paragraph 7 or the Equal Employment Opportunity Clause above, following is an excerpt of Section 2 of the FEPC's Rules and Regulations for Public Contracts:

“Section 2.10. The term “Subcontract” means any agreement, arrangement or understanding, written or otherwise, between a contractor and any person (in which the parties do not stand in the relationship of any employer and an employee):

(a) for the furnishing of supplies or services or for the use of real or personal property, including lease arrangements, which, in whole or in part, utilized in the performance of any one or more contracts; or

(b) under which any portion of the contractor's obligation under any one or more contracts is performed, undertaken or assumed.”

ACKNOWLEDGED AND AGREED TO:

By: _____
Authorized Signature / Title

Subscribed and sworn to before me this

_____ day of _____, 2025

Notary Public

END OF SECTION 000460

SECTION 000470 – AFFIDAVIT OF COMPLIANCE

The undersigned, _____, being first duly sworn on oath, deposes that he is
(print or type Name)
_____ of _____, the authority to make
(Sole Owner, Partner, President, Secretary, etc.) (Name of Company)

this certification on behalf of the Bidder;

A. That in connection with this procurement,

- (1) The bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation;
- (2) The Bidder has not in any manner directly or indirectly sought by consultation, communication, or agreement with anyone to fix the bid price of said bidder or any other bidder or to fix any overhead profit or cost element of such bid price or that of any other bidder or to secure any advantage against the public body awarding the contract or anyone interested in the proper contract;
- (3) The bid is genuine and not collusive or sham;
- (4) The prices or breakdowns thereof and any and all contents which had been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder directly or indirectly to any other bidder or any competitor prior to opening;
- (5) All statements contained in such bid are true;
- (6) No attempt has been made or will be made by the bidder to induce any other person or firm to submit a false or sham bid;
- (7) No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition;

- B.
- (1) He is the person in the Bidder's organization responsible within that organization for the decision as to the prices being bid herein and that he has not participated, and will not participate, in any action contrary to paragraphs 1 through 7 above; or
 - (2)
 - (a) He is not the person in the Bidder's organization responsible within that organization for the decision as to the prices being bid herein but that he has been authorized to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to paragraphs 1 through 7 above and as their agent does hereby so certify; and
 - (b) That he has not participated, and will not participate, in any action contrary to paragraphs 1 through 7 above.

- C. The undersigned certifies that the Bidder has never been convicted for a violation of State laws prohibiting bid rigging or bid rotating.
- D. It is expressly understood that the foregoing statements and representations and promises are made as a condition to the right of the bidder to receive payment under any award made hereunder.

ACKNOWLEDGED AND AGREED TO:

By: _____
Authorized Signature / Title

Subscribed and sworn to before me this
_____ day of _____, 2025

Notary Public

END OF SECTION 000470

SECTION 000476 – SEXUAL HARASSMENT POLICY CERTIFICATION

SEXUAL HARASSMENT POLICY CERTIFICATION

I, _____ (Individual), having been first duly sworn on oath, do depose and state that I presently reside at _____ (Address), and that I am the duly authorized principal, officer or agent of _____ (Name of Contractor) and do hereby certify to Lan-Oak Park District, its Commissioners, officers and employees that a written Sexual Harassment Policy which complies with the provisions of 775 ILCS 5/2-105(a)4 has been adopted by _____ and said policy is currently in full force and effect.

IT IS EXPRESSLY UNDERSTOOD THAT THE FOREGOING STATEMENTS AND REPRESENTATIONS AND PROMISES ARE MADE AS A CONDITION TO THE RIGHT OF THE BIDDER TO RECEIVE PAYMENT UNDER AND AWARD MADE UNDER THE TERMS AND PROVISION OF THIS BID.

Individually and on behalf of Contractor

Subscribed and sworn to before me this _____ day of _____, 2025

Notary Public

My commission expires: _____

END OF SECTION 000476

SECTION 000477 – DRUG FREE WORKPLACE CERTIFICATION

DRUG-FREE WORKPLACE CERTIFICATION

The bidder acknowledges its obligations under the Illinois Drug-Free Workplace Act 30 ILCS 580/1 et seq. and certifies it will provide a drug-free workplace by:

- 1) Publishing a statement:
 - a) Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the bidder’s workplace
 - b) Specifying the actions that will be taken against employees for violations of such prohibition.
 - c) Notify the employee that, as a condition of employment on such contract or grant, the employee will:
 - i) Abide by the terms of this statement; and
 - ii) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction.
- 2) Establishing a drug-free awareness program to inform employees about:
 - a) The dangers of drug abuse in the workplace
 - b) The contractor’s policy of maintaining a drug-free workplace;
 - c) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - d) The penalties that may be imposed upon employees for drug violations.
- 3) Making it a requirement to give a copy of the statement required by subsection (1) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- 4) Notifying the Owner within 10 days after receiving notice under part (b) of paragraph (c) of subsection (1) from an employee or otherwise receiving actual notice of such conviction.
- 5) Imposing a sanction on or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program, by, any employee who is so convicted, as required by Section 5 of the Illinois Drug Free Workplace Act.
- 6) Training personnel to effectively assist employees in selecting a proper course of action in the event drug counseling, treatment and rehabilitation is required and indicating an effectively trained counseling and referral team is in place.
- 7) Making a good faith effort to continue to maintain a drug free workplace through implementation of requirements of Section 3 of the Illinois Drug Free Workplace Act.

Individually and on behalf of Contractor

Subscribed and sworn to before me this

_____ day of _____, 2025

Notary Public

My commission expires: _____

END OF SECTION 000477

SECTION 000478 – Tax Compliance Affidavit

TAX COMPLIANCE AFFIDAVIT
VILLAGE OF LANSING

_____, the Contractor under a certain Contract dated _____, 2025,
with the Lan-Oak Park District, for Bock Park Phase One project, hereby certifies that no delinquent taxes
are outstanding or otherwise due to the Illinois Department of Revenue.

CONTRACTOR:

By: _____

Title: _____

Subscribed and sworn to before me this

_____ day of _____, 2025

Notary Public

My commission expires: _____

END OF SECTION 000478

CONTRACTING REQUIREMENTS

SECTION 000510 – FORMS REQUIRED WITH OWNER CONTRACTOR AGREEMENT

PART 1 - GENERAL

1.1 DESCRIPTION

A. The following items are required prior to signing the Owner Contractor Agreement:

1. Preliminary Construction Schedule per section 0013100.
2. Certificates of Insurance per Supplementary Conditions section 000800.
3. Performance Bond per Supplementary Conditions section 000800.
4. Labor and Material Payment Bond per Supplementary Conditions section 000800.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000510

SECTION 000520 – AGREEMENT BETWEEN OWNER AND CONTRACTOR

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The American Institute of Architects “AIA Document A101 – Standard Form of Agreement Between Owner and Contractor, 2007 Edition, is hereby made a part of the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000520



AIA Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

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

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement.

AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

- Not later than () calendar days from the date of commencement of the Work.

By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
------	-------

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price
------	-------

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the day of the month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than () days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

_____ % _____

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner’s convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

§ 8.3 The Contractor’s representative:

(Name, address, email address, and other information)

§ 8.4 Neither the Owner’s nor the Contractor’s representative shall be changed without ten days’ prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

.5 Drawings

Number	Title	Date
--------	-------	------

.6 Specifications

Section	Title	Date	Pages
---------	-------	------	-------

.7 Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

- AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

Title	Date	Pages
-------	------	-------

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

.9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor’s bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)

MODIFICATIONS TO AIA DOCUMENT A101-2017

The following modifies the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2017. Where a portion of the Agreement is modified or deleted the unaltered portions of the Agreement shall remain in effect. To the extent there is a conflict between this document and the A101-2017, the terms of this document shall prevail. Additional modifications will be made following receipt of the bids and award selection, and prior to formal execution of this Document, in order to complete the entry of information and the appropriate terms and conditions.

TABLE OF ARTICLES

1. Delete "Exhibit A Insurance and Bonds"
2. Add to end: "Article 10 Insurance and Bonds"

ARTICLE 1 CONTRACT DOCUMENTS.

Modify as appropriate.

ARTICLES 2-4: Make reference to Project Manual as appropriate.

SECTION 5.1.3 PROGRESS PAYMENTS

Delete Section in its entirety, and replace with: "Applications for payment shall be processed in accordance with the Illinois Prompt Payment Act and as set forth in the General and Supplemental Conditions."

SECTION 5.3

1. Delete article in its entirety, and replace with "Applications for payment shall be processed in accordance with the Illinois Prompt Payment Act and as set forth in the General and Supplemental Conditions."
2. Add "All references to interest are hereby deleted."

SECTION 6.2 BINDING DISPUTE RESOLUTION

1. Delete "subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201-2017" after "For any Claims" in the first line.
2. Litigation in a court of competent jurisdiction shall be the method of dispute resolution.

SECTION 8.5.2

1. Delete "AIA Document A101TM-2017 Exhibit A," and replace with: "as set forth in Article 11 of AIA Document A201-2017."
- 2.

ADD NEW ARTICLE 10:

"ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2017, and any modifications or Supplemental Conditions thereto."

SECTION 000700 – GENERAL CONDITIONS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The American Institute of Architects “AIA Document A201 – General Conditions of the Contract for Construction, 2007 Edition, is hereby made a part of the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000700

SUPPLEMENTARY CONDITIONS TO AIA DOCUMENT A201-2017

The following modifies the "General Conditions of the Contract for Construction," AIA Document A201-2017. Where a portion of the Agreement is modified or deleted the unaltered portions of the Agreement shall remain in effect. To the extent there is a conflict between this document and the A201-2017, the terms of this document shall prevail.

ARTICLE 1 GENERAL PROVISIONS

1.1 Basic Definitions

1.1.1 The Contract Documents

Add "Advertisement for Bids, Invitation & Instructions to Bidders, Conditions (General, Supplementary and Special Supplementary), Project Manual, Proposal, Surety Bond, Performance Bond, Labor and Material Payment Bond, Plans, Drawings, Specifications, Addenda" after "other documents listed in the Agreement" in lines 3-4.

Delete "Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements."

1.1.2 The Contract

Add "provided, however, Owner shall be a third party beneficiary of any Subcontract agreement under the circumstances set forth in Article 5 herein" after "Sub-subcontractor" in line 5.

1.1.7 Instruments Of Service

Delete this paragraph in its entirety.

Replace heading with "**1.1.7 The Project Manual**" and add the following:
"The Project Manual is a volume assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications."

1.2 Correlation And Intent Of The Contract Documents

1.2.1 Delete "indicated" and replace with "intended" before the work "results" in line 4.

Add the following at the end of the paragraph: "In the event the Contract Documents conflict, Contractor shall comply with the more stringent of the requirements."

1.4 Interpretation

Change the heading to "**1.4.1 Interpretation.**"

After 1.4.1, add new section "**1.4.2 Headings.** The headings for each paragraph of the Contract Documents are for convenience and reference purposes only and in no way define, limit or describe the scope or intent of said paragraphs or of the Contract Documents nor in any way affect the Contract Documents."

ARTICLE 2 OWNER

2.2 Evidence of the Owner's Financial Arrangements

Delete paragraph 2.2 in its entirety and replace with the following:

“2.2 Decision of the Owner. All work done under this Contract shall be done to the satisfaction of the Owner who shall in all cases determine the amount of work done which is to be paid for under this Contract. The Owner shall decide all questions that may arise as to the measurements of quantities and the fulfillment of this Contract on the part of the Contractor, and shall determine all questions concerning the true intent or meaning of the Plans and Specifications and his determination and decision shall be final and conclusive.”

2.2.1 Delete paragraph in its entirety.

2.2.2 Delete paragraph in its entirety.

2.2.3 Delete paragraph in its entirety.

2.2.4 Delete paragraph in its entirety.

2.3 Information And Services Required Of The Owner

2.3.2 Delete “Owner shall retain an architect” and replace with “Architect is the person” in line 1.

2.3.3 Delete paragraph in its entirety.

2.3.4 Delete “The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.”

Add the following to the end of the paragraph: “The furnishing of surveys by the Owner is not a guarantee of the accuracy of the information contained therein, and shall not relieve the Contractor from its duties under the Contract Documents in general. The submission of a bid for the Work implies that the Contractor has examined the site, taking into consideration all such conditions that may affect the Work, regardless of the information contained in the surveys.”

Add the following: “Any information furnished by the Owner shall not constitute a representation concerning site conditions and the Contractor shall bear, solely and exclusively, all costs due to concealed, unknown, unusual or otherwise unforeseen conditions at the site. Contractor is aware that all such risk concerning site conditions is borne by it, has considered such in making its bid, and therefore freely waives all of its rights under the Illinois Public Construction Contract Act of 1999.”

2.4 Owner's Right To Stop The Work

Delete “repeatedly” after “Section 12.2” in line 2.

Add “any portion of the” after the phrase “fails to carry out” in line 2.

Add “or in the event an emergency arises that requires the Work to be stopped,” after the phrase “in accordance with the Contract Documents” in line 2.

Add “or the emergency no longer exists;” after “such order has been eliminated.”

2.5 Owner's Right To Carry Out The Work

Delete "ten-day period" and replace with "seven-day period" in line 2.

Add "or other deficiency" after the word "neglect" and before "with diligence" in line 3.

Delete "prior approval" and replace with "prior evaluation" in line 4.

Delete "reasonable cost" and replace with "actual cost" in line 6.

Delete "failure" and replace with "other deficiency" in line 8.

Add "Owner's rights under this Article 2 for Contractor's deficiencies in the Work are not Owner's sole remedies, but are cumulative and may be exercised along with any other rights of Owner as permitted by law" to the end of the paragraph.

Add "For this contract, a labor dispute shall be defined as any slow-down or cessation of work. In the event of a labor dispute which results in a slow-down or cessation of work, the notice provisions of this Section shall not apply, but shall be governed by Section 3.4.6 of these Supplementary Conditions."

ARTICLE 3 CONTRACTOR

3.1 General

3.1.2 Add "High quality craftsmanship will be expected in all phases of work. Any elements found unacceptable and not in compliance with the Contract Documents will be removed and replaced by the Contractor until satisfactory results are obtained" after the first sentence.

3.2 Review Of Contract Documents And Field Conditions By Contractor

3.2.1 Delete and replace entire Subparagraph with the following:

3.2.1 Execution of the Contract by the Contractor is a representation by the Contractor, that the Contract Documents are full and complete, are sufficient to enable the Contractor to determine the cost of the Work and that the Contract Documents are sufficient to enable it to construct the Work outlined therein, in accordance with applicable laws and regulations, and otherwise to fulfill all its obligations hereunder, including, but not limited to, Contractor's obligations to construct the Work for an amount not in excess of the Contract Sum on or before the date(s) of Completion established in the Agreement. The Contractor further acknowledges and declares that it has visited and examined the Project site, examined all physical and other conditions affecting the Work and is fully familiar with all of the conditions thereon and thereunder affecting the same. In connection therewith, Contractor specifically represents and warrants to Owner that prior to the submission of its bid it has: (a) thoroughly examined the location of the work to be performed, is familiar with local conditions, and has read and thoroughly understands the Contract Documents as they relate to the physical conditions prevalent or likely to be encountered in the performance of the work at such location; (2) examined the nature, location and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (3) examined the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents.

3.2.2 Delete second sentence of Subparagraph 3.2.2.

Add the following Subparagraphs:

3.2.2.1 The exactness of grades, elevations, dimensions, or locations given in any drawings issued by the Architect or the work installed by other contractors is not guaranteed by the Architect or Owner.

3.2.2.2 The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions and locations. In all cases of interconnection of its work with existing or other work, it shall verify at the site all dimensions relating to such existing or other work. Any errors due to the Contractor's failure to so verify all such grades, elevations, locations or dimensions shall be promptly rectified by it without additional cost to the Owner.

3.2.4 Delete "in response to Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3" in lines 2 and 3.

Add "including any increases in construction costs" after "damages to Owner" in line 4.

Delete "for differences between field measurements or conditions and the Contract Documents," in lines 7 and 8.

3.2.5 Add new Subparagraph:

3.2.5 Prior to any excavation, the Contractor shall determine the locations of all existing water, gas, sewer, electric, telephone, telegraph, television, irrigation, petroleum pipelines, and other underground utilities and structures. Where the locations of existing underground and surface utilities and structures are indicated, these locations are generally approximate, and all items that may be encountered during the work are not necessarily indicated. The Contractor shall determine the exact locations of all items indicated, and the existence and locations of all items not indicated.

3.3.4 Add new Subparagraph:

3.3.4 The Contractor has the responsibility to ensure that all material suppliers and Subcontractors, their agents, and employees adhere to the Contract Documents, and that they order materials on time, taking into account the current market and delivery conditions and that they provide materials on time. The Contractor shall coordinate its Work, including without limitation, deliveries, storage, installations, and construction utilities with that of all others on the Project through communication with the Owner, Architect and Construction Manager. The Contractor shall be responsible for the space requirements, locations, and routing of its equipment. In areas and locations where the proper and most effective space requirements, locations and routing cannot be made as indicated, the Contractor shall, prior to installation, meet with all others involved to plan the most effective method of installation.

3.3.5 Add new Subparagraph:

3.3.5 All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, unless herein specified to the contrary.

3.3.6 Add new Subparagraph:

3.3.6 After commencing the work, the Contractor shall use every precaution to avoid interferences with existing underground and surface utilities and structures, and protect them from damage. The Contractor shall repair or pay for all damage caused by his operations to all existing utility lines, public property, and private property, whether it is

below ground or above ground, and he shall settle in total cost of all damage suits which may arise as a result of his operations at no additional costs to the Owner. To avoid unnecessary interferences or delays, the Contractor shall coordinate all utility removals, replacements and construction with the appropriate utility company. The cost of temporarily relocating utilities for convenience of the Contractor, shall be paid by Contractor.

3.3.7 Add new Subparagraph:

3.3.7 The Contractor shall establish and maintain benchmarks and all other grades, lines, and levels necessary for the Work, report errors or inconsistencies to the Owner and Architect before commencing Work, and review the placement of the building and permanent facilities on the site with the Owner and Architect after all lines are staked out and before foundation Work is started.

3.4 Labor And Materials

3.4.2 Delete Subparagraph 3.4.2 and replace with the following:

“3.4.2. The materials specified have been determined to have characteristics appropriate for the purposes of this project. No work will be acceptable which utilizes an alternate not approved during the bidding process.”

3.4.4 After 3.4.3 add new section:

“3.4.4. Contractor shall maintain harmonious labor relations on the job site. If a labor problem arises or any person employed by the Contractor on the Work shall appear to the Owner to be Incompetent or conduct himself in a disorderly or improper manner, such person or persons shall be removed from the Work immediately on the request of the Owner. Said removal shall not create any additional cost to Owner and shall not extend the time for completion of the Work.”

3.4.5 Add new Subparagraph:

The Park District has determined that the Illinois Prevailing Wage Act applies to this Contract. Contractor shall therefore comply with the Illinois Prevailing Wage Act and shall pay, and require every Subcontractor to pay, the prevailing rates of wages as established by the Illinois Department of Labor for each craft or type of work needed to execute the contract in accordance with 820 ILCS 130/01 et seq. Contractor shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to Contractor due to changes in the prevailing rate of wage during the terms of any contract shall be at the expense of Contractor and not at the expense of the Park District. Change orders shall, however, be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. Contractor shall be solely responsible to maintain accurate records as required by the Prevailing Wage Act and to obtain and furnish all such certified records to Department of Labor as required by Statute or Regulation, in the manner specified by the Department of Labor (e.g., through the Department’s portal) including certified payroll. Contractor shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work and in every way defend and indemnify Park District against any claims arising under or related to the payment of wages in accordance with the Prevailing Wage Act. The Park District agrees to notify the Contractor or Subcontractor of the pendency of any such claim, demand, lien or suit.

The Contractor is advised that the Illinois Department of Labor revises the prevailing wage rates and the Contractor/subcontractor has an obligation to check the Department’s web site for revisions to prevailing

wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website: <http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>.

The Contractor shall also:

- (1) Insert into each subcontract and the project specifications for each subcontract, a written stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.
- (2) Require each subcontractor to insert into each lower-tiered contract and the project specifications for each lower tiered subcontract, a stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.

3.4.6 Add new Subparagraph:

3.4.6 In the event of a labor dispute resulting in a slow-down or in the cessation or suspension of work, the Contractor shall not be relieved of its obligations to provide labor or for timely progress and completion of the work. In such event, the notice provisions contained in Section 2.4 shall not apply. Instead, the Contractor shall be automatically deemed to be in default and to have committed a breach of contract unless said work stoppage or slow-down is remedied to the Owner's satisfaction in accordance with this Section. In the event of a work stoppage due to a labor dispute, the Contractor shall provide replacement labor within 24 hours of the commencement of the work stoppage. In the event of a slow-down of work due to a labor dispute, the Contractor shall provide as much supplemental labor as may be necessary to resume normal and customary progress and deadlines on the project in accordance with the time schedules established for the work. In the alternative, the Owner shall have the option to replace or supplement labor, and shall be entitled to reduce the contract sum by an amount equal to the Owner's cost of replacing or supplementing labor. If the balance of the contract sum is not sufficient to cover such amounts, the contractor shall pay the difference to the Owner. The Owner may also pursue any other remedies it may have, including, but not limited to, remedies under the performance bond and payment bond. If any labor dispute necessitates legal action or legal intervention by the Owner, or in the event that the Owner otherwise takes legal action to enforce the terms of this section, the Contractor shall be responsible for the Owner's attorney's fees and court costs, without prejudice to any other remedies that the Owner may have.

3.5 Warranty

3.5.1 Add "or the Owner" after "If required by the Architect" the last sentence.

After 3.5.2 add the following new sections

"3.5.3. Warranty protection for a repaired item shall be for twelve months after final acceptance of non-concrete work or the length of the original warranty period, whichever is longer."

"3.5.4. Warranty protection for a repaired item shall be for twenty-four months after final acceptance of concrete work or the length of the original warranty period, whichever is longer. This will cover structural failures, as well as surface erosion due to spalling caused by frost popping soft aggregates within the concrete and surface erosion due to faulty workmanship. All concrete work not meeting high industry standards will be removed and replaced at no charge to the Owner."

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

items shall be removed and replace with new materials, equipment or workmanship complying with the Contract Documents.”

3.6 Taxes

Delete paragraph 3.6 in its entirety and insert the following:

3.6 Taxes The Owner is exempt from the Illinois Use Tax Act and the Retailer’s Occupation Tax. The Owner’s exemption identification number issued by the Illinois Department of Revenue is _____. Any taxes for which the Owner is not exempt shall be paid by the Contractor.

3.7 Permits, Fees, Notices And Compliance With Laws

3.7.3. Delete “knowing it to be” after “If the Contractor performs Work” in line 1.

3.7.4. Change “14 days” to “7 days” and add to the end: “Contractor accepts these procedures and therefore voluntarily waives any and all other rights it may have by operation of statute including but not limited to any statutory right to stop the work pending resolution of any claim for additional time or additional compensation or equitable adjustments for allegedly changed conditions that Contractor may otherwise enjoy by operation of the Illinois Public Construction Contract Act.”

3.9 Superintendent

3.9.1 Add “The Contractor’s competent superintendent shall have the knowledge and control of all work under this Contract and shall communicate directly to the Owner upon request” at the end of the paragraph.

3.10 Contractor’s Construction and Submittal Schedules

3.10.1 Delete Subparagraph 3.10.1 and insert the following:

3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner’s and Architect’s information a Contractor’s construction schedule for the Work. The schedule shall indicate the proposed completion dates for the various subdivisions of the Work, as well as the totality of the Work. The schedule shall be updated every thirty (30) days and submitted to Architect with Contractor’s Applications for Payment. Each schedule shall contain a comparison of actual progress with the estimated progress for such point in time stated in the original schedule. If any schedule submitted sets forth a date for Completion for the Work or any phase of the Work beyond the date(s) of Completion established in the Contract (as the same may be extended as provided in the Contract Documents), then Contractor shall submit to Architect and Owner for their review and approval a narrative description of the means and methods which Contractor intends to employ to expedite the progress of the Work to ensure timely completion of the various phases of the Work as well as the totality of the Work. To ensure such timely completion, Contractor shall take all necessary action including, without limitation, increasing the number of personnel and labor on the Project and implementing overtime and double shifts. In that event, Contractor shall not be entitled to an adjustment in the Contract Sum of the schedule. The Owner may, in its discretion, choose to withhold any payment due the Contractor until an updated schedule is submitted. The Owner’s or Architect’s failure to object to a submitted schedule that exceeds time limits current under the Contract Documents shall not relieve the Contractor of its obligations to meet the time limits in the Contract Documents, nor shall it make the Owner or Architect liable for any of the Contractor’s damages incurred as a result of increased construction time or not meeting the time limits in the Contract Documents. Similarly, the Owner’s or Architect’s failure to object to a Contractor’s schedule showing completion in advance of the time limits in the Contract Documents shall not create or infer any rights in favor of the Contractor for acceleration of the Work.

Add the following new sections after 3.10.3:

“3.10.4 Construction Engineering Check. The Contractor shall notify the Owner three (3) business days in advance of all grading, drainage, and other major items of construction for field checking of construction engineering. All questions pertaining to the Plans, Specifications and details of the Work shall be directed to the Owner and cleared prior to construction.”

“3.10.5 Contractor's Construction Schedule. The Contractor shall provide regular monitoring and updating of the Progress Schedule with monthly Update Reports submitted contemporaneously with the monthly pay application, or more frequently as required by the conditions of the Work. The Update Reports shall indicate progress achieved and activities commenced or completed within the last month.”

3.12 Shop Drawings, Product Data And Samples

3.12.9 Add to End:

Contractor shall be entitled to one resubmittal of any submittal or shop drawing rejected by Architect or returned by the Architect for further action. Thereafter, Contractor shall pay the cost of all further reviews of such submittal or shop drawing and agrees to execute a Change Order reducing the Contract Sum by the amount charged by Architect to Owner for the additional reviews.”

3.13 Use Of Site

Add heading “3.13.1” before first paragraph.

Add the following new sections after newly created 3.13.1:

“3.13.2 General Use. The Contractor shall enforce the Owner's instructions regarding the conduct and use of the site by his employees.”

“3.13.3 Property Corners. Existing property corners on the site shall be replaced by a registered Land Surveyor at the Contractor's expense.”

3.14 Cutting And Patching

Add the following new subparagraph to the end of 3.14.1:

3.14.1.1 The Contractor shall remove, cut, alter, replace, patch and repair any existing work as required to install new work. Except as otherwise shown or specified, Contractor shall not cut, alter or remove any structural work and shall not disturb any ducts, plumbing, steam, gas, or electrical work without approval of Architect. Existing work (walls, ceilings, partitions, floors, mechanical and electrical work, equipment, lawns, pavings, roads, walks, etc.) disturbed or removed as a result of performing required new work shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work. Existing work to be altered or extended that is found to be defective in any way shall be reported to the Architect before it is disturbed. Materials and workmanship used in restoring work shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.

3.15 Cleaning Up

After 3.15.2 add new section **“3.15.3.** The Contractor shall walk the site at the close of every work day to assure it is either free of waste material and rubbish, or the waste material and rubbish is secured in a container that is inaccessible to the public.”

3.18 Indemnification

3.18.1 Delete the paragraph in its entirety and replace with the following:

3.18.1 To the fullest extent permitted by law, the Contractor shall waive any right of contribution against the Owner and shall indemnify 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 to, legal fees (attorney's and paralegal's fees, expert 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 is attributable to bodily injury, sickness, disease or death, or injury to or destruction of property, other than the work itself, including the loss of use resulting therefrom, or is attributable to misuse or improper use of patent, trademark or copyright protected material or otherwise protected intellectual property, to the extent it is caused 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. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right to indemnity which the Owner would otherwise have. The Contractor shall similarly, protect, indemnify the Owner, its officers, officials, employee, 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 provisions of the Contract. The indemnification obligations under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Workers' Compensation or Disability Benefit Acts or Employee Benefit Act.

"Claims, damages, losses and expenses" as these words are used in this Contract shall be construed to include, but not limited to (1) injury or damage consequent upon the failure of or use or misuse by Contractor, its Subcontractors, agents, servants or employees, of any hoist, rigging, blocking, scaffolding, or any and all other kinds of items of equipment, including those covered in the Illinois Structural Work Act whether or not the same be owned, furnished or loaned by Owner; (2) all attorneys' fees and costs incurred in bringing an action to enforce the provisions of this indemnity or any other indemnity contained herein; (3) time expended by the party being indemnified and their employees, at their usual rates plus costs of travel, long distance telephone and reproduction of documents; and (4) error or omission or defect in any submission made to Architect / Engineer for its approval or review. The Contractor and every subcontractor expressly waive all so-called *Kotecki* rights under the Illinois workers' compensation statutes even though the Owner has retained all such rights.

ARTICLE 4 ARCHITECT

4.1 General

4.1.2 Delete "Contractor" in line 2.

4.2 Administration Of The Contract

4.2.2 Add "as a representative of the Owner" after "The Architect" in the first line.

Delete "become generally familiar with" and replace with "supervise and to keep the Owner informed about" in line 2.

Add "to endeavor to guard the Owner against defects and deficiencies in the Work" after "Work completed" in line 3.

Delete "observed" after "to determine in general if the Work" in Line 3.

4.2.8 Delete “and may order minor changes in the Work as provided in Section 7.4” in the first sentence.

4.2.12 Add “to the Contractor” after “will not be liable” in the last line.

4.2.13 Delete section in its entirety

4.2.14 Re-number to “4.2.13”

ARTICLE 5 SUBCONTRACTORS

5.2 Award Of Subcontracts And Other Contracts For Portions Of The Work

5.2.1 Delete “14” and replace with “30” in line 4 and the last line.

Add “or any extension thereof” after “period” in the last line.

5.4 Contingent Assignment Of Subcontracts

5.4.3 Delete “If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor’s obligations under the subcontract.” at the end of section.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.2 Mutual Responsibility

6.2.2 Delete the last sentence.

ARTICLE 7 CHANGES IN THE WORK

7.2 Change Orders

7.2.1 Add “Methods used in determining adjustments to the Contract sum may include those listed in Section 7.3.3.” at the end of the section

7.3 Construction Change Directives

7.3.4 Add “and the Owner” after “the Architect” in the second line.

7.3.6 Add “and the Owner” after “the Architect” in the second line.

7.4 Minor Changes In The Work

Delete section in its entirety.

ARTICLE 8 TIME

8.3 Delays And Extensions Of Time

8.3.1 Delete “pending mediation and binding dispute resolution; or (5) by other causes that the

Contractor asserts and the Architect determines justify delay” after “or by delay authorized by the Owner” in line 4.

Add “Unless the date of commencement is established by the Contract Documents or a Notice to Proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work” at the end of the section.

8.3.1.1 Add the following subparagraph:

8.3.1.1 Contractor shall not participate in any secondary boycotts or honor any informational picket lines and shall not receive credit for days or costs associated with any such labor action.

ARTICLE 9 PAYMENTS AND COMPLETION

9.3 Applications For Payment

9.3.1 Add the following new sections after 9.3.1.2:

“**9.3.1.3.** The following forms must be used for pay requests (See Samples): (1) AIA Application & Certificate for Payment (G702 & G703); and (2) a Sworn Statement from Contractor and Subcontractor to Owner.”

“**9.3.1.4.** When the contract work has been awarded on a unit price bid basis, the form of each application shall follow the Bid Proposal Form, listing each item number, the total quantity of units completed to date of the estimate, the unit price and subtotal. The subtotal column shall be added to show the total cost of work completed to date, less ten (10%) percent to be withheld giving the total amount requested for payment. Previous applications for payment paid by the Owner shall be shown on each subsequent request and subtracted after the ten (10%) percent has been withheld.”

“**9.3.1.5.** Failure to supply waivers of lien or acceptable evidence of payment of all current accounts incurred by this Contract work will be considered grounds for withholding final payment.”

9.4 Certificates for Payment.

9.4.2 Add the words “by Owner and to a further evaluation of the Work” after “Work” and before “for conformance” in the second sentence.

9.7 Failure Of Payment

Delete this entire paragraph in its entirety and replace with the following: “If the Architect does not issue a recommendation for a Certificate for Payment, through no fault of the Contractor, or if the Owner either (i) does not reject the Architect’s recommendation for a Certificate for Payment, or (ii) does not pay the Contractor the amount accepted by the Owner as due and owing within 10 days after the date established for payment in the Contract Documents, then the Contractor may, upon seven days additional days’ written notice to the Owner, stop the Work. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor’s reasonable costs incurred of shutdown, and start-up, plus interest as provided for in the Contract Documents.”

9.8 Substantial Completion

9.8.4 Add “Contract Documents or the” after “unless otherwise provided in the” in the last sentence.

9.10 Final Completion And Final Payment

- 9.10.3** Delete paragraph in its entirety and replace with:
“The final payment by Owner shall not relieve the Contractor of the responsibility for the correction of any and all defects in the work performed. Contractor shall correct all defects as notified for the applicable warranty period after final payment.”
- 9.10.4** Delete paragraph in its entirety and replace with the following:
”The final payment by Owner shall not relieve the Contractor of the responsibility for the correction of any and all defects in the work performed. Contractor shall correct all defects as notified for a period of one year after final payment.”

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.3 Hazardous Materials

- 10.3.2** Delete “delay” before “and start-up” in the last line of paragraph.

ARTICLE 11 INSURANCE

11.1 Contractor’s Liability Insurance

Delete entire Article 11 and all references to Exhibit A to the A101-2017 and replace with the following:

Delete entire 11.1 and replace with the following:

11.1 Contractor’s Insurance Requirements

Contractor shall procure and maintain for the duration of the contract, insurance against claims for death, injuries to persons, or damages to property which may arise from or in connection with the performance of work hereunder by the Contractor, his agents, representatives, employees or subcontractors of the types and in the amounts listed in the Contract Documents and as set forth below.

11.1.1 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 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, Architect and Construction Manager shall be included as an insured under the CGL. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance afforded to Owner, Architect and Construction Manager. 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.

Where required by the Contract Documents, Contractor shall also maintain by endorsement or separate policy Contractors’ Pollution Legal Liability and/or Asbestos Legal Liability and/or Errors and Omissions (if project involves environmental hazards) with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.

11.1.2 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 three years following substantial completion of the work. Continuing CGL insurance 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.

11.1.3 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.

11.1.4 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 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 Contractors work.

11.1.5 Contractor's Obligation To Insure For Bodily Injury Claims

In addition to the above, all Contractors will purchase insurance to cover claims and expenses asserted against Architect, its employees and consultants for bodily injury, sickness, disease, or death cause by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable.

11.1.6 General Insurance Provisions

11.1.6.1 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.

11.1.6.2 Acceptability of Insurers. Insurers must be licensed in the State of Illinois and approved for the relevant line of coverage.

11.1.6.3 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.

11.1.6.4 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.

11.1.6.5 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."

11.2 Owner's Insurance

Delete Section 11.2 in its entirety and replace with the following:

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

11.2.2 Unless otherwise provided, the Owner shall maintain property insurance in the amount of the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or other entity other than Owner has an insurable interest in the property required by this Section 11.2 to be covered, whichever is later. This insurance shall include the interests of the Owner, the Contractor, subcontractors and Sub-Subcontractors in the Project. The Owner's insurance obligations under this paragraph may be satisfied by membership in programs of self-insurance or membership in an insurance pool.

11.2.2.1 Property insurance shall be on "all risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements and shall cover reasonable compensation for Architect's and Contractor's services for such insured loss.

11.2.2.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors, and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then

the Owner shall bear all reasonable costs properly attributable thereto.

- 11.2.2.3 If deductibles are not identified in the Contract Documents, the Contractor shall pay costs not covered because of deductibles.
- 11.2.2.3 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance.
- 11.2.3 Boiler and Machinery Insurance
The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interest of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.”
- 11.2.4 If the Contractor requests in writing that insurance for risks other and those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.
- 11.2.5 A loss insured under the Owner’s property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.
- 11.2.6 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner’s duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.
- 11.2.7 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner’s exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.
- 11.2.8 Notwithstanding any provision contained in Section 11.2, the Owner’s obligation to purchase insurance shall herein be deemed satisfied by the Owner’s membership in a self-insured risk management agency or pool. The Contractor agrees that any obligation the Owner has to purchase property insurance shall be satisfied by the Owner’s membership in a self-insured risk

management agency or pool. The Contractor further agrees that it will only have rights allowable to it under any coverage provided through the Owner's membership in a self-insured risk management agency or pool.

11.3 Waivers Of Subrogation

Delete Section 11.3 in its entirety (including the title) and replace with the following:

“11.3 Performance And Payment Bonds

11.3.1 Where the Contract Sum is equal to or greater than \$50,000.00, the Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Bond. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bonds shall be on standard AIA Documents, issued by the American Institute of Architects, shall be issued by a surety authorized by the Illinois Department of Insurance to issue surety bonds in Illinois and otherwise satisfactory to the Owner, and shall name the Owner as a primary co-obligee. The cost of the bonds is to be included in the Bid Proposal. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. Each Bidder shall list the name of the surety company that will be furnishing the Bonds on its Bid Proposal. The failure of a Bidder to list the name of its surety company on its Bid Proposal shall be a non-responsive bid. The failure of the successful Bidder to enter into a Contract and supply the required Bonds within ten (10) days after the Notice of Award or within such extended period as the Owner may grant if the forms do not meet its approval shall constitute a default, and the Owner may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids.

11.3.1.1 The Contractor shall deliver the required bonds to the Owner not later than three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

11.3.1.2 The contractor shall require the attorney-in-fact who executed the required bonds on behalf of the Surety to affix thereto a certified and current copy of the power of attorney.

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

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

11.3.5 The Contractor and all subcontractors shall name the Owner as an obligee on all bonds.

11.4 Loss Of Use, Business Interruption, And Delay In Completion Insurance

Delete Section 11.4 in its entirety.

11.5 Adjustment and Settlement of Insured Loss

Delete Section 11.5 in its entirety.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1 Uncovering Of Work

12.1.2 Add “with the consent of the Owner” after “the Architect” in line 2.

12.2 Correction Of Work

12.2.2.1Delete “unless the Owner has previously given the Contractor a written acceptance of such condition” after “shall correct it promptly after receipt of written notice from the Owner to do so” in line 5.

Delete “one-year” and replace with “applicable” in line 7.

12.2.2.3Delete section in its entirety.

ARTICLE 13 MISCELANEOUS PROVISIONS

13.1 Governing Law

Delete “excluding that jurisdiction’s choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.”

13.2 Successors And Assigns

13.2.1 Delete “Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract” and replace with “This Contract is nonassignable in whole or in part by Contractor, and an assignment shall be void without the prior written consent of Owner, which consent shall not be unreasonable withheld.”

13.4 Tests And Inspections

After 13.4.6 add new section “**13.4.7 Retests.** The cost of a retest will be borne by the party requesting the retest, unless the retest shows that the original test or the Work being tested was in error or defective, and in such event, the cost of the retest shall be borne by the other party.”

13.5 Interest

Delete Subparagraph 13.5. in its entirety. All references to interest payments throughout the contract documents are hereby voided. Payment is governed by the Illinois Local Government Prompt Payment

Act.

Add the following new sections after 13.5:

13.6 Sexual Harassment

13.6 The Contractor agrees to execute the attached “Contractor’s Certification Form Certifying Compliance With The Sexual Harassment Provision Of The Human Rights Act” contemporaneously with this Agreement.”

13.7 Bid Rigging

13.7 The Contractor agrees to execute the attached “Contractor’s Certification Under Article 33E Of The Criminal Code” contemporaneously with this Agreement.”

13.8 Tax Compliance

13.8 The Contractor agrees to execute the attached “Tax Compliance Affidavit” contemporaneously with this Agreement.”

13.9 Drugfree Workplace

13.10 The Contractor shall comply with the *Illinois Drug Free Workplace Act* as contained in the Illinois Compiled Statutes Ch. 30, Sec. 580/1 *et. seq.*”

13.12 Equal Employment Opportunity

“**13.12** All companies entering into contractual relationships with the Owner on federal or state-assisted projects must comply with the Illinois Preference Act and Federal Equal Opportunity regulations, including, but not limited to Executive Order 11246-11375.”

13.13 Record Keeping

“**13.13** Contractor and any subcontractor shall keep and maintain accurate books of record and account, in accordance with sound accounting principles, of all expenditures made and all costs, liabilities and obligations incurred under this Contract, and all papers, files, accounts, reports, cost proposals with backup data and all other material relating to work under this Contract and shall make all such materials available at the office of the Owner at any reasonable time during the term of this contract and for the length of time established by law or five (5) years, whichever is longer from the date of final payment to Contractor or termination of this Contract for audit, inspection and copying upon Owner's request. The Contractor agrees to maintain all records and documents for projects of the Owner in compliance with the Freedom of Information Act, 5 ILCS 140/1 *et seq.* In addition, the Contractor shall produce records which are responsive to a request received by the Owner under the Freedom of Information Act so that the Owner may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then the Contractor shall so notify the Owner and if possible, the Owner shall request an extension so as to comply with the Act. In the event that the Owner is found to have not complied with the Freedom of Information Act due to the Contractor’s failure to produce documents or otherwise appropriately respond to a request under the Act, then the Contractor shall indemnify and hold the Owner harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorneys’ fees and penalties.”

13.13 Substance Abuse Prevention

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

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

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

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

.b A prohibition against the actions for the use, possession, distribution or delivery of any drug or alcohol (as defined under the Act) or any employee under the influence of any said drug or alcohol while performing the Work;

.c A requirement that employees performing the Work submit to pre-hire, random, reasonable suspicion, and post-accident drug and alcohol testing. Testing of an employee before commencement of the Work is not required if the employee participated in a random testing program during the 90 days preceding the date on which the employee commenced work hereunder; and

.d A procedure for notifying an employee that he or she may not perform any of the Work if he or she: 1) uses, possess, delivers or is under the influence of a drug or alcohol as prohibited under the Act; 2) tests positive for the presence of a drug as outlined in the Act; or 3) refuses to submit to drug or alcohol testing as required under the Contractor’s substance abuse program until the employee tests negative for the presence of drugs or alcohol as outlined in the Act or has been approved to commence or return to work in accordance with the Contractor’s substance abuse program.

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

.4 Complying with all other requirements of the Act.

13.13.2 Failure by the Contractor to comply with the requirements of the Illinois Substance Abuse Prevention on Public Works Projects Act shall constitute a material default of the Contract and shall give the Owner the right to pursue any remedy available to it at law or in equity, including termination of this Contract for cause in the Owner’s sole discretion and any other remedy as provided in this Contract. In the event of a default hereunder, Contractor shall also pay to the Owner all damages Owner is entitled to under this Contract that arise from the default, together with interest, costs, and the Owner’s reasonable attorney fees.”

13.14 Contractor warrants that it is familiar with and shall comply with Federal, State and local laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Contract including without limitation Workers’ Compensation Laws, minimum salary and wage statutes and regulations, laws with respect to permits

and licenses and fees in connection therewith, laws regarding maximum working hours. No plea of misunderstanding or ignorance thereof will be considered.

13.14.1 Whenever required, the Contractor or Subcontractor shall furnish the Architect and Owner with satisfactory proof of compliance with said Federal, State and local laws, statutes, ordinances, rules, regulations, orders, and decrees.

13.14.2 Contractor shall carefully examine the Occupational Safety and health Act as issued by the Federal Register (OSHA), and the specific regulations governing procedures, techniques, safety precautions, equipment design, and the configuration of the same as required under this Act and shall comply with all terms of the Act and to perform and complete in a workmanlike manner all work required in full compliance with said Act.

13.14.3 Contractor shall comply with all terms of the Illinois Preference Act and all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission.

13.14.4 At all times Contractor shall remain in compliance with the Illinois Public Works Employment Discrimination Act (775 ILCS 10/1, et seq.) and the Illinois Human Rights Act (775 ILCS 5/2-101, et seq.), and in addition shall at all times comply with Section 2-105 of the Illinois Human Rights Act requiring a written sexual harassment policy as defined therein.

13.14.5 Contractor understands, represents and warrants to the Owner that the Contractor and its Subcontractors (for which the Contractor takes responsibility to insure that they comply with the above-mentioned Acts) are in compliance with all requirements and that they will remain in compliance for the entirety of the Work. A violation of any of the Acts set forth in this Article is cause for the immediate cancellation of the Contract. However, any forbearance or delay by the Owner in canceling this Contract shall not be considered as, and does not constitute, Owner's consent to such violation and a waiver of any rights the Owner may have, including without limitation, cancellation of this Contract.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 Termination By The Contractor

14.1.1 Delete ".4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2e."

14.1.3 Delete ", as well as reasonable overhead and profit on Work not executed, costs incurred by reason of such termination," at the end of section.

14.2 Termination By The Owner For Cause

14.2.1 Delete the term "repeatedly" any place it appears.

14.2.1.5 Add new Section 14.2.1.5 Failed to remedy a labor dispute in accordance with Section 3.4.7 of the General Conditions.

14.2.2 Delete section in its entirety and replace with "When any of the above reasons exist with the exception of 14.2.1.5, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor seven days' written notice, terminate employment of the Contractor and may,

.1 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by or leased to the Contractor;

.2 accept assignment of subcontracts pursuant to Paragraph 5.4; and

.3 finish the Work by whatever reasonable method the Owner may deem expedient.”

In the event the Owner terminates the contract because the Contractor has failed to remedy a labor dispute in accordance with Section 3.4.5 hereof, the Owner may, subject to any prior rights of the Surety, engage in all of the actions specified in Section 14.2.2.1, 14.2.2.2, and 14.2.2.3 upon only 24 hours’ notice to the Contractor.

ARTICLE 15 CLAIMS AND DISPUTES

15.1.1 Definition

Delete section in its entirety and replace with “A “Claim” is a written demand or assertion by the Contractor seeking adjustment to interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms or arising out of the Contract.”

15.1.2 Time Limits On Claims

Delete “but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 15.1.2

15.1.3 Notice of Claims

15.1.3.1

Delete “either” and “Owner or” from first line.

Delete “other party” and replace with “Owner”.

Delete “either party must” and replace with “Contractor must”.

Delete “claimant” and replace with “Contractor” in the last line.

15.1.3.2

Delete “either” and “Owner or” from first line.

Delete “other party” and replace with “Owner” in the third line.

15.1.4 Continuing Contract Performance

15.1.4.1 Delete section in its entirety and replace with “Pending final resolution of a Contractor’s Claim, the Contractor shall proceed diligently with the performance required of him under the Contract.”

15.1.6 Claims for Additional Time

After 15.1.6.2 add new subsection 15.1.6.3:

“**15.1.6.3 Unit Prices.** The Contractor shall be responsible for notifying the Owner of any discrepancies or additions to work items completed on a unit price basis. This notification must

take place prior to the execution of the Work. The purpose of this requirement is to make sure the Owner is aware of the extra items affecting the cost of the original contract amount. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the corrected sum thereof will be resolved in favor of the corrected sum.”

After 15.1.7, add new section “**15.1.8 Resolution of Disputes.**”

Add the following subsections to 15.1.8:

“**15.1.8.1 Venue.** Any suit or action arising under this Contract shall be commenced in the Circuit Court for the location of the Project, but only after exhausting all possible administrative remedies.”

“**15.1.8.2 Attorneys’ Fees and Costs.** In any suit or action arising under this Contract the prevailing party shall be entitled to an award of reasonable attorney's fees and costs of litigation.”

“**15.1.8.3 Limitations On Contractor’s Claims.** No suit or action shall be maintained by Contractor, its successors or assigns, against Owner on any claim based upon or arising out of this Contract or out of anything done in connection with this Contract unless such action shall be commenced within one year of the termination of this Contract.”

“**15.1.8.4 Waiver of Punitive Damages.** The Contractor and Owner waive all claims against each other for all punitive damages arising out of or relating to this Contract, but nothing in this Subparagraph 4.4.4 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.”

15.2 Initial Decision

15.2.1 Delete Third sentence (beginning “Except for those Claims excluded by this Section 15.2.1...”) and Fourth sentence (beginning “If an initial decision...”).

15.2.5 Delete last sentence (beginning “The initial decision shall be”)

Delete 15.2.6 and 15.2.6.1 in their entirety.

15.3 Mediation

Delete section 15.3 in its entirety, including all subparagraphs thereto.

15.4 Arbitration

Delete section 15.4 in its entirety, including all subparagraphs thereto.

SECTION 000800 – SUPPLEMENTARY CONDITIONS

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. The American Institute of Architects “AIA Document A201 – General Conditions of the Contract for Construction, 2007 Edition”, Articles 1 through 14 inclusive, are part of these Contract Documents. For brevity, this Document is referred to in the Contract Documents as the “General Conditions”.

1.2 SUPPLEMENTARY CONDITIONS

- A. The following Supplementary Conditions modify, change, delete from or add to, the General Conditions. Where any article of the General Conditions is modified or any paragraph, subparagraph or clause is modified, changed or deleted by these supplements, the unaltered provisions of that article, paragraph, subparagraph or clause shall remain in effect.

1.3 INSURANCE

- A. Contractor shall maintain, at its own expense, the following insurance coverages on an occurrence basis (except as to the coverage specified in subparagraph (a) below, which may be on a claims-made basis), insuring the Contractor, his employees, and agents, and the Indemnities as required herein (except that such agents shall not be insureds under the coverage specified in subparagraph (a) below), which insurance shall be placed with insurance companies rated at least “A Minus” by Best’s Key Rating Guide and shall incorporate a provision requiring the giving of written notice to Owner at least thirty (30) days prior to the cancellation or non-renewal of any such policies.
 - (a) Contractor’s Professional Liability Insurance [INTENTIONALLY OMITTED]
 - (b) Commercial General Liability Insurance (including limited form contractual liability and completed operations, explosion, collapse and underground hazards), covering personal injury, bodily injury and property damages in the amount of Two Million Dollars (\$2,000,000) per claim and aggregate, covering personal injury, bodily injury and property damage.
 - (c) Commercial Automobile Liability Insurance, including hired and non-owned vehicles, if any, in the amount of One Million Dollars (\$1,000,000) per claim and aggregate covering personal injury, bodily injury and property damage.
 - (d) Workmen’s Compensation Insurance in the amount of the statutory maximum with an Employer’s Liability coverage of at least Five Hundred Thousand Dollars (\$500,000).
 - (e) Umbrella or excess of loss coverage for Employer’s Liability, Comprehensive Liability and Auto Liability of not less than Five Million Dollars (\$5,000,000) for any one occurrence.

- (f) Contractor shall submit valid certificates and, if requested, policies, in form and substance satisfactory to Owner evidencing the effectiveness of the foregoing insurance policies along with original copies of the amendatory riders to any such policies to Owner for Owner's approval before Contractor commences the rendition of any services hereunder.

11.1.2.1 Insert new paragraph:

- (a) To the fullest extent permitted by law, the Contractor hereby agrees to indemnify, defend and hold the Owner, its directors, members, officers, agents, landlord, employees and the Architect and its consultants (collectively the "Indemnitees") harmless from all losses, claims, liabilities, injuries, damages and expenses, including attorneys' fees, that the Indemnitees may incur by reason for any injury or damage sustained to any person or property (including, but not limited to any one or more of the Indemnitees) arising out of or occurring in connection with the negligent performance or lack of performance by the Contractor of his duties and obligations under or pursuant to this Agreement.
- (b) The Contractor hereby agrees to maintain the insurance described in paragraph 11.1.2 herein during the term hereof and for such longer periods as may be set forth in said subparagraphs. If the Contractor fails to furnish and maintain the insurance required, the Owner may after written notice to Contractor purchase such insurance on behalf of the Contractor, and the Contractor shall pay the cost thereof to the Owner upon demand and shall furnish to the Owner any information needed to obtain such insurance.
- (c) Contractor shall insure specifically the indemnity contained in subparagraph 11.1.2.1(a) of this Agreement. Independent of its obligation to indemnify, Contractor shall also add each of the following as additional insureds by causing amendatory riders or endorsements to be attached to the insurance policies described in subparagraphs (b) and (c): Owner, Architect and their respective agents, officers, employees and consultants. The insurance coverage afforded under these policies shall be primary to any insurance carried independently by the Indemnitees. Said amendatory rights or endorsements shall indicate that as respects the Indemnities, there shall be severability of interests under said insurance policies for all coverages provided under said insurance policies."

11.1.2.2 Insert new paragraph:

"Failure of Owner to demand Certificates of Insurance and/or policies shall not constitute a waiver of the contractor's responsibility hereunder. Nor shall review and/or approval by either the Owner in any way relieve Contractor of its responsibility for furnishing sufficient amounts and coverages of insurance. Said endorsements or amendatory riders shall indicate that as respects said additional insured, there shall be severability of interests under said insurance policies. The Certificates and amendatory riders or endorsements shall clearly indicate the specific coverage (including contractual liability).

It is agreed and understood that under no circumstances shall the Contractor be relieved of providing insurance as required by this Contract. Contractor shall not be relieved of his obligation to provide insurance coverages as required herein and may not assert any defense of waiver, acquiescence, estoppel, or otherwise by the failure of Owner, or its agents to object to the form, content or absence of a Certificate. Owner reserves the right to inspect policies or other documents to verify that the Contractor complied with the provisions of this Contract regarding insurance coverage."

Insert new paragraph:

“Liability of Contractor and Subcontractor is Not Limited by Purchase of Insurance. Nothing contained in the insurance requirements of the Contract Documents is to be construed as limiting the liability of the Contractor, the liability of any Subcontractor of any tier, or either of their respective insurance carriers. Owner does not, in any way, represent that the coverages or limits of insurance specified are sufficient or adequate to protect the Owner, Contractor or any Subcontractor’s interest or liabilities, but are merely minimums. The obligation of the Contractor and every Subcontractor of any tier to purchase insurance shall not, in any way, limit their obligations to the Owner in the event that the Owner should suffer an injury or loss in excess of the amount recoverable through insurance, or any loss or portion of the loss which is not covered by either the Contractor’s or any Subcontractor’s insurance.”

Add new paragraph:

“Subcontractor’s Obligation to Obtain Insurance. The Contractor shall require that every Subcontractor of any tier obtain insurance of the same character as the Contractor, naming the same Additional Insureds as the insurance required of the Contractor. Before the commencement of any Work by any Subcontractor of any tier, the Contractor shall obtain and furnish the Owner and the Owner’s representative with Certificates of Insurance naming the Owner, the Owner’s representative, and all of their officers, directors, commissioners, officials, employees, consultants, volunteers and agents, as Additional Insureds on the insurance required to be obtained by each Subcontractor of any tier. Failure to submit such a certification signed by all Subcontractors shall be grounds to withhold payment in full or in part.”

B. Name the following as additionally insured:

OWNER: Lan-Oak Park District
2550 178th Street,
Lansing, Illinois 60438

LANDSCAPE ARCHITECT: Hitchcock Design Group
22 East Chicago Avenue
Suite 200A
Naperville, IL 60540

ENGINEER: Civiltech Engineering, Inc.
30 N. LaSalle St, Suite 3220
Chicago, Illinois 60602

1.4 BONDS

A. Provide within fourteen (14) days of Contract Award, a Performance Bond and Labor and Material Payment Bond for 100% of the Contract Sum.

- B. Furnish bond with a surety qualified to do business in the State of Illinois. Both the surety and the agency through which the bond is purchased shall be acceptable to the Owner.
- C. Form of bond: AIA Document A311, current edition, or as acceptable to Owner.
- D. The bond shall remain in effect until the end of the guarantee period described in the Contract Documents.
- E. Payment to the Contractor for the bond cost will be made based on the value stated in the Unit Price Schedule if identified separately.

1.5 AUTHORIZED REPRESENTATIVES

- A. When authorized by the Owner, the definition of the term “Architect” and/or “Owner’s Representative” in the General Conditions and Contract Documents is amended to mean “Landscape Architect”.
- B. The Landscape Architect has engaged the services of professional architectural and engineering consultants to prepare certain drawings and specifications, and to perform certain construction phase services. The definition of “Architect” and/or “Owner’s Representative” in the General Conditions and Contract Documents is amended to mean “Landscape Architect” and shall include such consultants.

1.6 LANDSCAPE ARCHITECT’S RESPONSIBILITY

- A. The Landscape Architect and its consultants are providing professional services to the Owner during the execution of the Contractor’s work, which includes, but is not limited to:
 1. Administration of a Pre-Construction meeting.
 2. Review and recommend acceptability of certain construction component samples.
 3. Observations of the construction work in progress at appropriate intervals.
 4. Recommendations regarding the Contractor’s applications for payment of partially, substantially and finally completed work.
 5. Recommendations regarding Contractor’s and Owner’s requests for change orders.
 6. Interpretation and recommendations regarding required testing by the independent testing agency of items such as subgrade materials, concrete paving, and asphalt paving.

1.7 OWNER FURNISHED WORK

- A. In addition to Owner’s responsibilities outlined in the General Conditions, the Owner will provide the following for this work:
 1. A topographic survey of the project area. The Owner does not guarantee the accuracy of the information.
 2. Items indicated below:
 - P Shelter
 - P Basketball outfit
 - P Solar LED parking lights
 - PI Benches
 - PI Litter receptacles

- PI Picnic tables
- P Provided by owner / installed by contractor
- PI Provided and installed by owner

1.8 MAINTENANCE

- A. Maintain and protect from vandalism until written Final Acceptance of Completed Work by the Landscape Architect and Owner.
- B. Contractor shall take normal precautions to protect from vandalism but shall not be held responsible for correction of damage caused by vandalism, with the exception of the concrete paving and curb work. ALL concrete paving and curbing shall be replaced by the Contractor at no cost to the Owner if damaged by vandalism. Normal precautions may be defined as temporary fencing, signage or placing watchmen.

1.9 USE OF WORK

- A. Prior to Final Acceptance, the Owner may use any part of the partially completed work without objection or interference by the Contractor. Such use does not constitute Final Acceptance or approval of the work or relieve the Contractor of the maintenance requirements.

1.10 LIQUIDATED DAMAGES

- A. See Section 000800 Supplementary Conditions for additional information.
- B. Contractor acknowledges that Owner is entitled to full and beneficial occupancy and use of the completed Work following expiration of the Contract Time and that the Owner will enter into agreements and make commitments to rent, lease or demise all or part of the premises where the Work is to be completed, all based on Contractor's agreement to achieve Substantial Completion of the Work within the Contract Time. Contractor further acknowledges and agrees that if Contractor fails to achieve Substantial Completion of the Work within the Contract Time, Owner will sustain extensive damages and loss as a result. The exact amount of such damages are difficult or impossible to quantify at the time of execution of this Agreement. As an additional inducement to Owner to enter into this Agreement, Owner and Contractor therefore agree as follows:
- C. If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, Owner shall be entitled to retain or recover from Contractor, as liquidated damages and not as a penalty, the following per diem amounts, commencing on the first day following expiration of the Contract Time and continuing until actual achievement of Substantial Completion. The Contractor acknowledges and agrees that liquidated damages of \$500 per day are appropriate given the relative difficulty of determining the amount of damages that Owner will suffer or incur by virtue of Contractor's failure to complete the Work in all respects by the scheduled Final Completion Date, and that said amount per day is a reasonable amount under the circumstances.

- D. Owner may deduct liquidated damages described in subparagraph above from any unpaid amounts then or thereafter due the Contractor under this Agreement. Any liquidated damages not so deducted from unpaid amounts due the Contractor shall be payable to the Owner upon written demand, together with interest from the date of the demand at the rate of one percent (1%) per month.

1.11 ACTUAL DAMAGES

- A. In addition to recovery of liquidated damages if the Contractor fails to achieve Final Completion of the Work within the Contract Time, Owner shall be entitled to retain or recover from the Contractor, Landscape Architect and Engineering Fees for all services required after the Final Completion Date.”

1.12 CONTRACT TIME

- A. Begin work no later than the time specified in the Contract or separate Notice to Proceed.
- B. Execute the work diligently in order to meet the Construction Schedule and the completion date.
- C. Obtain Substantial Completion of the work on or before date indicated in the Invitation to Bid unless additional time has been granted by the Owner.
- D. Unless otherwise provided in the Contract Documents, the Contractor shall make no charge or claim whatsoever for any hindrance or delay in the progress of the work.
- E. Contractor initiated change proposals for an increase in contract time must be submitted no later than 14 days after the identification of a delay.
- F. Contract time can be adjusted by written change order only. Verbal direction will not be acceptable.

1.13 PAYMENT

- A. Submit applications for payment to the designated Owner’s Representative. Applications for payment must be approved in writing by the Owner’s Representative before submittal to the Owner. Ten percent (10%) of the amount due will be retained from payments for completed work that has received preliminary acceptance from the Owner’s Representative. Additional amounts, determined by the unit prices may be withheld at the discretion of the Owner’s Representative or Owner in order to ensure proper completion of the work. Properly completed labor and material waivers must accompany all payment requests. The retained amount will be authorized for payment only after final written acceptance by the Owner’s Representative.
- B. No payments will be made for material ordered, stored at the Contractor’s facilities, or stored on site without prior approval from Owner.
- C. Payment recommendations will be based on the Owner’s Representative’s opinion of the percentage complete of each line item in the Schedule of Values as stated by the Contractor in the application for payment.

- D. Payment Requests must be submitted with sufficient time for the Owner's Representative to review and make a recommendation to the Owner prior to the payment period cut-off date. Incomplete or inaccurate payment requests will not be processed until the following regularly scheduled payment period.

1.14 GUARANTEE

- A. Guarantee all work for one year following the date of Final Acceptance by the Landscape Architect and Owner. At the end of the guarantee period, the Contractor must replace all work that does not comply with the Contract Documents or is in an unsatisfactory condition as determined by the Owner or Owner's Representative.
- B. Following Final Acceptance, the Contractor is not responsible for damage caused by vandalism, abnormal usage, acts of God or alterations made to previously accepted work made by anyone other than his own personnel.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000800

GENERAL REQUIREMENTS

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Work phases.
 - 3. Work provided by Owner.
 - 4. Use of premises.
 - 5. Owner's occupancy requirements.
 - 6. Specification formats and conventions.
- B. See Division 01 Section "Multiple Contract Summary" for division of responsibilities for the Work.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: BOCK PARK PHASE ONE
 - 1. Project Location: 17500 Lorenz Avenue, Lansing, Illinois 60438
- B. Owner: Lan-Oak Park District
 - 1. Owner's Representative: Sharon Desjardins
 - 2. Landscape Architect: Hitchcock Design Group, 22 E. Chicago Avenue, Suite 200A, Naperville, Illinois 60540
 - 3. Civil Engineer: Civiltech Engineering, Inc., 30 North LaSalle Street, Suite 3220, Chicago, Illinois 60602
- C. The Work consists of the following:
 - 1. Site preparation, construction fencing, temporary erosion control measures, site removals and clearing, earth work operations, storm sewer utilities, cast-in-place concrete footings, sporting equipment installation, shelter installation, pedestrian asphalt paving, sport court paving, concrete walks & curbs, parking lot lighting, site furnishings, native planting, and seeding.
- D. Project will be constructed under a single prime contract.

1.3 WORK PHASES

- A. The Work shall be completed in a single phase.

1.4 WORK BY OWNER

A. General: Cooperate fully with separate contractors or Owner's work forces so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

B. Bock Park

PI	benches	6	EA
PI	litter receptacles	4	EA
PI	picnic tables	4	EA
P	shelter - 24' x 34' - Illini shelter	1	LS
P	basketball outfit	7	EA
P	solar LED parking lot / commercial area light	2	EA

KEY

PI	Owner Provided and Installed
P	Owner Provided Only, Contractor Installed (including offloading)

1.5 USE OF PREMISES

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

1.6 OWNER'S OCCUPANCY REQUIREMENTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building or site, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. Landscape architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.

2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.

3. Before partial 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 building or site.

4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building or site.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.
 1. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. 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. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. See Division 01 Section "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

- A. Unit price is stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

- A. Unit Price No. 1: Over excavate and Backfill with Structural Fill:
 - 1. Description: If subgrade proof roll test fails, over excavate and backfill with structural fill as determined by testing agency to the extents determined by test results, according to Division 31 Section 312000 Earth Moving.

2. Unit of Measurement: CUBUC YARD (CY)

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

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

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1 – Shelter Lighting and Electrical Connection:

1. Add electrical connection to shelter
2. Add furnish and installation of shelter light
3. Add furnish and installation of gfi receptacles to be added at shelter post electrical cutouts (as shown in detail)

B. Alternate No. 2 – Reuse Existing Parking Lot Base for Sport Court:

1. Deduct new base material from asphalt paving – sport court (as shown in detail)
2. Add modification/adjustments to existing base material for use as base material below asphalt paving – sport court
3. Add import of additional material or export of excess material (as needed)

END OF SECTION 012300

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

- A. Owners Representative will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, as Supplemental Instructions.

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Owners Representative will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Owners Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.

2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

1.4 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor.

1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets, Submittals Schedule, and Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Landscape Architect.
 - c. Landscape Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 2. Submit draft of AIA Document G703 Continuation Sheets.
 - 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - 6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 7. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Owners Representative and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 or forms acceptable to Owner as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owners Representative will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit signed and notarized original copies of each Application for Payment to Owners Representative by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule (preliminary if not final).
 - 4. Submittals Schedule (preliminary if not final).
 - 5. List of Contractor's staff assignments.
 - 6. Copies of building permits.
 - 7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

8. Initial progress report.
 9. Certificates of insurance and insurance policies.
- H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Project meetings.
 - 3. Requests for Interpretation (RFIs).
- B. See Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts

and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.4 SUBMITTALS

A. Format: Digital submittals are preferred when available.

B. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
2. Sheet Size: At least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
3. Number of Copies: Submit two opaque copies of each submittal. Owners Representative will return one copy.
4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.

1.5 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Owners Representative of scheduled meeting dates and times.
- B. Preconstruction Meeting: Schedule a preconstruction meeting before starting construction, at a time convenient to Owner and Owner's Representative, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
 - 1. Attendees: Authorized representatives of Owner, Owner's Representative, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Preparation of Record Documents.
 - l. Use of the premises.
 - m. Work restrictions.
 - n. Owner's occupancy requirements.
 - o. Responsibility for temporary facilities and controls.
 - p. Construction waste management and recycling.
 - q. Parking availability.
 - r. Office, work, and storage areas.
 - s. Equipment deliveries and priorities.
 - t. First aid.
 - u. Security.
 - v. Progress cleaning.
 - w. Working hours.
 - 3. Minutes: Owners Representative will record and distribute meeting minutes.
- C. Preinstallation Meeting: Conduct a preinstallation meeting at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Owners Representative of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. The Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at regular intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Owners Representative, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) RFIs.
 - 16) Status of proposal requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
 - c. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
 1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Owners Representative.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
- C. Owners Representative's Action: Owners Representative will review each RFI, determine action required, and return it. Allow seven working days for Owners Representative's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Owners Representative's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Owners Representative's action may include a request for additional information, in which case Owners Representative's time for response will start again.
 3. Owners Representative's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Owners Representative in writing within 10 days of receipt of the RFI response.
- D. On receipt of Owners Representative's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Owners Representative within seven days if Contractor disagrees with response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number.
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Owners Representative.

4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Owners Representative's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Submittals Schedule.
 - 3. Field condition reports.
- B. See Division 01 Section "Payment Procedures" for submitting the Schedule of Values.

1.2 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- C. Field Condition Reports: Submit two copies at time of discovery of differing conditions.

1.3 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for Notice of Award to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than [20] <Insert number> days, unless specifically allowed by Architect.
 - 2. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 - 3. Startup and Testing Time: Include not less than seven days for startup and testing.
 - 4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - 1. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 - 2. Work Stages: Indicate important stages of construction for each major portion of the Work.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 14 days of date established the Notice of Award. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.

- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require 3 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.4 REPORTS

- A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At progress meetings, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. See Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule.
- C. See Division 01 Section "Quality Requirements" for submitting test and inspection reports and mockup requirements.
- D. See Division 01 Section "Closeout Procedures" for submitting warranties.
- E. See Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Preferred submittal format is digital PDF.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 01 Section "Project Management and Coordination" for list of submittals and time requirements for scheduled performance of related construction activities.

- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Owners Representative's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Owners Representative will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- E. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.

3. Resubmit submittals until they are marked "Exceptions Noted, Do Not Resubmit" or "No Exceptions Taken" by the Architect.
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals with marked with "Exceptions Noted, Do Not Resubmit" or "No Exceptions Taken" by Architect.

1.4 CONTRACTOR'S USE OF LANDSCAPE ARCHITECT'S CAD FILES

- A. General: At Contractor's written request, copies of Landscape Architect's CAD files will be provided to Contractor for Contractor's use in connection with the Project, subject to the following conditions:
 1. Conditions agreed upon at time of transfer.

PART 2 - PRODUCTS

2.1 FORMAT

- A. Digital submittals are preferred for data and drawing related submittals when available.

2.2 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with specified referenced standards.
 - i. Testing by recognized testing agency.
 4. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Architect will return one copy. Mark up and retain one returned copy as a Project Record Document.

- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Notation of coordination requirements.
 - j. Notation of dimensions established by field measurement.
 - k. Relationship to adjoining construction clearly indicated.
 - l. Seal and signature of professional engineer if specified.
 - m. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
 3. Number of Copies: Submit two opaque (bond) copies of each submittal. Architect will return one copy.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Owners Representative will return submittal with options selected.
- E. Submittals Schedule: Comply with requirements specified in Division 01 "Construction Progress Documentation"

- F. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
 - 1. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Architect will return two copies.

2.3 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Owners Representative will not return copies.
 - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - 3. Test and Inspection Reports: Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- K. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- L. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- M. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- N. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- O. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - 1. Statement on condition of substrates and their acceptability for installation of product.
 - 2. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
- P. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- Q. Material Safety Data Sheets (MSDSs): Submit information as required to Owners Representative.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Owners Representative.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 OWNERS REPRESENTATIVE'S ACTION

- A. General: Owners Representative will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Owners Representative will review each submittal, make marks to indicate corrections or modifications required, and return it. Owners Representative will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
 - No Exceptions Taken.
 - Exceptions Noted, Do Not Resubmit.
 - Exceptions Noted, Resubmit.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-control services required by Owners Representative, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. See Divisions 02 through 49 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Owners Representative.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- G. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Owners Representative for a decision before proceeding.

1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.5 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- E. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- F. **Mockups:** Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 - 2. Notify Owners Representative seven days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Owners Representative's approval of mockups before starting work, fabrication, or construction.
 - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.6 QUALITY CONTROL

- A. **Owner Responsibilities:** Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
- B. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- C. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- E. Coordination: Coordinate sequence of activities to accommodate required quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

PART 2 - EXECUTION

2.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 - 2. Comply with the Contract Document requirements for Division 01 Section “Cutting and Patching”.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA)
CFR	Code of Federal Regulations
CRD	Handbook for Concrete and Cement
FS	Federal Specification
FTMS	Federal Test Method Standard (See FS)
UFAS	Uniform Federal Accessibility Standards

1.3 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

AASHTO	American Association of State Highway and Transportation Officials
ACI	ACI International (American Concrete Institute)
ACPA	American Concrete Pipe Association
AF&PA	American Forest & Paper Association
AGC	Associated General Contractors of America (The)
AI	Asphalt Institute
AIA	American Institute of Architects (The)
AISC	American Institute of Steel Construction

AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALCA	Associated Landscape Contractors of America
ALSC	American Lumber Standard Committee, Incorporated
ANSI	American National Standards Institute
AOSA	Association of Official Seed Analysts
APA	APA - The Engineered Wood Association
APA	Architectural Precast Association
ASCE	American Society of Civil Engineers
ASTM	ASTM International (American Society for Testing and Materials International)
AWI	Architectural Woodwork Institute
AWS	American Welding Society
BIA	Brick Industry Association (The)
CLFMI	Chain Link Fence Manufacturers Institute
CPPA	Corrugated Polyethylene Pipe Association
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute (The)
CSSB	Cedar Shake & Shingle Bureau
EJMA	Expansion Joint Manufacturers Association, Inc.
FSC	Forest Stewardship Council
IESNA	Illuminating Engineering Society of North America
ILI	Indiana Limestone Institute of America, Inc.
ISO	International Organization for Standardization
LPI	Lightning Protection Institute
NCAA	National Collegiate Athletic Association (The)

NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NFHS	National Federation of State High School Associations
NRMCA	National Ready Mixed Concrete Association
NSSGA	National Stone, Sand & Gravel Association
PCI	Precast/Prestressed Concrete Institute
TMS	The Masonry Society
TPI	Turfgrass Producers International
UL	Underwriters Laboratories Inc.
UNI	Uni-Bell PVC Pipe Association
USGBC	U.S. Green Building Council

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

BOCA	BOCA International, Inc. (Now ICC)
CABO	Council of American Building Officials (Now ICC)
ICBO	International Conference of Building Officials (Now ICC)
ICC	International Code Council (Formerly: CABO - Council of American Building Officials)

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

CE	Army Corps of Engineers
CPSC	Consumer Product Safety Commission
EPA	Environmental Protection Agency
OSHA	Occupational Safety & Health Administration

E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

IDOT	Illinois Department of Transportation
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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. See Division 01 Section "Execution" for progress cleaning requirements.

1.2 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

1.3 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Construction Fence: 6' height chain link fence with top and bottom rails, supported direct bury or stanchion mounted posts at 8' spacing.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

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

3.2 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Park in accordance with local code and per Owner's direction.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 - 2. Remove snow and ice as required to minimize accumulations.
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- C. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- E. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As indicated on Drawings
- F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- G. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than

Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Tree Pruning Schedule: Written schedule from arborist detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
- C. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- D. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

1.3 QUALITY ASSURANCE

- A. Arborist Qualifications: An arborist certified by ISA or licensed in the jurisdiction where Project is located.
- B. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Tree Protection: High Density Polyethylene Snow Control Barrier Fence fabric as distributed by Discount Fence Supply 800.878.7829 or approved equal, Model #SF50, Color Orange; a minimum of 48 inches high; with t-posts; with tie wires, hog ring ties, and other accessories for a complete fence system.
- B. T-Posts: 1-1/2" x 6' heavy duty steel studded T-posts.
- C. Organic Mulch: Shredded hardwood bark mulch free from deleterious materials.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Temporary Fencing: Install temporary fencing around tree protection zones to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- C. Mulch areas inside tree protection zones and other areas indicated.
 - 1. Apply 3-inch average thickness of organic mulch. Do not place mulch within 6 inches of tree trunks.
- D. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.

3.2 EXCAVATION

- A. Install shoring or other protective support systems to minimize sloping or benching of excavations.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where utility trenches are required within tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
 - 1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.3 REGRADING

- A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones.
- B. Minor Fill: Where existing grade is 6 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

3.4 TREE PRUNING

- A. Prune trees to remain that are affected by temporary and permanent construction.

- B. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
- C. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
- D. Cut branches with sharp pruning instruments; do not break or chop. Disinfect tools between uses.
- E. Chip removed tree branches and dispose of off-site.

3.5 TREE REPAIR AND REPLACEMENT

- A. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

3.6 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess excavated material and displaced trees from Owner's property.

END OF SECTION 015639

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. See Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
- C. See Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.2 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use contractor provided form.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.

- c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 10 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order.
 - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.
- B. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- 1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 10 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
 - b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

- B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

- C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.

6. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
7. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Architect will consider requests for substitution if received at time of bid submittal. Requests received after that time may be considered or rejected at discretion of Architect.
- B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 7. Requested substitution is compatible with other portions of the Work.
 8. Requested substitution has been coordinated with other portions of the Work.
 9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

- A. Conditions: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field Engineering and surveying.
 - 3. General installation of products.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
 - 7. Correction of the Work.
- B. See Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.

2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 2. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Lay out the Work using accepted surveying practices.
1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 3. Inform installers of lines and levels to which they must comply.
 4. Check the location, level and plumb, of every major element as the Work progresses.
 5. Notify Architect when deviations from required lines and levels exceed allowable tolerances.

- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and. Items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.7 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. See Divisions 2 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.2 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information: describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided; list products to be used and firms or entities that will perform the Work; indicate when cutting and patching will be performed.
 - 1. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
 - 2. Owner's Representative's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.3 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Owner's Representative's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 017329

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.
- B. See Division 01 Section "Selective Structure Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements.
- C. See Division 02 Section "Structure Demolition" for disposition of waste resulting from demolition of buildings, structures, and site improvements.
- D. See Division 31 Section "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.
- E. See Division 04 Section "Unit Masonry" for disposal requirements for masonry waste.
- F. See Division 04 Section "Stone Masonry" for disposal requirements for excess stone and stone waste.

1.2 DEFINITIONS

- A. Construction Waste: Site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 SUBMITTALS

- A. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- B. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - 2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until installation.
 - 4. Protect items from damage during transport and storage.
 - 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Sale and Donation: Not permitted on Project site.
- C. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 4. Store components off the ground and protect from the weather.
 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.
- B. See Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
- C. See Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
- D. See Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs[**and photographic negatives**], damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems.
 - 9. Submit test/adjust/balance records.
 - 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 11. Advise Owner of changeover in utilities.

12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner's Representative will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Owner's Representative, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit certified copy of Owner's Representative's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner's Representative. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner's Representative will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: request reinspection when the work identification in previous inspections as incomplete is completed or corrected.

1.5 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Owner's Representative for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

- b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Remove labels that are not permanent.
 - i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - j. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - k. Replace parts subject to unusual operating conditions.
 - l. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - m. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation manuals for systems, subsystems, and equipment.
 - 2. Maintenance manuals for the care and maintenance of products, materials, and finishes, and systems and equipment.
- B. See Divisions 02 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.2 SUBMITTALS

- A. Manual: Submit one copy of each manual in final form at least 10 days before final inspection. Architect will return copy with comments within 10 days after final inspection. Digital files in PDF format will be accepted.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit 1 copy of each corrected manual within 7 days of receipt of Architect's comments.

PART 2 - PRODUCTS

2.1 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name, address, and telephone number of Contractor.
 - 6. Name and address of Architect.
 - 7. Cross-reference to related systems in other operation and maintenance manuals.

- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder. Digital files in PDF format will be accepted.
 - 1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 - 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 - 4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
- B. Descriptions: Include the following:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.
 - 4. Equipment function.
 - 5. Operating characteristics.
 - 6. Limiting conditions.
 - 7. Performance curves.
 - 8. Engineering data and tests.
 - 9. Complete nomenclature and number of replacement parts.

- C. Operating Procedures: Include start-up, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed and identify color-coding where required for identification.

2.3 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
 1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product,

list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

- C. **Manufacturers' Maintenance Documentation:** Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment:
- D. **Maintenance Procedures:** Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions that detail essential maintenance procedures.
- E. **Maintenance and Service Schedules:** Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. **Spare Parts List and Source Information:** Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. **Maintenance Service Contracts:** Include copies of maintenance agreements with name and telephone number of service agent.
- H. **Warranties and Bonds:** Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. **Emergency Manual:** Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. **Product Maintenance Manual:** Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- C. **Operation and Maintenance Manuals:** Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- D. **Manufacturers' Data:** Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- E. **Drawings:** Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and

flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

1. Do not use original Project Record Documents as part of operation and maintenance manuals.
- F. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. See Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
- C. See Divisions 02 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up Record Prints in Adobe PDF format and AutoCAD format.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications in Adobe PDF format.
- C. Record Product Data: Submit one copy of each Product Data submittal in Adobe PDF format.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.

- b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
2. Contractor shall obtain an as-built survey of the project improvements prepared and stamped by a professional surveyor licensed in the state of Illinois and inserted into the existing survey coordinate system.
3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
4. Format: Identify and date each Record Drawing; include designation "PROJECT RECORD DRAWING" in a prominent location.
5. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
6. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Owner's Representative.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. Note related Change Orders and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Owner's Representative's reference during normal working hours.

END OF SECTION 017839

TECHNICAL SPECIFICATIONS

DIVISION 03 - CONCRETE

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
- B. See Division 31 Section "Earth Moving" for drainage fill under slabs-on-grade.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture.
- C. Concrete Cylinder Testing.
- D. Subgrade inspection report and boring capacity.

1.3 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. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

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, plain, fabricated from as-drawn steel wire into flat sheets.
- C. 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 II.
 - a. Fly Ash: ASTM C 618, Class C.
 - b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- B. Normal-Weight Aggregates: ASTM C 33, graded, 3/4-inch nominal maximum coarse-aggregate size.
 - 1. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Lightweight Aggregate: ASTM C 330, 1/2-inch nominal maximum aggregate size.
- D. Water: ASTM C 94/C 94M and potable.
- E. Air-Entraining Admixture: ASTM C 260.
- F. 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.

2.4 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

- B. Water: Potable.
- C. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

2.5 RELATED MATERIALS

- A. Expansion – and Isolation Joint-Filler Strips: 1/2 – inch thick, polyethylene, closed cell, expansion joint-filler with strip cap.

2.6 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. Proportion normal-weight concrete mixture as follows:
 1. Minimum Compressive Strength 4000 psi at 28 days.
 2. Maximum Water-Cementitious Materials Ratio:0.40.
 3. Slump Limit: 3 inches, plus or minus 1 inch.
 4. Air Content: 3 percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.

2.7 FABRICATING REINFORCEMENT

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

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M 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.

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. Retain one of two options in paragraph below. ACI 301 requires chamfers, unless otherwise specified.

- C. Provide 1/2" chamfer of 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.
- B. Place expansion joint materials with caulk around all embedded items.

3.3 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 of concrete thickness as follows:
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 - 2. 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.

3.4 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.

3.5 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 below finished grade.
- 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 above finished grade.
 - 2. Apply rubbed finish to these surfaces.
- C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:
 - 1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
- D. 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.

3.6 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

3.7 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. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. 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. 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.

3.8 CONCRETE SURFACE REPAIRS

- 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.

3.9 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
 1. Testing Services: Tests shall be performed according to ACI 301.
 2. Contractor to pull 4 cylinders for every 50CY of concrete for compression testing. One at 7 days, two at 28 days, and a spare.

END OF SECTION 033000

DIVISION 11 – EQUIPMENT

SECTION 116600 – ATHLETIC EQUIPMENT

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide all equipment and materials and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:
 - 1. Basketball post
 - 2. Basketball backboard
 - 3. Basketball goal ring and net

1.2 REFERENCES

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. American Sports Builders Association (ASBA)

1.3 SUBMITTALS

- A. Manufacturers Product Data
 - 1. Provide manufacturers product data prior to actual field installation work, for Architect's or Owner's representative's review.
- B. Shop Drawings
 - 1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architect's or Owner's representative's review.

1.4 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.5 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 - PRODUCTS

2.1 Basketball Post

- A. Single Post Gooseneck Basketball Post as manufactured by:
1. PW Athletic Mfg. Co. 2 Industrial Dr, PO Box 1290, Salem, IL 62881 Phone: 618-548-2890, <https://pwathletic.com/> or approved equal
 2. Model 1520 G, Gooseneck Post 4-1/2" O.D., 5' Offset, Galvanized

2.2 Basketball Backboard

- A. Heavy Duty Cast Aluminum Powder Coated White as manufactured by:
1. PW Athletic Mfg. Co. 2 Industrial Dr, PO Box 1290, Salem, IL 62881 Phone: 618-548-2890, <https://pwathletic.com/> or approved equal
 2. Model 22, Aluminum "Fan" Basketball Backboard

2.3 Basketball Goal and Net

- A. Basketball Goal Rings and Nets as manufactured by:
1. PW Athletic Mfg. Co. 2 Industrial Dr, PO Box 1290, Salem, IL 62881 Phone: 618-548-2890, <https://pwathletic.com/> or approved equal
 2. Model 45, Heavy Duty Double Rim Goal Ring
 3. Model 34, Super Nylon Net

PART 3 - EXECUTION

3.1 INSTALLATION OF EQUIPMENT

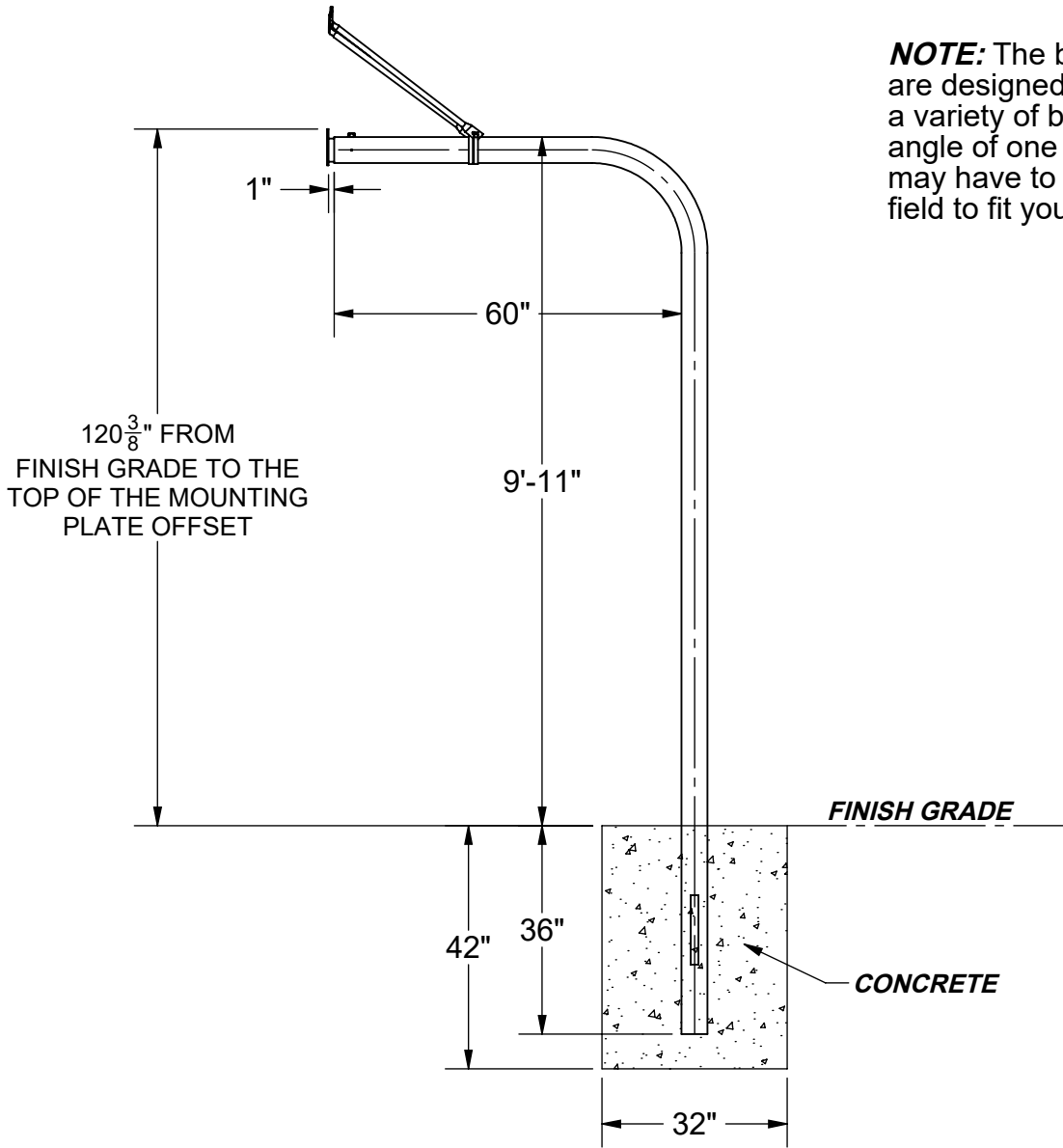
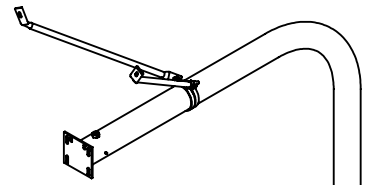
- A. All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

END OF SECTION 011660

SINGLE BASKETBALL POST

MODEL #1520 4-1/2" O.D. WITH 5' OFFSET (195 LBS)

Verify the vertical position of the mounting plate using a level.



NOTE: The backboard braces are designed to accommodate a variety of backboards. The angle of one end of the brace may have to be adjusted in the field to fit your backboard.

OPTIONAL ANTI-SPIN

SPECIFICATIONS:

Material: Support post is a single length of 4-1/2" O.D. galvanized steel formed to provide a graceful 5 ft. offset. Backboard mount is a 6-1/4" x 6-1/2" steel plate welded to the sleeve adapter and mounted to the support post with a set screw and drive pins.

A pair of diagonal braces, 1" O.D. galvanized steel, is mounted between the backboard and the post. Braces bolt to the backboard and are secured to the post with a pair of brace bands formed to fit the post diameter.

All welds are ground smooth and either treated with cold-galvanizing compound or prepared for powder coating, depending on the finish selected. All the hardware is zinc-plated for long rust-free service.



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 Drawn: MT
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SPECIFICATION / INSTALLATION INSTRUCTIONS

SINGLE GOOSENECK POST

MODEL NO.

1520-SPEC

PERMANENT FOOTING DETAIL

NOTE: Footing sizes are based on average soil conditions. Loose and/or sandy soil is not average and footing sizes must be increased accordingly to meet soil conditions and local building codes and specifications. Post depth is approximate and should be adjusted to ensure that the top of the Gooseneck offset post is **9'-11"** above finish grade.

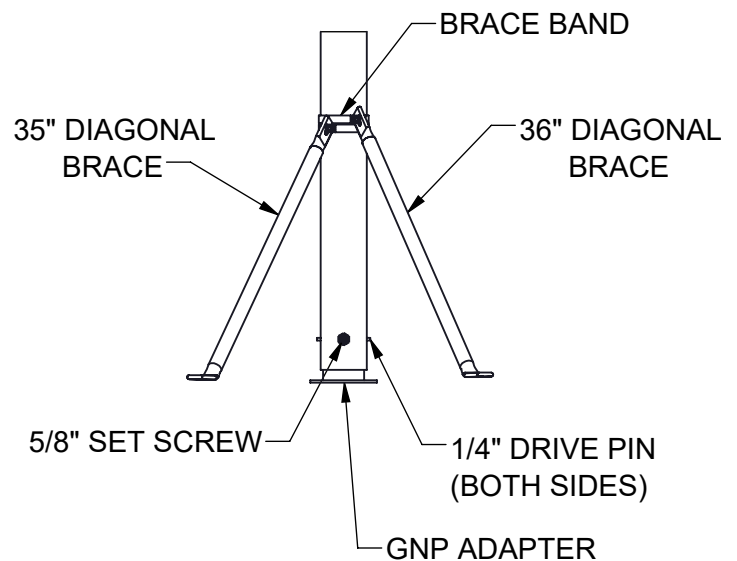
INSTALLATION INSTRUCTIONS:

1. Dig a hole in the desired location per footing chart dimensions. Set the bottom of the post in the center of the hole and shim from below or fill such that the top of the Gooseneck Post on the offset is **9'-11"** above finish grade. Plumb the post true vertical and brace. **NOTE:** The top of the rim will be at 10' when installed.

NOTE: Verify that the backboard mounting plate is perpendicular to the surface by using a vertical level before pouring the concrete.

2. Pour the concrete and allow it to set for 3 days before the removal of bracing and completion of the installation. Cover the footings with turf or court materials.
3. Attach the diagonal braces with the brace bands and carriage bolts provided. Slide both brace bands onto the post and attach with the carriage bolts and lock nuts.
4. Refer to backboard installation instructions to complete backboard & GNP Adapter installation.
5. Slide the brace bands and braces toward the back of the backboard until the opposite end of the diagonal brace aligns with attachment angles or nuts. **NOTE:** Attach the diagonal braces either to welded nuts or attachment angles, depending on the backboard.
6. Tighten all the bolts.
7. Once everything is tightened, drill 1/4" Drive Pin holes in the GNP Adapter through the Gooseneck holes on the left and right side of the offset end with an undersized 7/32" drill bit.
8. Install the drive pins.

Packing Slip	Qty
4-1/2" O.D. Gooseneck Post 5' Offset	1
4" GNP Adapter	1
35" Diag. Brace	1
36" Diag. Brace	1
4-1/2" O.D. Brace Band	2
Hardware Kit	Qty
5/16"-18 x 1-1/4" Carriage Bolt	2
5/16"-18 Nylock Nut	2
5/8"-11 x 1" Socket Head Set Screw	1
1/4" SS Drive Pin	2



TOP VIEW



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SPECIFICATION / INSTALLATION INSTRUCTIONS

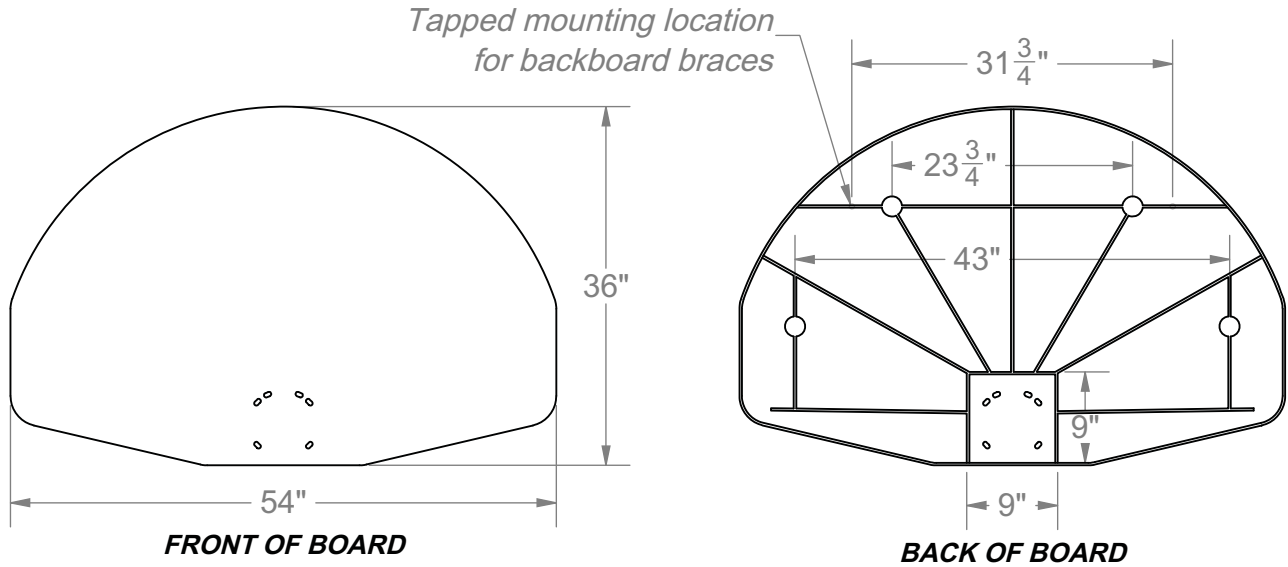
SINGLE POST GOOSENECK

MODEL NO.

1520-SPEC

BASKETBALL BACKBOARD

MODEL #22 HEAVY DUTY CAST ALUMINUM POWDER COATED WHITE (50 LBS)



Instructions for installation of backboards to PW Athletic posts ONLY. For other manufacturer's posts and backboards, please consult installation instructions provided by that manufacturer.

MATERIALS:

Aluminum Backboard: #22 have one-piece permanent mold of 3/16" thick minimum cast aluminum alloy with 1-1/2" deep perimeter flange and reinforcing ribs. Tapped mounting holes and goal ring holes are also heavily reinforced. Edges are rounded and casting has a smooth finish. Finish is semi-gloss, powder coated white.

Warranty Period: Limited Lifetime Warranty

NOTE: Rim & Backboard to be mounted secure to sleeve adapter (GNP). Then attach sleeve to Post and secure with set screws and drive pin.

1. Align Rim with holes on Backboard & mounting plate and attach with 3/8" x 1-1/2" Hex Head bolt. Flat Washers and Nylock Nuts.
2. Attach Assembled Rim/Backboard/Sleeve to Gooseneck Post.
3. For **Adjustable Offset Goals**, attach Rim & Backboard with requested hardware to the adjustable offset. Use other half clamp and attach assembly to bottom of post. Once all hardware is snug enough, slide assembly up the post to the desired height.


CAUTION: Flat washers must be used behind plate when mounting backboard.

4. Adjust Rim/Top assembled unit to be square and tighten all bolts.

NOTE: Hardware comes separately with each item (i.e. rim, backboard, and post)

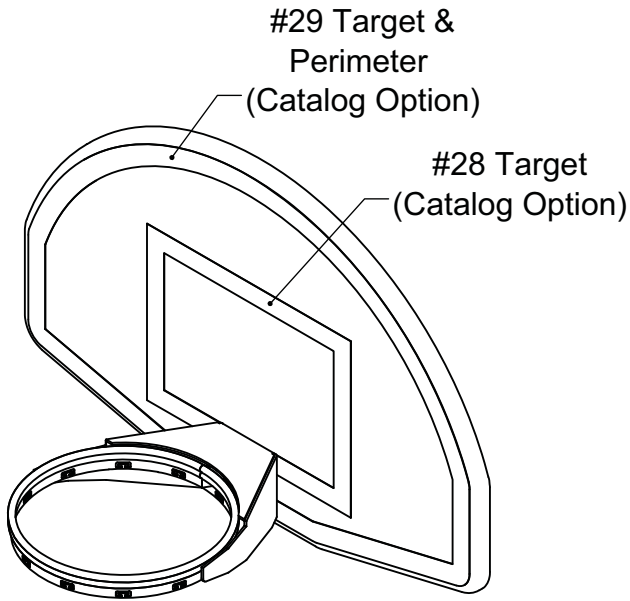
Component Description	Qty
3/8"-16 Lock Nut - Nylock	2
3/8" Flat Washer	4
3/8"-16 x 1-1/2" Flat Head Bolt	2
3/8"-16 x 3/4" Hex Bolt for Braces	2

FOR USE ON MODEL 1577:	Qty
3/8"-16 Lock Nut - Nylock	2
3/8" Flat Washer	4
3/8" - 16 x 3/4" Hex bolt for Braces	2
3/8"-16 x 2-1/2" Flat Head Bolts	2
3/4" Backboard Spacer	1

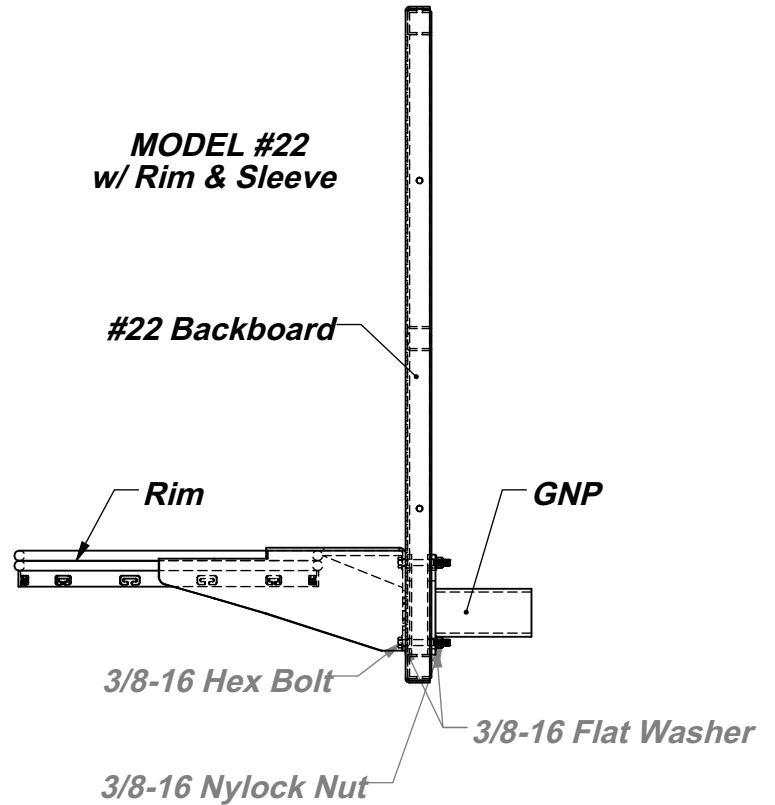
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	Rev: SS81517	
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BASKETBALL BACKBOARD

MODEL #22 HEAVY DUTY CAST ALUMINUM POWDER COATED WHITE (50 LBS)

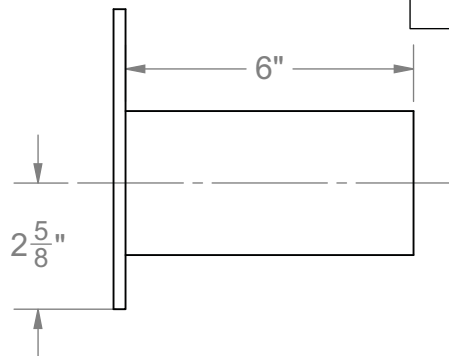
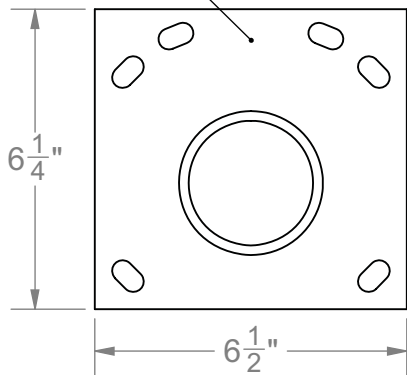


**MODEL #22
w/ Rim & Sleeve**



NOTE: Sleeves supplied with PW Gooseneck Post ONLY

Universal Mounting Plate/ on 6" Sleeve



Post Size	Sleeve Size
3.5"	3"
4.5"	4"
5.563"	5"
6.625"	6"



Date: 4/8/15
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SPECIFICATION / INSTALLATION INSTRUCTIONS

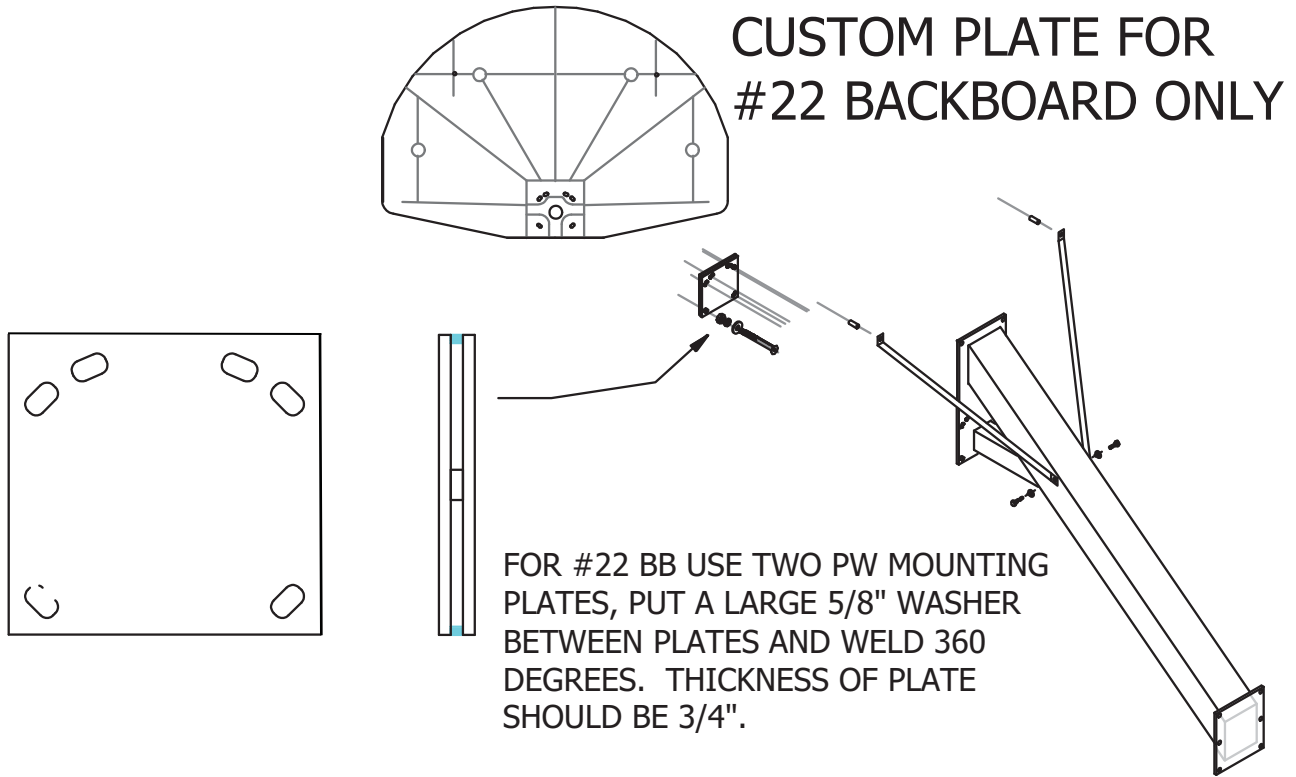
ALUMINUM "FAN" BASKETBALL BACKBOARD

MODEL NO.

#22

BASKETBALL BACKBOARD

MODEL #22 HEAVY DUTY CAST ALUMINUM POWDER COATED WHITE (50 LBS)



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Sheet: 3 of 3

SPECIFICATION / INSTALLATION INSTRUCTIONS

ALUMINUM "FAN" BASKETBALL BACKBOARD

MODEL NO.

#22

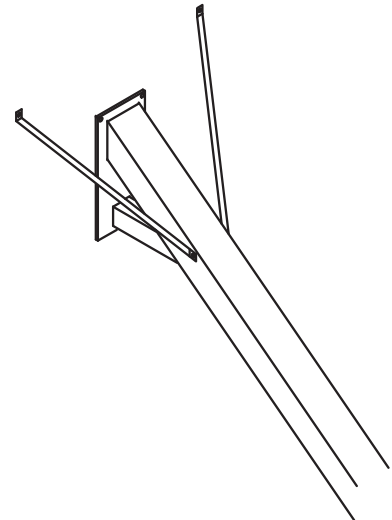
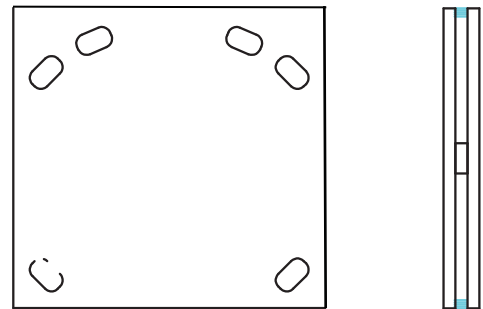
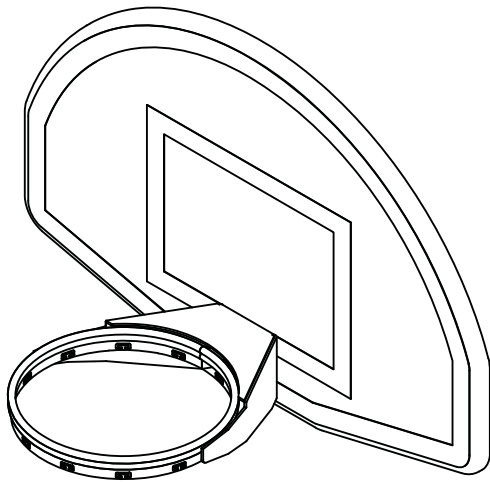
Pick Ticket

Internal use only return to office with packet

Shipping to pull Backboard and hardware nothing required from Fabrication.

Component Description	Qty
3/8"-16 Lock Nut - Nylock	2
3/8" Flat Washer	4
3/8"-16 x 1-1/2" Flat Head Bolt	2
3/8"-16 x 3/4" Hex Bolt for Braces	2

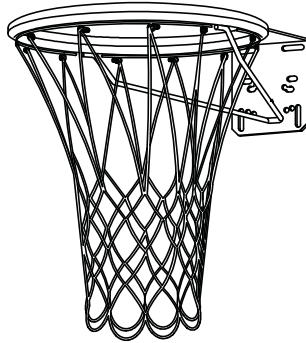
FOR USE ON MODEL 1576 & 1577	Qty
3/8"-16 Lock Nut - Nylock	2
3/8" Flat Washer	4
3/8" - 16 x 3/4" Hex bolt for Braces	2
3/8"-16 x 2-1/2" Flat Head Bolts	2
3/4" Backboard Spacer	1



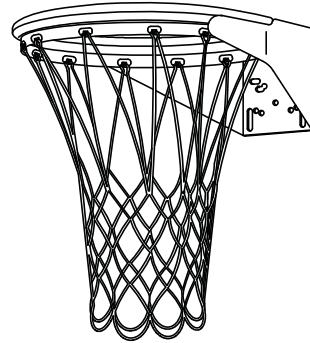
BASKETBALL GOAL RINGS & NETS

MODEL #39, 41, 44, 45 GOAL RINGS

MODEL #33, 34, 35, 36 NETS



**HEAVY-DUTY
DOUBLE RIM**



**EXTRA HEAVY-DUTY
DOUBLE RIM**


SPECIFICATIONS

GENERAL:

PW Athletic offers seven types of official size goal rings and a variety of nets to meet your specific requirements. See respective model numbers and descriptions below.

MATERIAL:

All materials are selected for strength, durability and the ability to withstand years of exposure.

	Date: 11-6-07	SPECIFICATION/INSTALLATION INSTRUCTIONS BASKETBALL GOAL RINGS & NETS
	Rev: SS81517	
	Drawn: AMC	MODEL NO.
	Sheet: 1 of 4	BB-GOAL RINGS & NETS

Heavy-duty double ring goal with chain net (model #44): Goal is official size 18" diameter of 5/8" round steel with an additional ring of 1/2" diameter round steel welded together. Bottom rim is formed to accommodate S-hooks to hold net. A 3/16" thick x 6-1/2" wide heavy-duty steel mounting plate is welded to the goal rings. The mount plate is drilled with a 6-hole universal mounting pattern. Goal is finished with an orange powder coated color. Goal ring is not designed for use with nylon or other fabric-type nets.

Heavy-duty double ring goal with super nylon net (model #45): Goal is fabricated with two 18" diameter steel rings 5/8" diameter are welded together, with 1/8" diameter steel formed with 12 pigtail style net hooks welded to the bottom of the ring. A 3/16" thick x 6-1/2" wide heavy-duty steel mounting plate is welded to the goal ring which is further reinforced with a 1/2" diameter round steel support welded between each side of ring and the angle bracket. The mounting plate is drilled with a 6-hole universal mounting pattern. Goal is finished with an orange powder coated color.

Extra Heavy-duty double ring goal (model #39): Goal is official size 18" diameter round steel rim welded together. A 3/16" thick steel mounting plate is welded to the goal ring and comes drilled with a 6-hole universal mounting pattern. The rim support is welded between bottom and top rim. Net lock design is for chain and/or nylon nets. Goal is finished with an orange powder coated color.

Breakaway heavy-duty double ring goal with super nylon net (model #41): Goal is official size 18" diameter of double 5/8" diameter round steel rims welded together. A 3/16" thick steel net support welded to a 3/16" steel box shaped mounting plate swivel mounted by 1/2" diameter pin to house dual spring mechanism. Net lock design is for chain and nylon nets. Goal is finished with an orange powder coated color.

Component Description	Qty
For Boards - 13, 14, 25, and 26	
3/8"-16 X 1-1/4" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 19, 22, 23 & 24	
3/8"-16 X 2" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 18 & 20	
3/8"-16 X 2 1/2" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 10	
3/8"-16 X 3" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 27	
3/8"-16 X 3-1/2" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
NOTE: FOR RIM #31 & 38 WITH	
STD CHAIN NET ADD S-HOOKS	12



Date:	11-6-07
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SPECIFICATION/INSTALLATION INSTRUCTIONS
BASKETBALL GOAL RINGS & NETS
MODEL NO.
BB-GOAL RINGS & NETS

Replacement Chain Net, model #33: Zinc plated steel chain net with S-hooks to secure all goals.

Replacement Super Nylon Net, **model #34**: Extra heavy braided nylon net to reduce net whip.

Replacement Super Chain Net, model #35: Zinc plated steel chain net with all loops welded closed to prevent snagging or opening.

Note: For net attachment see following page.

Goal Warranty Period: Limited Lifetime

For #33 & #35 chain nets slip s-hooks through holes on the goal rings (Models #37, #38, #44 & #31) and fully close.

For #34 Super Nylon Net on goal ring Models #39 & #41 twist loop on net. From the inside of the rim, slip the twisted loop through the punched net tie-off hole to the outside of the rim. Wrap twisted loop around goal ring and back through punched net tie-off ring. Secure around neck of the punched tie-off hole and pull tight.

For #34 Super Nylon Net on goal ring Model #45 slip the net loop through from the inside through the welded net tie-off wire and hook onto middle of tie-off wire and pull tight.


Model #	Description	Net Type	Wt. #
31	Heavy-Duty Double Rim with universal mount plate	Std. Chain	18 lbs.
37	Extra Heavy-Duty Double Rim with universal mount plate	Super Chain	30 lbs.
38	Extra Heavy-Duty Double Rim	Std. Chain	29 lbs.
39	Extra Heavy-Duty Double Rim	Super Nylon	28 lbs.
41	Breakaway Extra Heavy-Duty Double Rim	Super Nylon	28 lbs.

For installation of goal rings to PW Athletic backboards and posts ONLY. For other manufacturer's posts and backboards please consult installation instructions provided by that manufacturer.

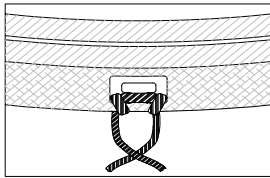
Caution: Flat washers must be used behind plate when mounting backboard.

Align mounting holes in goal ring mounting plate with the corresponding holes in the backboard and gooseneck adaptor mount using installation hardware (bolts). Install lock nuts and tighten enough to hold board and goal ring in position.

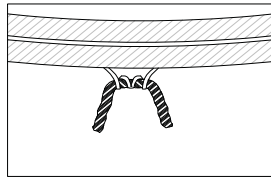
Plumb backboard true vertical (shim if necessary) and goal ring level. Tighten all hardware securely. Install net. If the goal ring is equipped with chain net, make sure all S-hooks are fully closed

	Date: 11-6-07	SPECIFICATION/INSTALLATION INSTRUCTIONS BASKETBALL GOAL RINGS & NETS
	Rev: SS81517	
	Drawn: AMC	MODEL NO.
	Sheet: 3 of 4	BB-GOAL RINGS & NETS

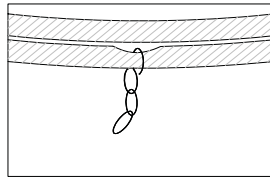
NETTING OPTIONS



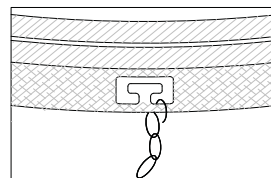
MODEL #39
MODEL #41



MODEL #45



MODEL #41
MODEL #44



MODEL #39
MODEL #41



MODEL #36 VINYL CABLE NET INSTALLATION INSTRUCTIONS:

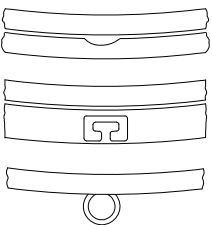
1) Starting at the back of the rim, thread the orange rimlock cable through one side of a net connector (Fig. 1a), then through the eyelet of the net (Fig. 1b) & finally through the other end of the net connector (Fig. 1c). Pull the cable firmly forcing the net eyelet up into the middle of the net connector (Fig. 1d). Leave approximately 4" of cable behind this first net connector to allow for connection with the other end of the cable at the end of the threading process. Repeat the threading process through the remaining 11 connection points on the rim, pulling all slack from the cable as you go. (Note: The net eyelet must be centered in the net connector to prevent sideways movement of the net around the rim)

2) When all of the eyelets are threaded, the two ends of the rimlock cable must be secured together. Ensure that there is no slack in the cable at any point. Thread the two cable ends into opposing sides of the supplied aluminum sleeve (Fig. 2a). Using a large pair of pliers, crimp the sleeve flat at both ends against the rimlock cable (Fig. 2b). This must be crimped well to prevent the cable from slipping.

3) Due to it's unique construction, it is very important to stretch the net in the middle and bottom sections to prevent the ball from sticking (Fig. 3a & 3b). Grab opposing sides and pull hard. Repeat this stretching technique all the way around the middle and bottom of net. Cold weather may require re-stretching.

THESE STYLE OF RIMS USE THE FOLLOWING METHOD:

The orange rimlock cable will travel around the outside of the rim and weave in and back out of each rim connector. Feed the cable from the outside of the rim in, threading it through one net eyelet. (Leave 4" of cable tail from your starting point) Continue threading the cable back from the inside to the outside of the rim using the same connector. Pull tight all slack in the cable as you go. This will force the net eyelet close to the given rim connector. Repeat for all 11 remaining connections and terminate the cable with the supplied sleeve as in step above.



<p>ATHLETIC MFG. CO.</p>	Date: 11-6-07	<p>SPECIFICATION/INSTALLATION INSTRUCTIONS</p> <p>BASKETBALL GOAL RINGS & NETS</p> <hr/> <p>MODEL NO.</p> <p>BB-GOAL RINGS & NETS</p>
	Rev: SS81517	
	Drawn: AMC	
	Sheet: 4 of 4	

Pick Ticket

Internal use only return to office with packet

Shipping to pull Rim, Net and Hardware Below nothing required from Fabrication.

Component Description	Qty
For Boards - 13, 14, 25, and 26	
3/8"-16 X 1-1/4" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 19, 22, 23, 30, 24 & 24T	
3/8"-16 X 2" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 18 & 20	
3/8"-16 X 2-1/2" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 10	
3/8"-16 X 3" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8
For Boards - 27	
3/8"-16 X 3-1/2" Hex Bolt	4
3/8"-16 Lock Nut - Nylock	4
3/8" Flat Washer	8

SECTION 116800 - PLAY FIELD EQUIPMENT AND STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Freestanding shelter structure.

1.2 SUBMITTALS

- A. Shop Drawings: Show fabrication and installation details for playground equipment and structures.
- B. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
 - 1. Extent of surface systems and use zones for equipment.
 - 2. Critical heights for playground surface, or fall heights for equipment.
- C. Manufacturer's Kit:
 - 1. Installation Drawings
 - 2. Touch up Paint
 - 3. Spare Parts
 - 4. Instruction & Maintenance Manuals
- D. Manufacturer's Representative Post-Installation Inspection Letter.
 - 1. A manufacturer's representative, as coordinated by Contractor, will be required to conduct an on-site inspection verifying that the playground equipment has been installed in accordance with the manufacturer's specifications. Following the inspection and approval, correspondence shall be directed to the Owner certifying that the shelter has been installed in accordance with the manufacturer's specifications. This letter is required for each manufacturer included in the project.

1.3 DELIVERY, HANDLING AND STORAGE

- A. Contractor shall coordinate the delivery and acceptance of the shelter with the Owner.
- B. The installing contractor shall check all materials delivered to the site to ensure that the correct materials have been received and are in good condition. The installing contractor will be responsible for notifying the Owner and Supplier of any missing or damaged items within 10 days of delivery. If the installing contractor fails to notify the Owner and Supplier within 10 days of delivery, or finds missing or damaged items after this date, they will assume the financial responsibility for repairs and replacements

1.4 QUALITY ASSURANCE

- A. Safety Standards: Provide playground equipment complying with or exceeding requirements in the following:
 - 1. ASTM F 1487.
 - 2. CPSC No. 325.

1.5 WARRANTY

- A. Contractor to provide a letter of compliance from manufacturer's representative completed during physical inspection of final installation.
- B. Manufacturer's standard warranty.

PART 2 - PRODUCTS

2.1 FREESTANDING SHELTER

- A. 24'X34' Illini Shelter:
 - 1. Manufacturer: Americana Outdoors, Available from: NuToys Leisure Products, Contact: Chuck Gardiner, 708-606-7223.

2.2 CAST-IN-PLACE CONCRETE

- A. Concrete Materials and Properties: Comply with requirements in Division 03 Section "Cast-In-Place Concrete".
- B. Concrete Materials and Properties: Dry-packaged concrete mix complying with ASTM C 387.

2.3 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

2.4 IRON AND STEEL FINISHES

- A. Galvanizing: Hot-dip galvanize to comply with ASTM A 123/A 123M.
 - 1. Hot-dip galvanize steel and iron hardware indicated to be galvanized to comply with ASTM A 153/A 153M.
- B. Powder-Coat Finish: Prepare, treat, and coat ferrous metal to comply with resin manufacturer's written instructions.
- C. Color: As selected by Architect from manufacturer's full range.

2.5 STAINLESS-STEEL FINISHES

- A. Bright, Cold-Rolled, Unpolished Finish: No. 2B finish on exposed faces.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. General: Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated.
 - 1. Maximum Equipment Height: Coordinate installed heights of equipment and components with finished elevations of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.
- B. Post and Footing Excavation: Excavate holes for posts and footings as indicated in firm, undisturbed or compacted subgrade soil.
- C. Post Set with Concrete Footing: Comply with ACI 301 for measuring, batching, mixing, transporting, forming, and placing concrete.
 - 1. Set equipment posts in concrete footing.
 - 2. Embedded Items: Use setting drawings and manufacturer's written instructions to ensure correct installation of anchorages for equipment.

END OF SECTION 116800

GENERAL NOTES

SHELTER DESIGN

THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS SHALL BE PROHIBITED AS INCREASED WIND FORCES MAY RESULT.

STEEL

STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.

HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B (Fy = 46 KSI).

WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATIONS FOR THE MATERIAL BEING WELDED.

WELDING ELECTRODES SHALL BE E70XX.

STRUCTURAL STEEL COMPONENTS SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATION.

ALUMINUM

EXTRUDED ALUMINUM RIDGE CAP SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWING.

EXTRUDED ALUMINUM GUTTER FASCIA AND FASCIA TRIM SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5 OR 6061-T6 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWING.

ALUMINUM COMPONENTS SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATION.

ROOF DECK

INTERLOCKING SEAL ALUMINUM ROOF DECK SHALL BE ROLL FORMED FROM ALUMINUM ALLOY 3004-H36 AND SHALL CONFORM TO THE DECK PROFILE SHOWN ON THE DRAWING.

ROOF DECK SHALL BE COATED WITH HEAT REFLECTIVE BASF ULTRA-COOL COATING OR APPROVED EQUAL.

FASTENERS

HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325.

SCREWS ATTACHING TO STEEL SHALL BE 12-24 HEX WASHER HEAD #5 POINT SELF DRILLING SCREWS WITH BOND SEAL WASHER.

SCREWS ATTACHING TO ALUMINUM SHALL BE 8-18 HEX WASHER HEAD #2 POINT SELF DRILLING SCREWS.

HIGH STRENGTH BOLTS SHALL BE HOT DIP GALVANIZED. ALL SCREWS SHALL BE STAINLESS STEEL OR COATED WITH ZINC.

ALL BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION AS DEFINED IN THE 2004 RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS.

SHOP FABRICATION AND FIELD ASSEMBLY

ALL STRUCTURAL STEEL AND ALUMINUM COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.

ALL SHOP WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS.

ALL SHOP WELDS SHALL BE IN STRICT ACCORDANCE WITH THE STRUCTURAL WELDING CODE AWS D1.1 OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ALL STRUCTURAL WELDS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF "PRE-QUALIFIED" WELDED JOINTS. ALL WELDING SHALL CONFORM TO AWS A5.18 : ER70S-6 SERIES E70XX ELECTRODES - LOW HYDROGEN.

FIELD WELDING SHALL NOT BE REQUIRED.

SPECIAL INSPECTIONS

THIS SHELTER IS CLASSIFIED AS AN ACCESSORY AND/OR MISCELLANEOUS STRUCTURE AND SHALL BE CONSIDERED CONSTRUCTION OF A MINOR NATURE. THEREFORE SPECIAL INSPECTIONS SHALL NOT BE REQUIRED PER IBC 1704.2.

DESIGN PARAMETERS

BUILDING CODES:

2015 IBC
ASCE 7-10

ROOF DEAD LOAD: 5 PSF

ROOF LIVE LOAD: 20 PSF

GROUND SNOW LOAD: 25 PSF

ROOF SNOW LOAD: 21 PSF

BASIC WIND SPEED: 115 MPH (3 SECOND GUST)

WIND EXPOSURE: C

SOIL BEARING STRENGTH: 1500 PSF

SOIL SITE CLASS: D (ASSUMED)

SEISMIC SS: 0.137

SEISMIC S1: 0.065

SEISMIC SDS: 0.146

SEISMIC SD1: 0.104

SEISMIC DESIGN CATEGORY: B

TRANSVERSE SEISMIC RESISTING SYSTEM: STEEL ORDINARY MOMENT FRAME

TRANSVERSE RESPONSE MODIFICATION FACTOR: 3.50

TRANSVERSE SEISMIC RESPONSE COEFFICIENT: 0.042

LONGITUDINAL SEISMIC RESISTING SYSTEM: STEEL ORDINARY CANTILEVER COLUMN

LONGITUDINAL RESPONSE MODIFICATION FACTOR: 1.25

LONGITUDINAL SEISMIC RESPONSE COEFFICIENT: 0.117

SEISMIC ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

BUILDING DATA

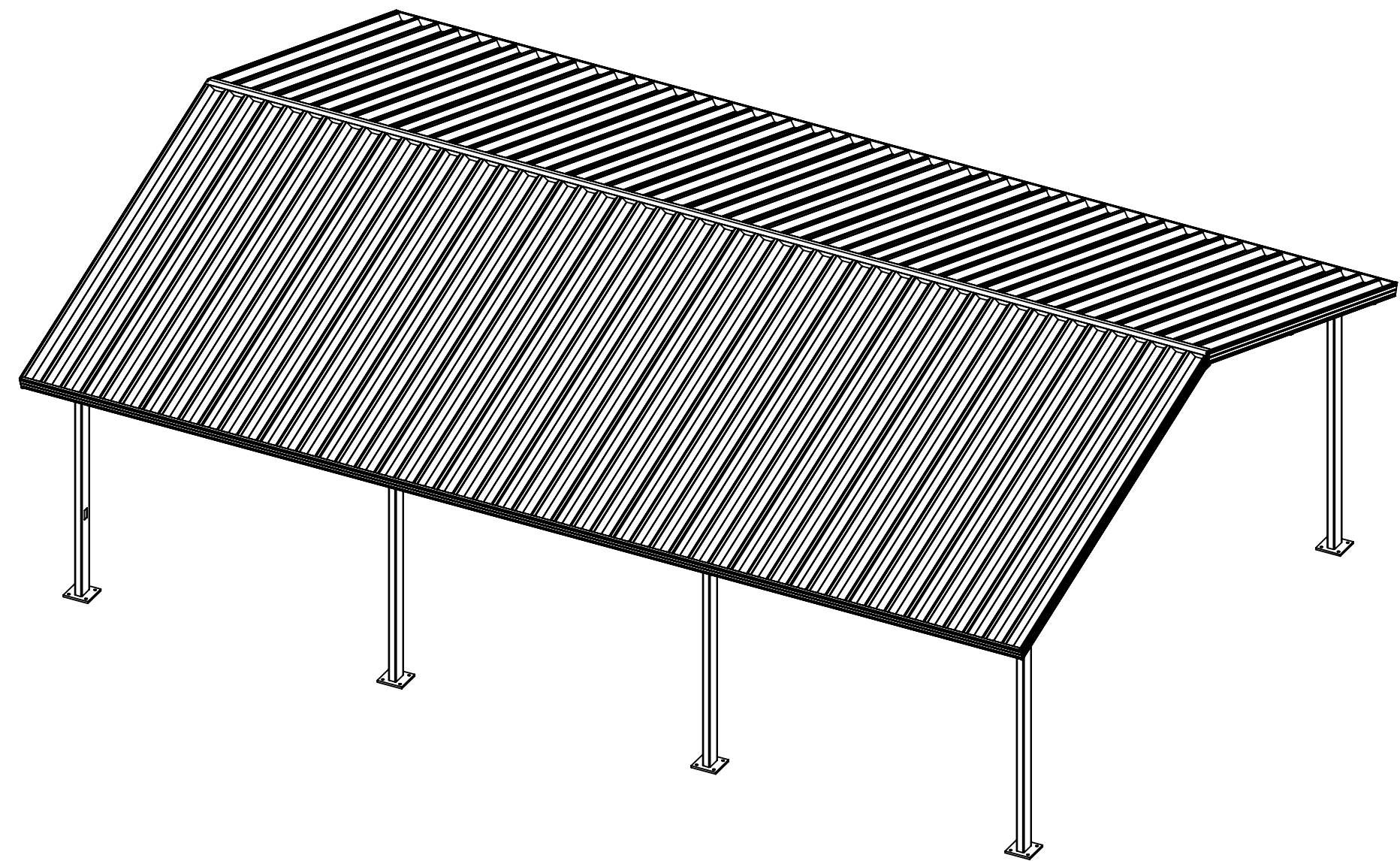
OCCUPANCY CLASSIFICATION: U (ACCESSORY / MISC.)

RISK CATEGORY: II

CONSTRUCTION TYPE: II-B

FLOOR AREA: 816 SQ. FT.

OCCUPANCY LOAD: 7 SQ. FT. / OCCUPANT = 116 OCCUPANTS

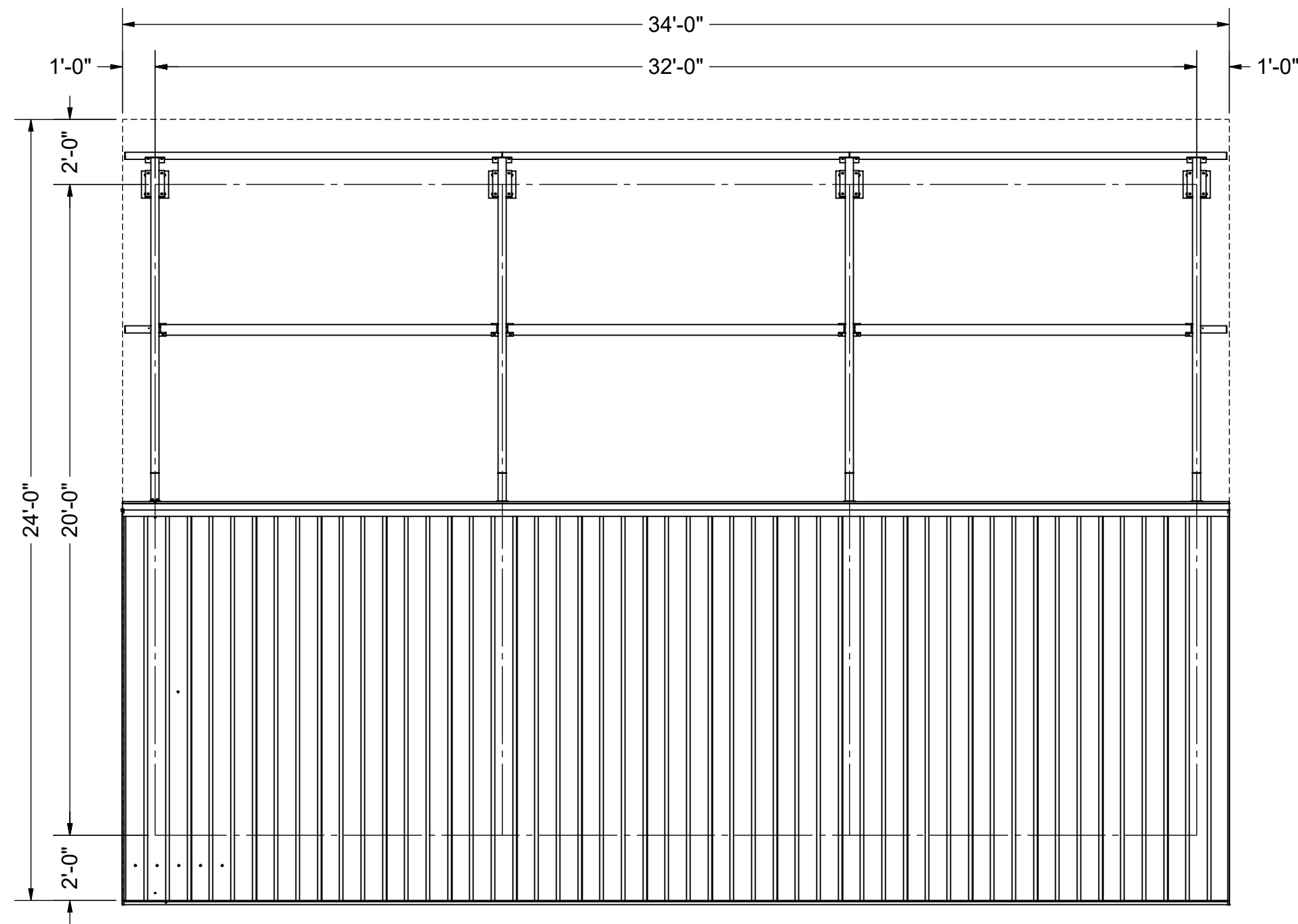


CONTENTS

- C1 COVER SHEET
- S1 PLAN AND ELEVATIONS
- S2 FOUNDATION PLAN AND SECTION
- S3 STRUCTURAL FRAMING
- S4 FRAMING CONNECTION DETAILS
- S5 ROOFING DETAILS
- D1-D12 STEEL FABRICATION DETAILS

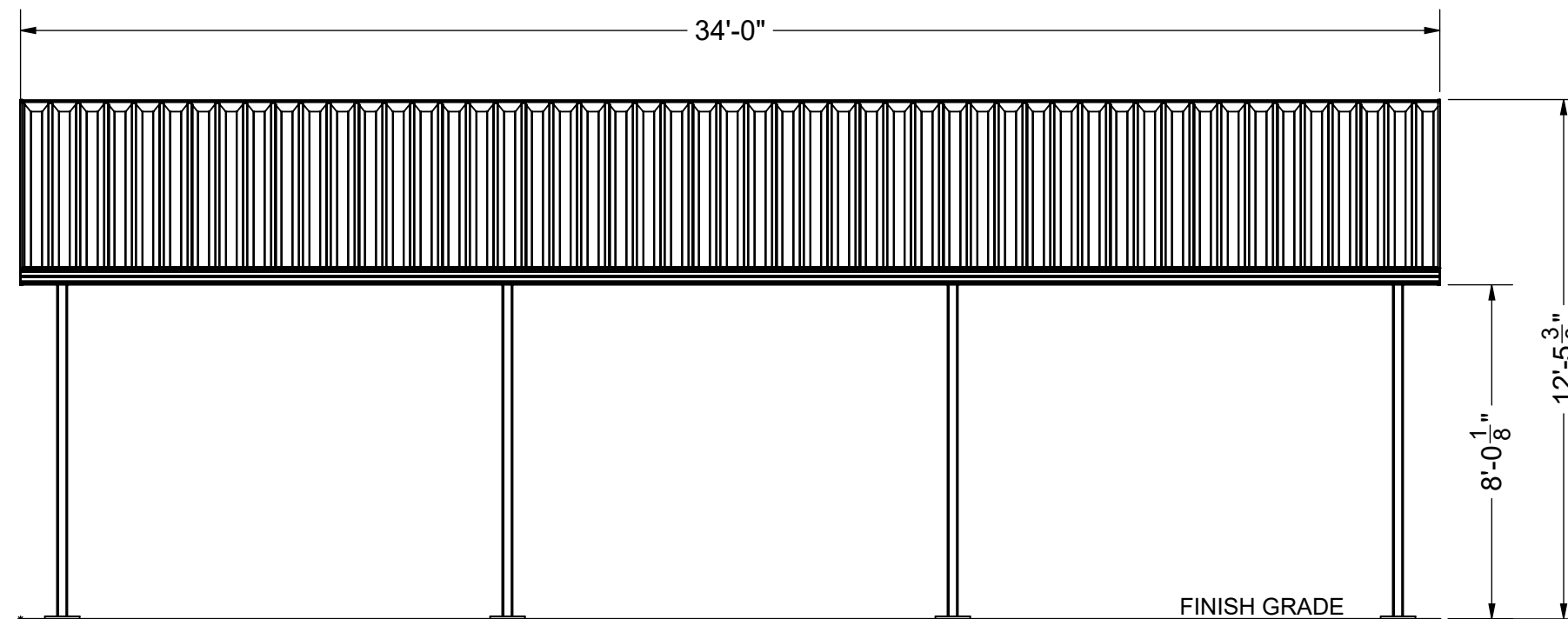
SEAL

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET C1 OF 18 SHEETS
				JOB NO. 221218			
				P.O. NO. AM561954-L	CHECKED BY AY	REVISE DATE 7/9/2024	



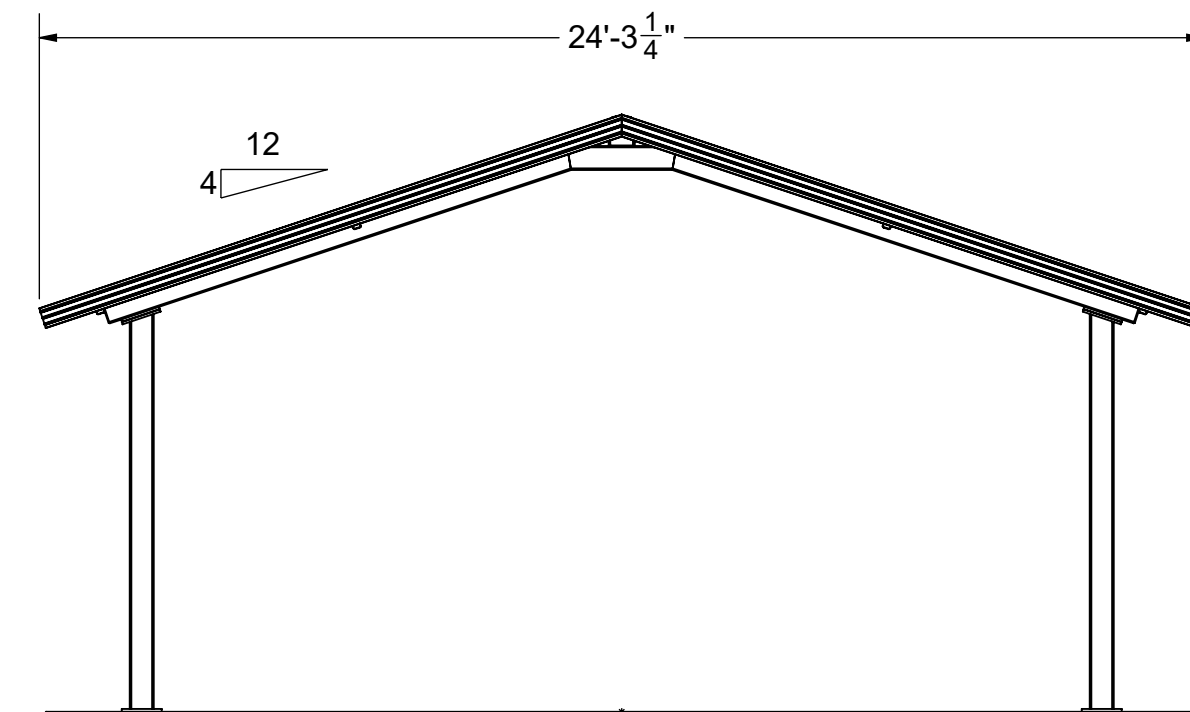
ROOF PLAN

Scale: 1/4" = 1'-0"



FRONT ELEVATION

Scale: 1/4" = 1'-0"



SIDE ELEVATION

Scale: 1/4" = 1'-0"

SEAL

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				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			

NOTES

FOUNDATION

THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND CAPABLE OF SUPPORTING 1500 PSF VERTICAL BEARING PRESSURE AND 100 PSF/FT LATERAL BEARING PRESSURE.

FOUNDATION DESIGN SHOWN IS BASED ON THE MINIMUM PRESUMPTIVE SOIL STRENGTHS FROM THE SPECIFIED BUILDING CODE. OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOUNDATION DESIGN SHALL BE DESIGNED BY OTHERS.

IF NECESSARY, EXTEND DEPTH OF FOOTING TO MEET LOCAL FROST DEPTH REQUIREMENTS AND ADD TIES TO MEET THE SPACING REQUIREMENT STATED ON THE DRAWING.

CONCRETE

COMPRESSION STRENGTH OF ALL REINFORCED CONCRETE SHALL NOT BE LESS THAN 3500 PSI AT 28 DAYS.

REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4.

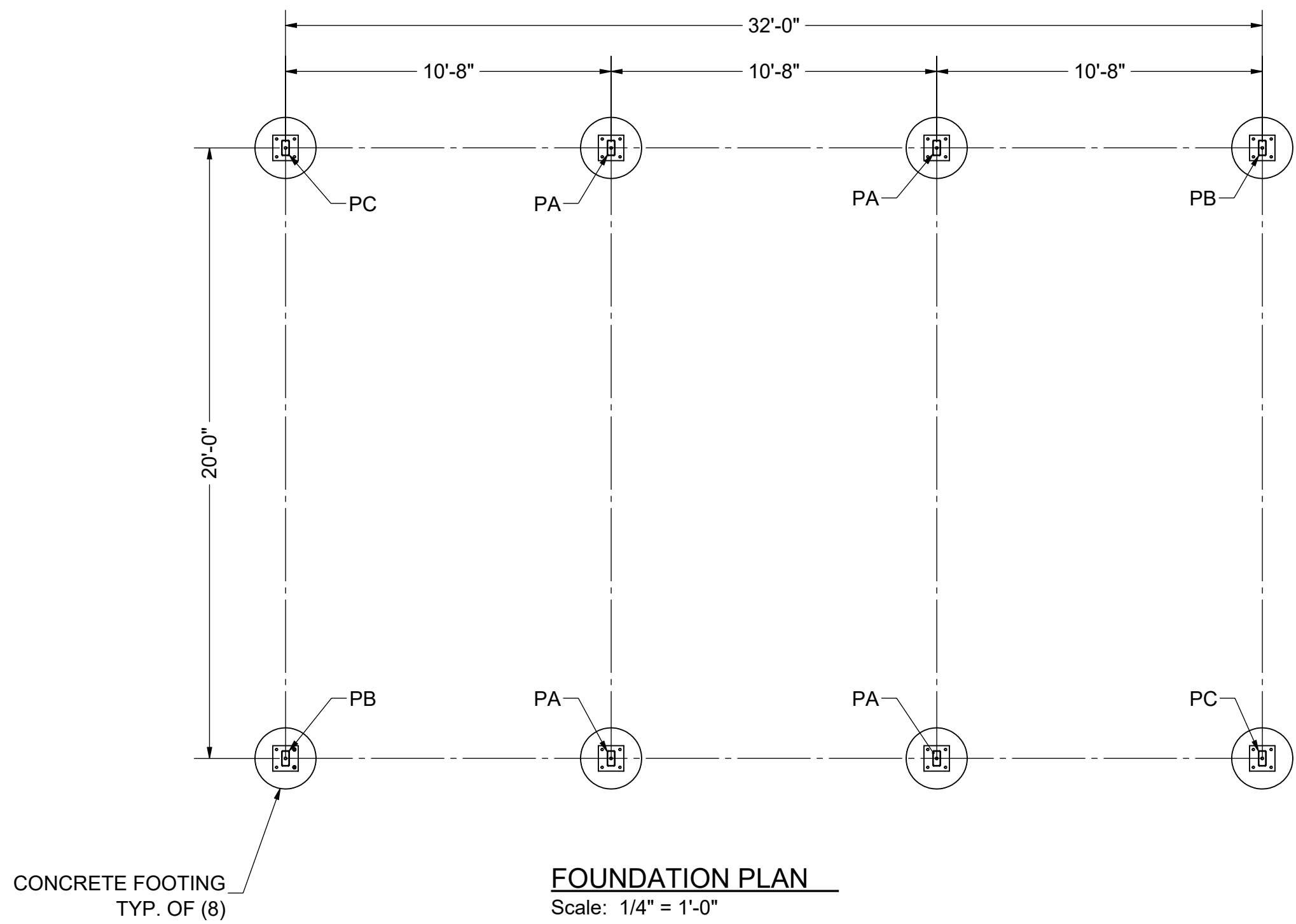
MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE 3" UNLESS NOTED OTHERWISE.

ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 MINIMUM, GALVANIZED ROD, HEADED OR WITH HEAVY HEX NUT TACKED TO ROD.

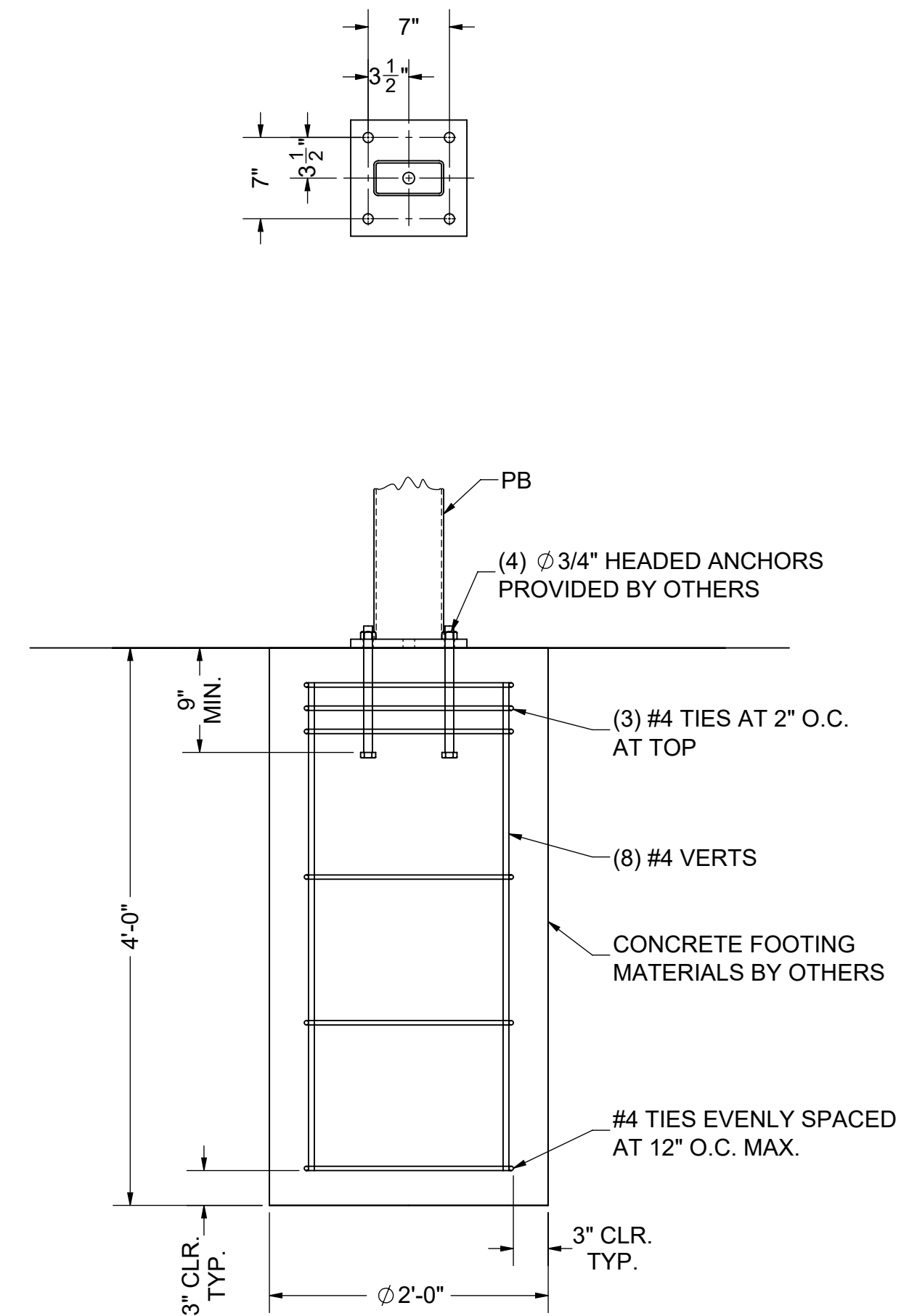
FOUNDATION REACTIONS (ASD MAX.)

AXIAL: 3.910 KIP
 UPLIFT: 0.367 KIP
 LATERAL: 0.898 KIP
 MOMENT: 0.469 K-FT

NOTE: FOOTING DESIGNED BY OTHERS



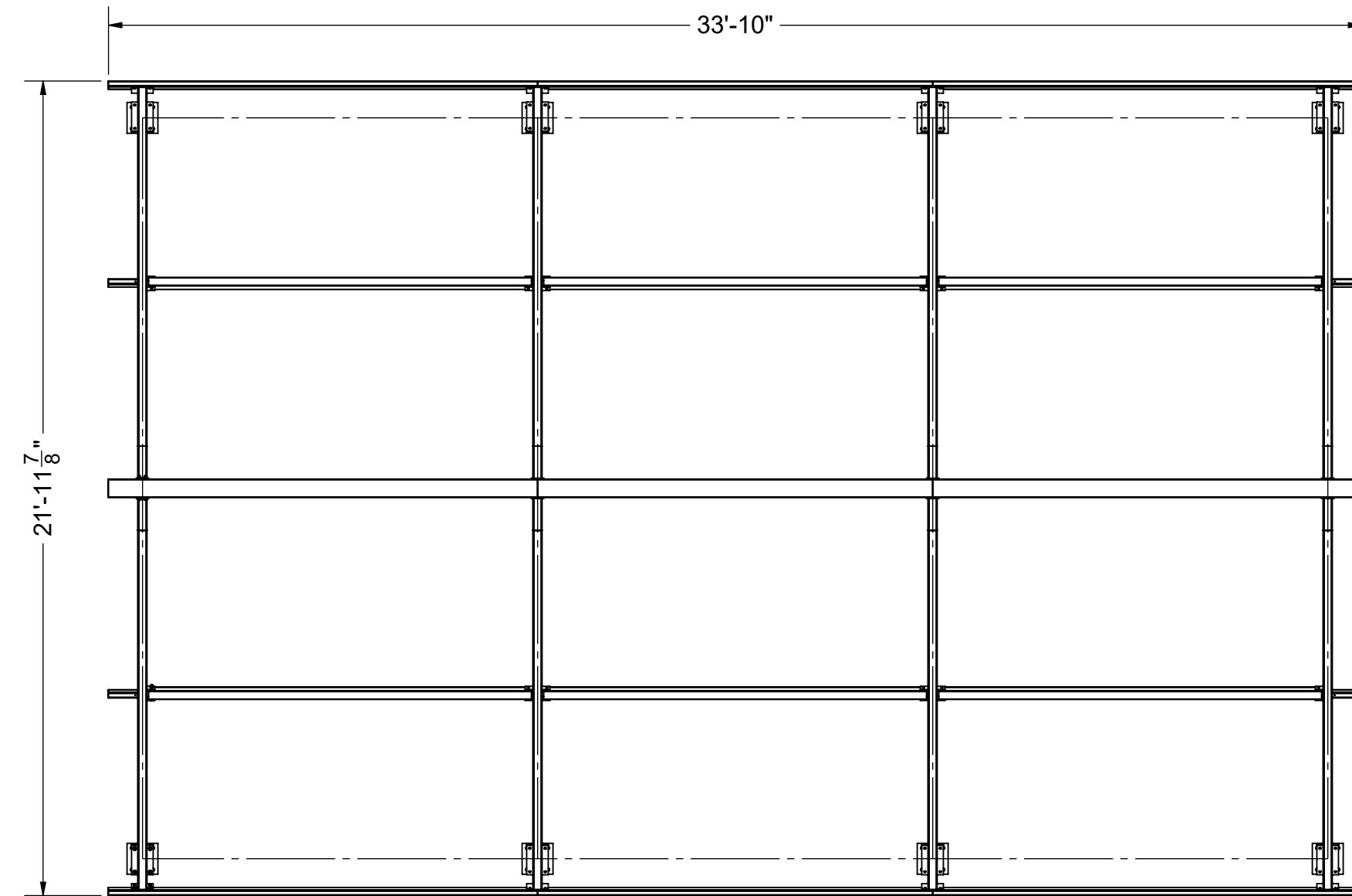
FOUNDATION PLAN
 Scale: 1/4" = 1'-0"



FOUNDATION SECTION
 Scale: 1" = 1'-0"

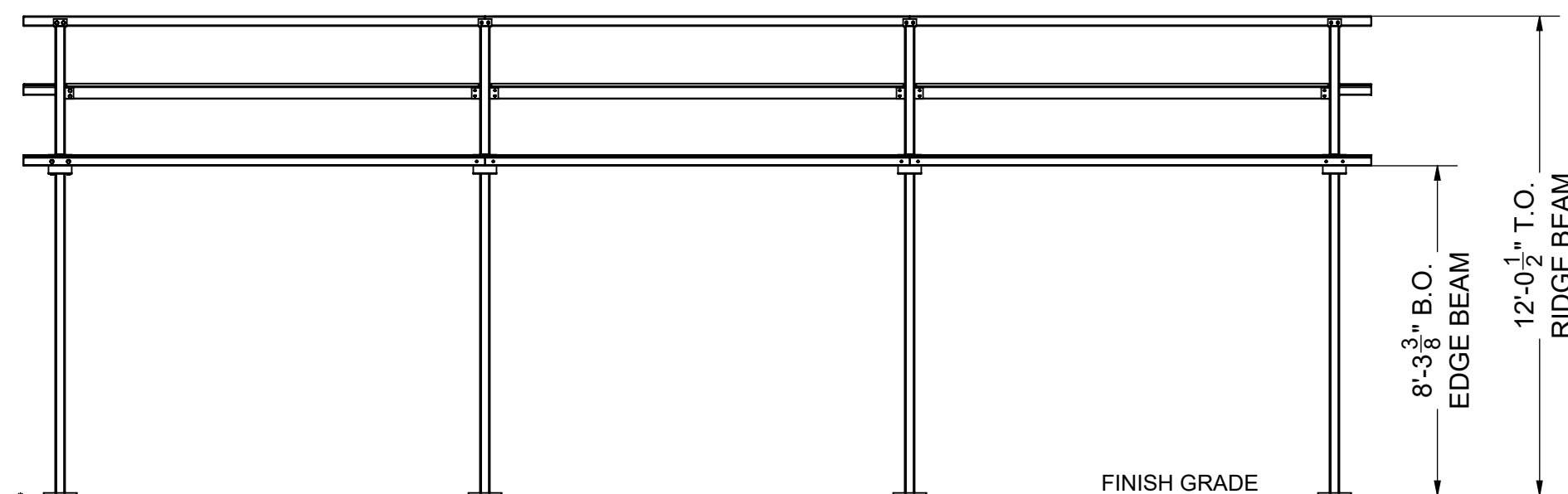
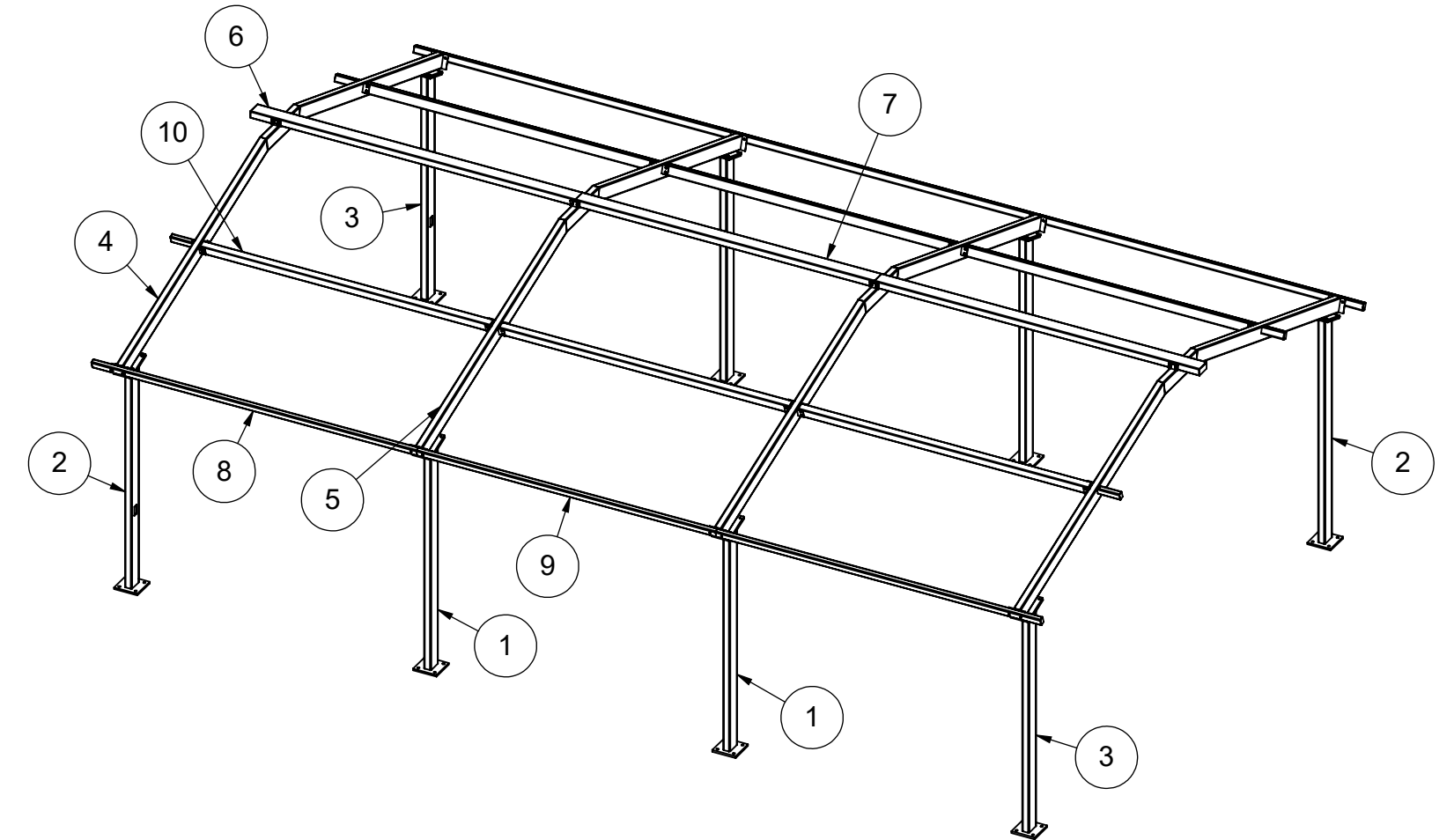
SEAL

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				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			

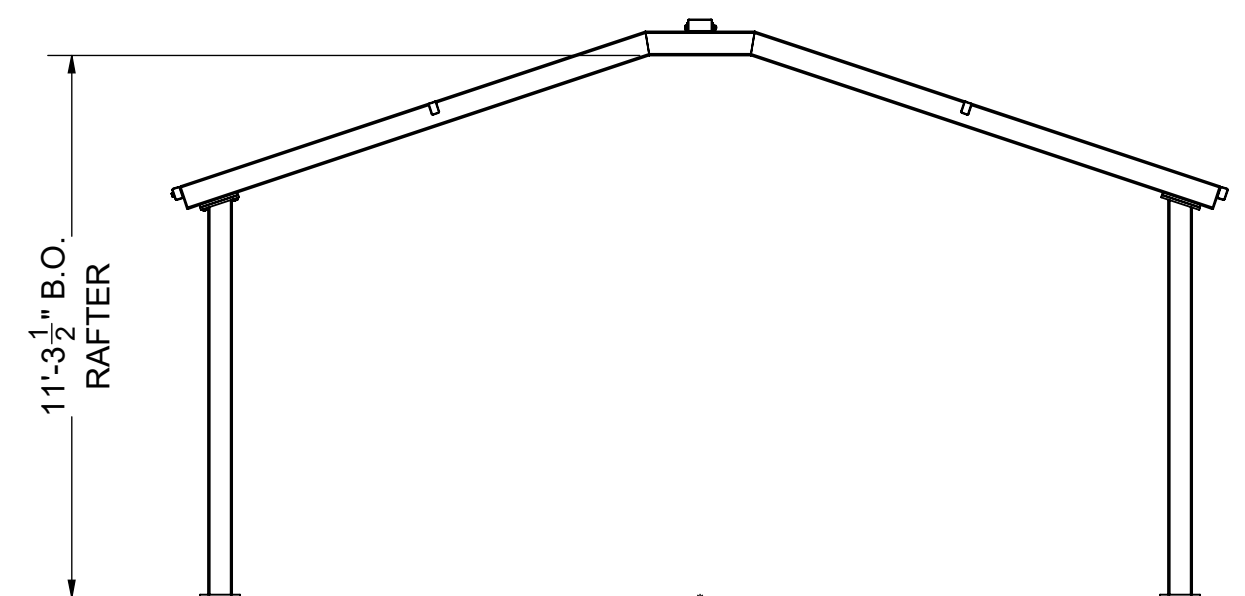


FRAME PLAN
Scale: 1/4" = 1'-0"

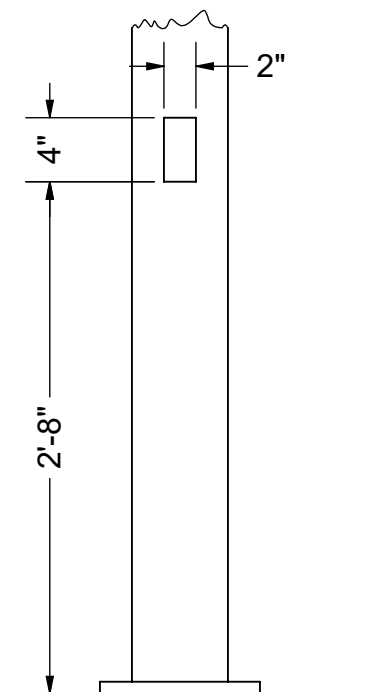
ITEM NO.	QTY.	PART NO.	DESCRIPTION	MATERIAL	EST. WEIGHT (LBS)
1	4	PA	POST	HSS 6x3x3/16"	118.69
2	2	PB	POST	HSS 6x3x3/16"	118.27
3	2	PC	POST	HSS 6x3x3/16"	118.27
4	2	RA	RAFTER	HSS 6x3x3/16"	279.92
5	2	RB	RAFTER	HSS 6x3x3/16"	273.14
6	2	TA	RIDGE BEAM	HSS 6x3x1/8"	84.07
7	1	TB	RIDGE BEAM	HSS 6x3x1/8"	76.91
8	4	EA	EDGE BEAM	HSS 3x2x3/16"	64.05
9	2	EB	EDGE BEAM	HSS 3x2x3/16"	58.85
10	6	SA	PURLIN	HSS 4x3x1/8"	57.11



FRAME ELEVATION
Scale: 1/4" = 1'-0"



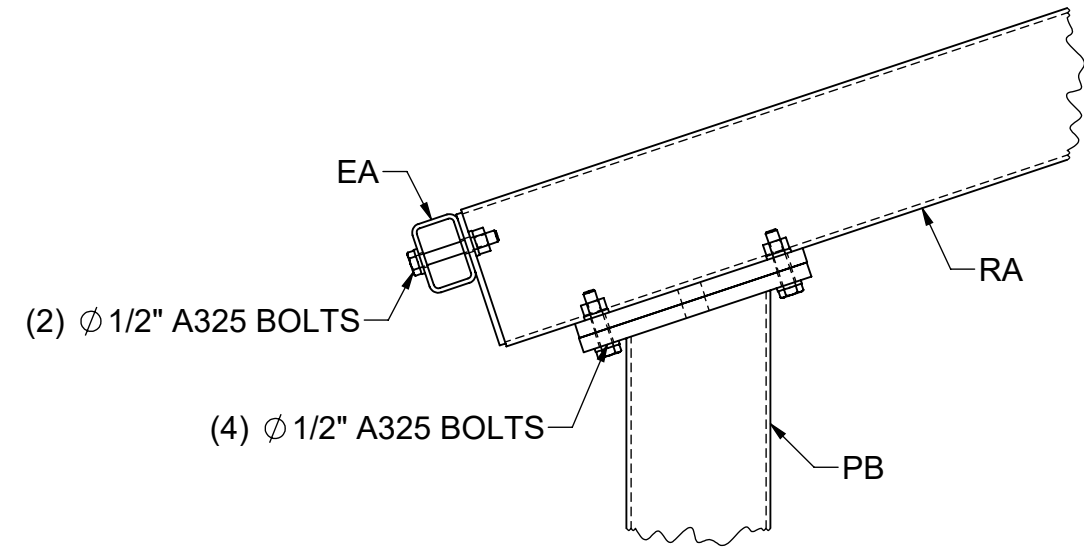
FRAME ELEVATION
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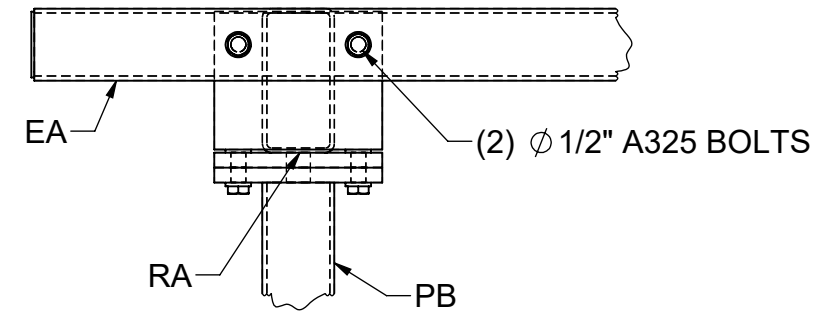
ELECTRICAL CUTOUT
TYP. AT (4) POSTS

SEAL

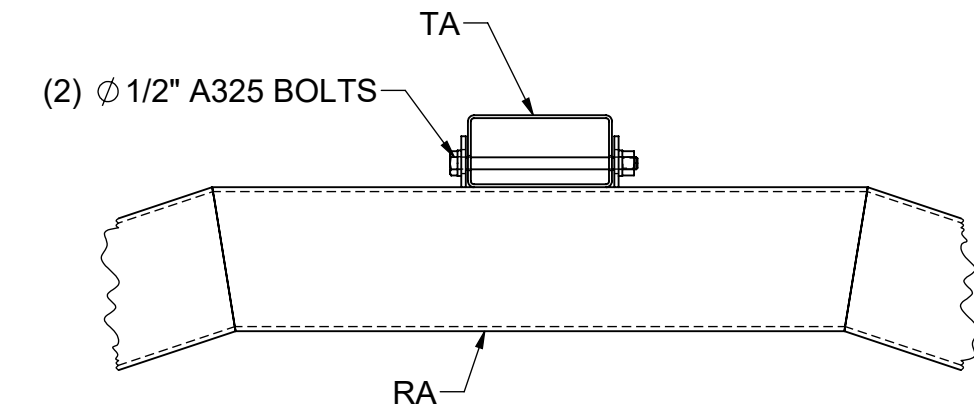
ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET S3 OF 18 SHEETS
				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			



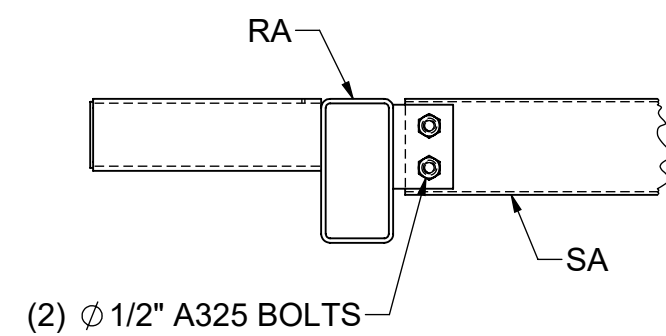
FRAME SECTION AT POST
Scale: 1-1/2" = 1'-0"



FRAME SECTION AT EDGE BEAM
Scale: 1-1/2" = 1'-0"



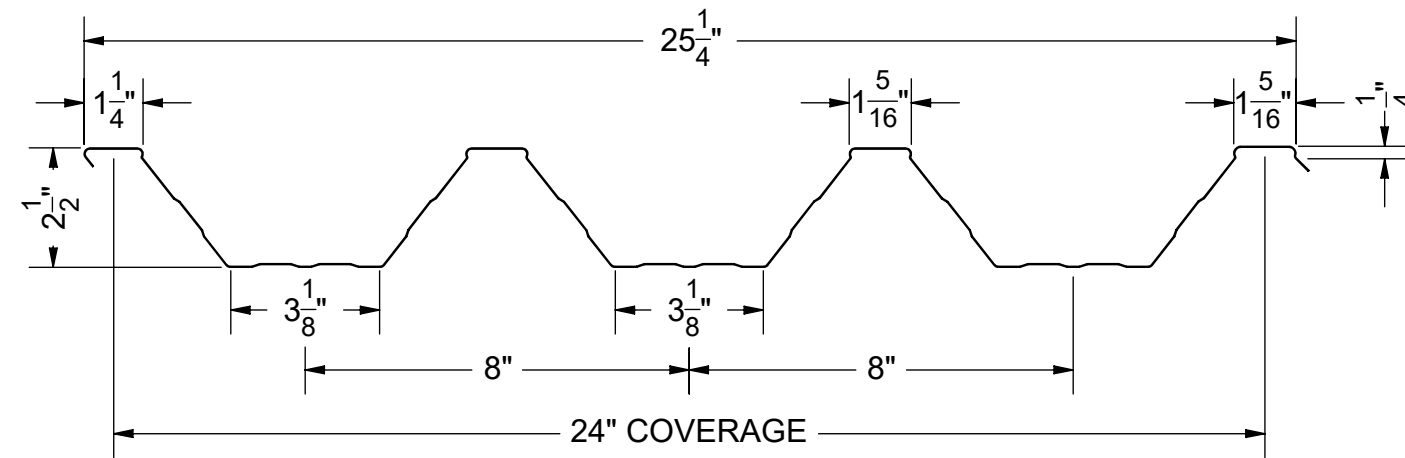
FRAME SECTION AT RIDGE
Scale: 1-1/2" = 1'-0"



FRAME SECTION AT PURLIN
Scale: 1-1/2" = 1'-0"

SEAL

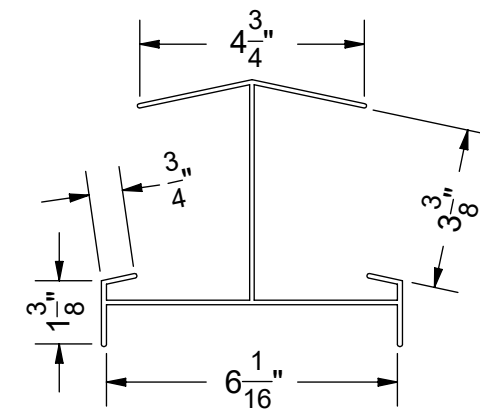
ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET S4 OF 18 SHEETS
				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			



ALUMINUM ALLOY 3004-H36
THICKNESS= .038"

ROOF DECK PROFILE

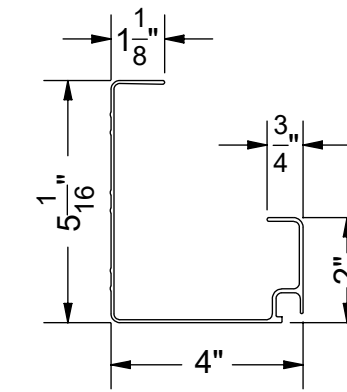
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ALUMINUM ALLOY 6105-T5
THICKNESS= .094"

RIDGE CAP PROFILE

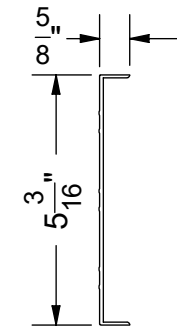
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ALUMINUM ALLOY 6105-T5
THICKNESS= .062"

GUTTER PROFILE

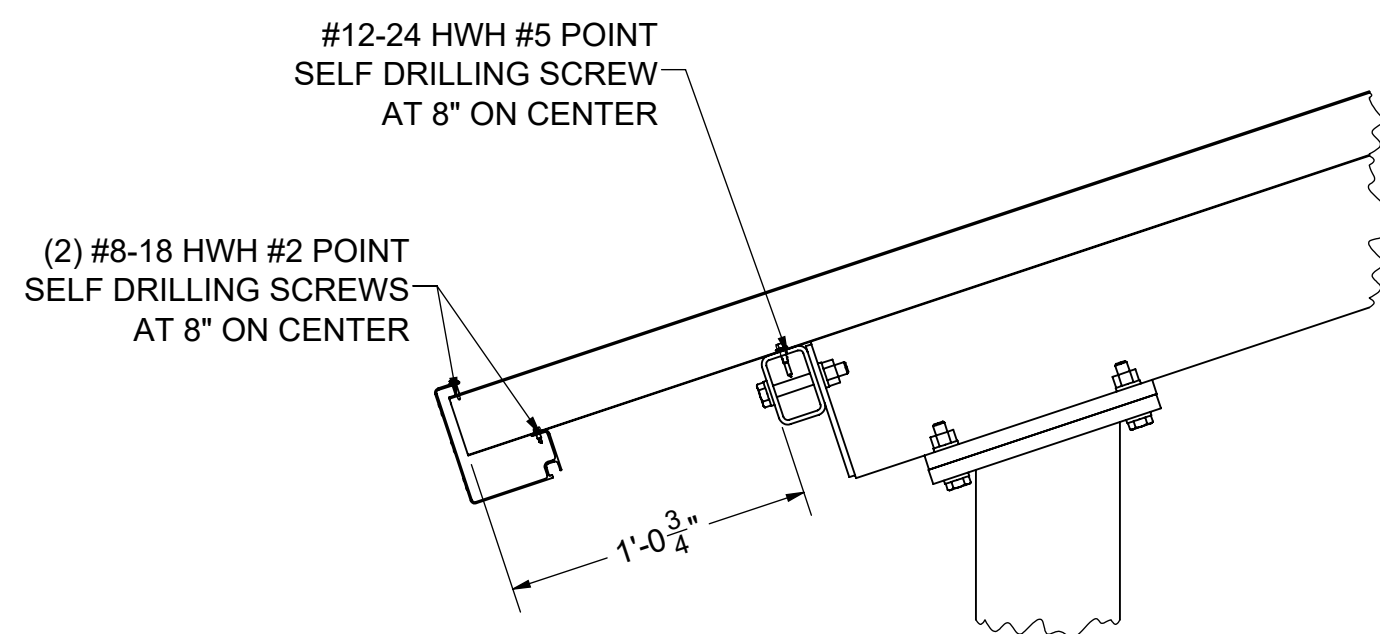
Scale: 3" = 1'-0"



ALUMINUM ALLOY 6061-T6
THICKNESS= .080"

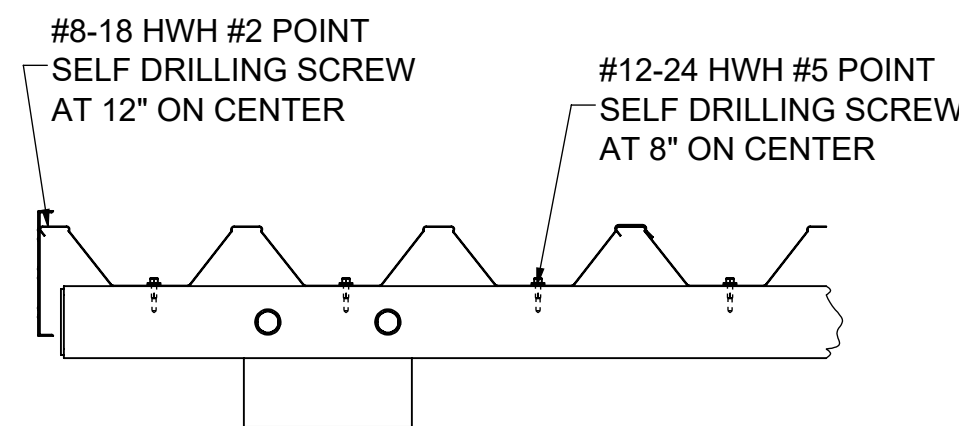
FASCIA PROFILE

Scale: 3" = 1'-0"



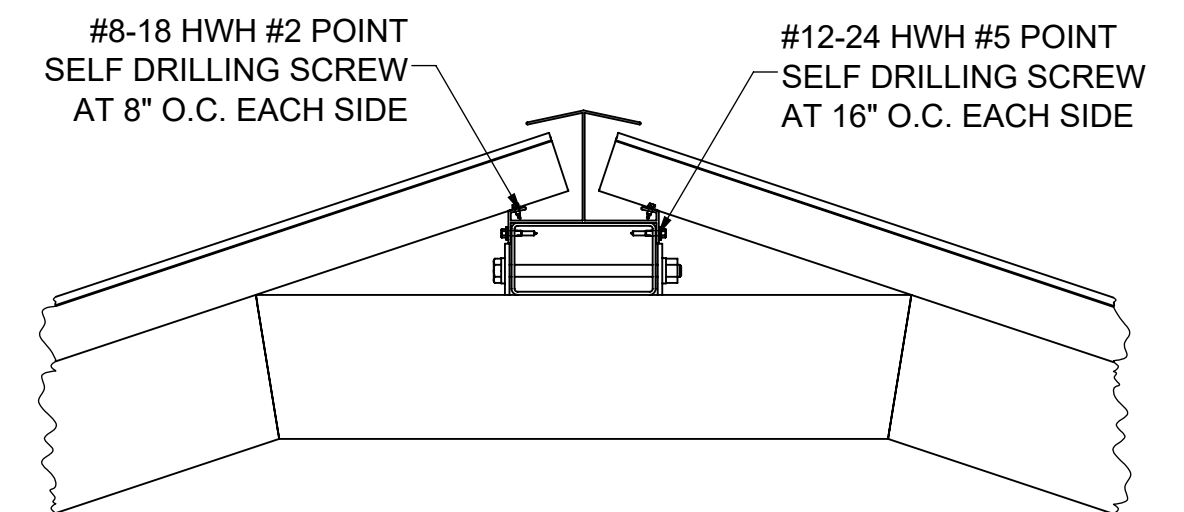
ROOF SECTION AT EAVE

Scale: 1-1/2" = 1'-0"



ROOF SECTION AT RAKE

Scale: 1-1/2" = 1'-0"

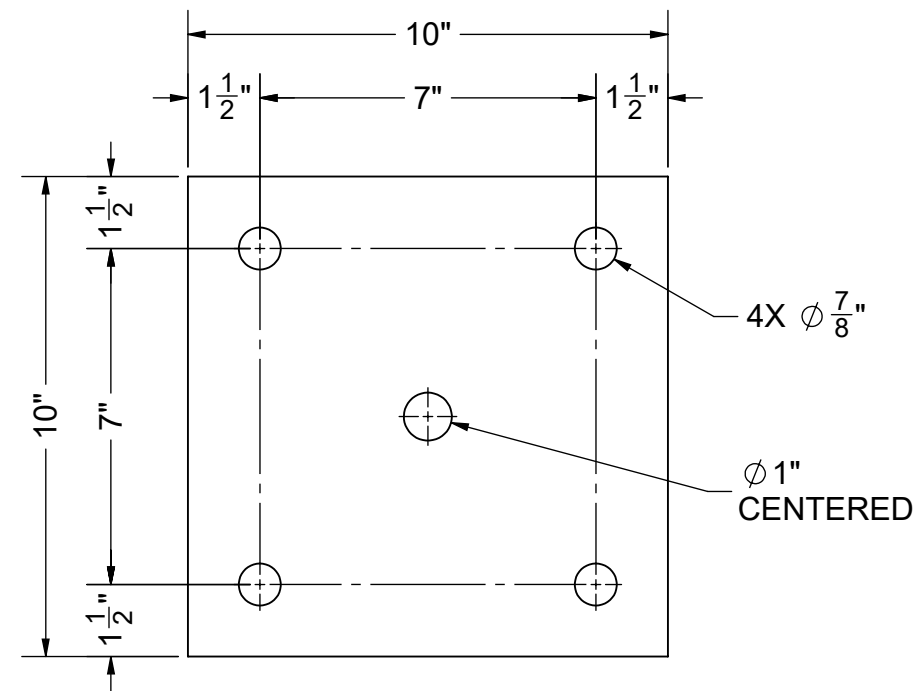


ROOF SECTION AT RIDGE

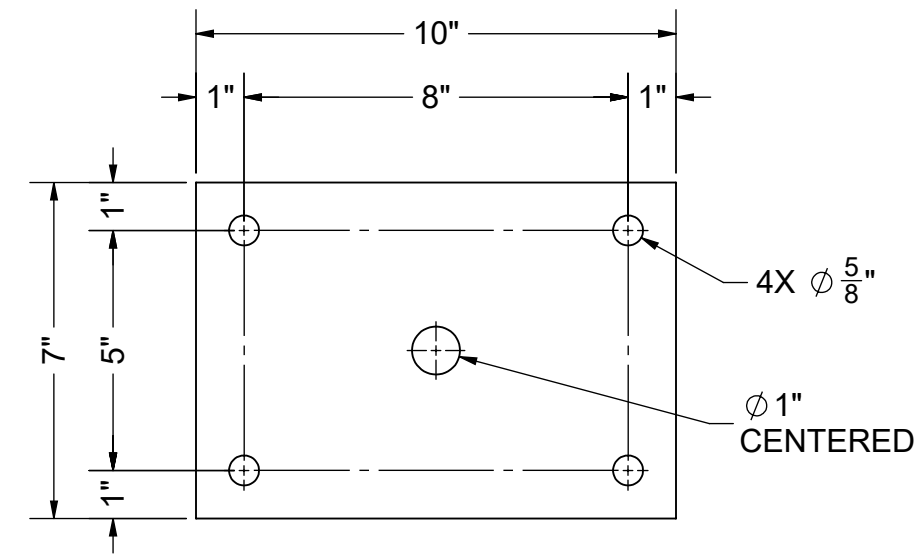
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SEAL

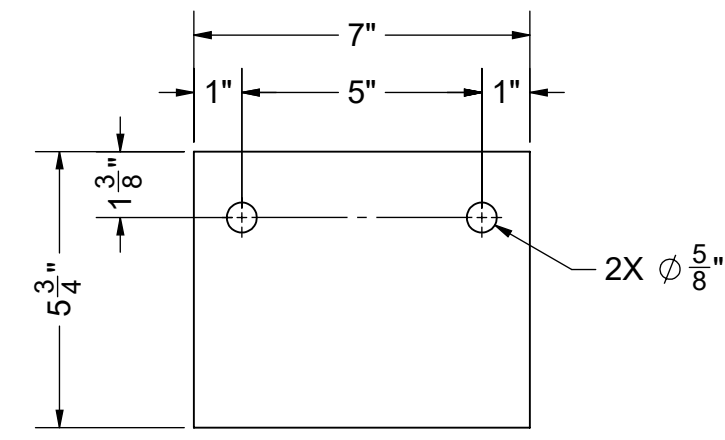
ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET S5 OF 18 SHEETS
				JOB NO. 221218			
				P.O. NO. AM561954-L			



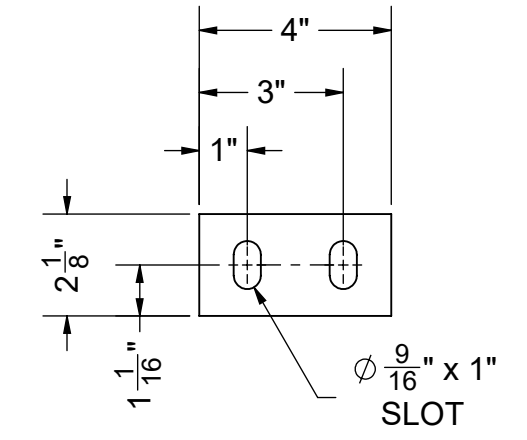
3/4" PLATE
(8) BASE PLATE - BP2



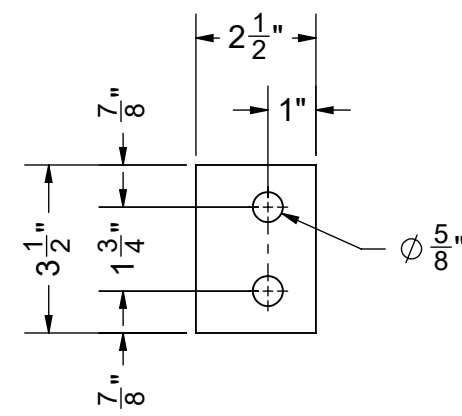
5/8" PLATE
(16) POST PLATE - RP23



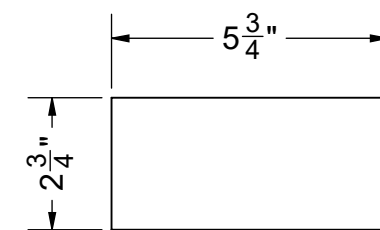
1/4" PLATE
(8) BEAM MOUNT - RP15



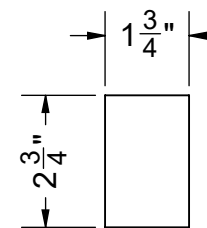
3/16" PLATE
(8) BEAM MOUNT - RP8



1/4" PLATE
(24) PURLIN MOUNT - PM5



1/8" PLATE
(2) CAP PLATE - PL1

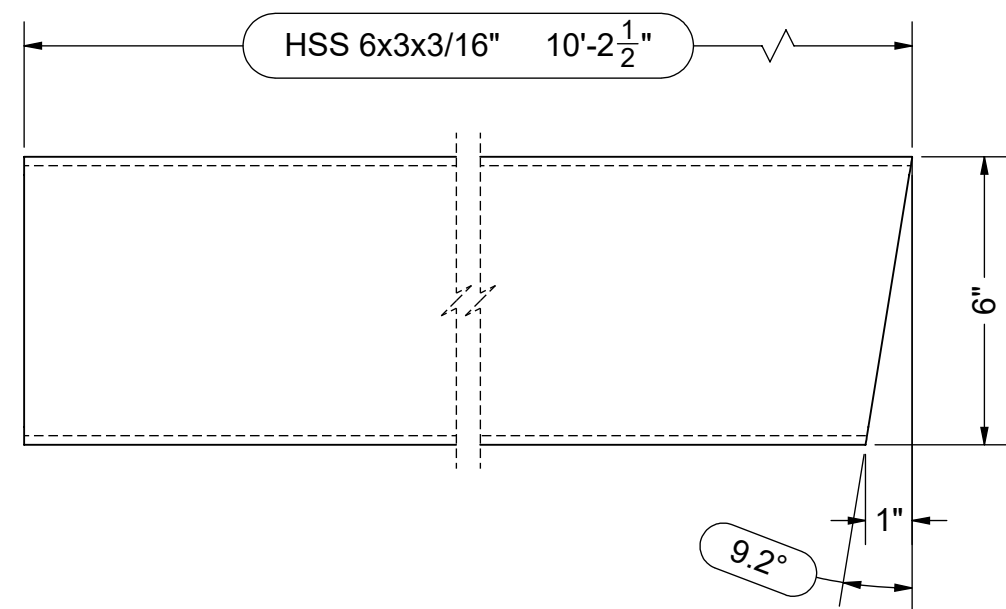


1/8" PLATE
(8) CAP PLATE - PL3

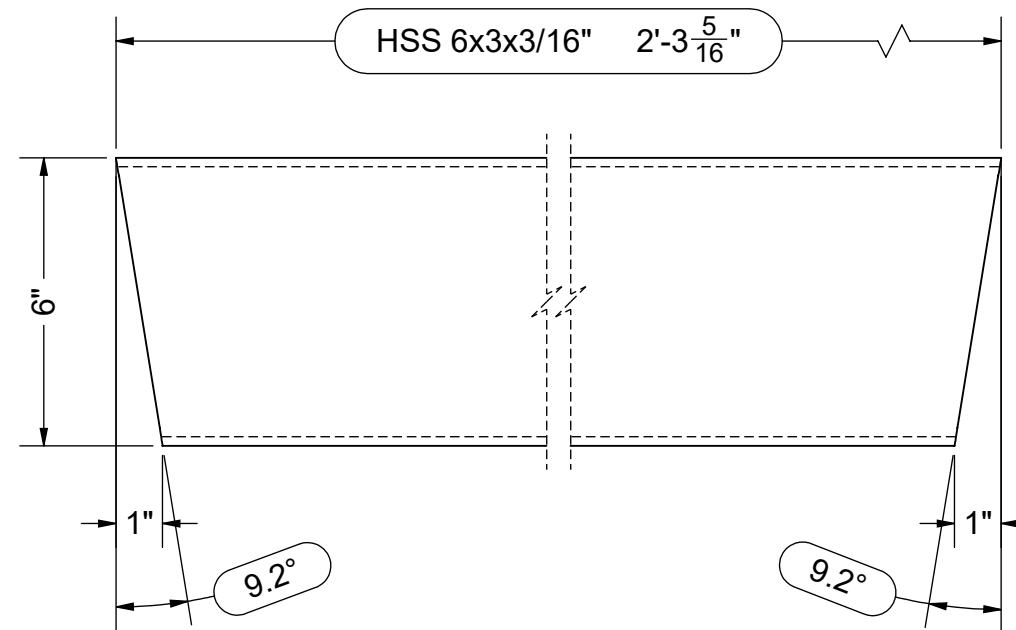
SEAL

PART QTY SHOWN IS FOR (1) SHELTER

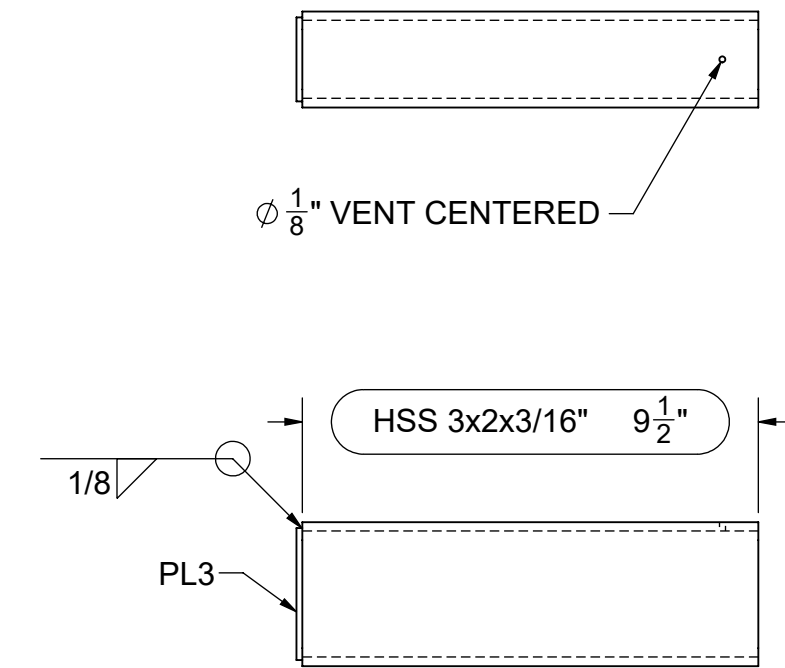
ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D1 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					



(8) RAFTER TUBE - R1



(4) RAFTER TUBE - R2

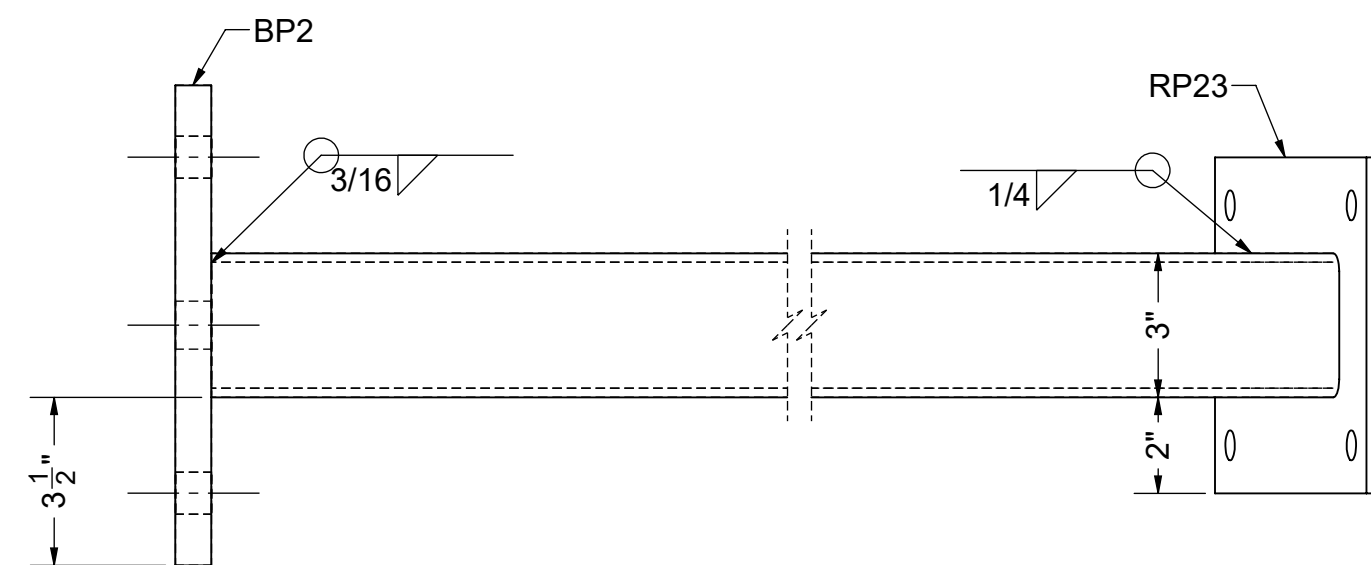
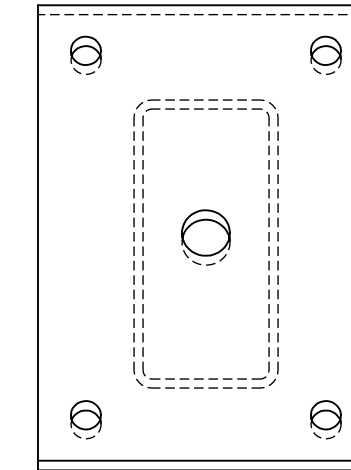
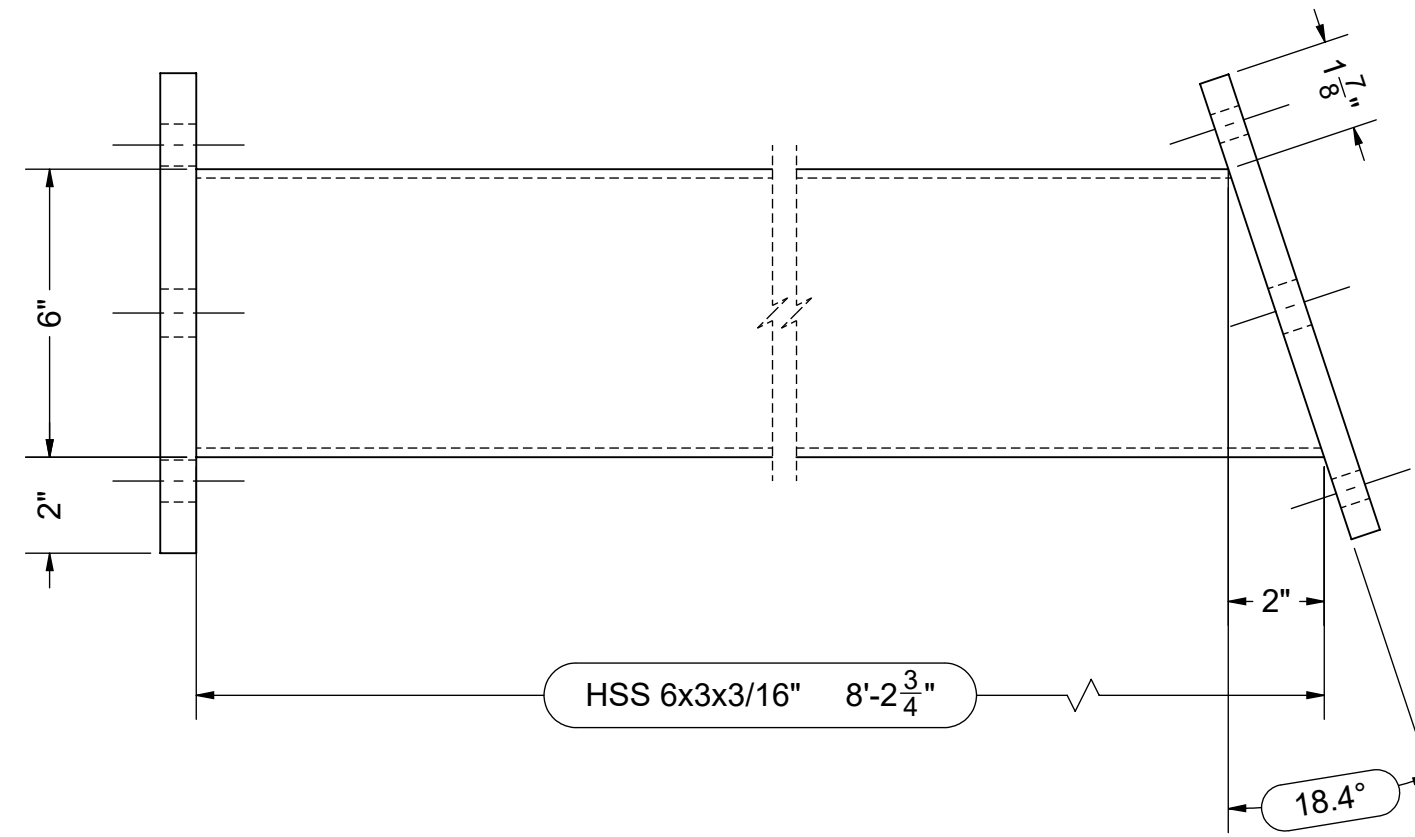
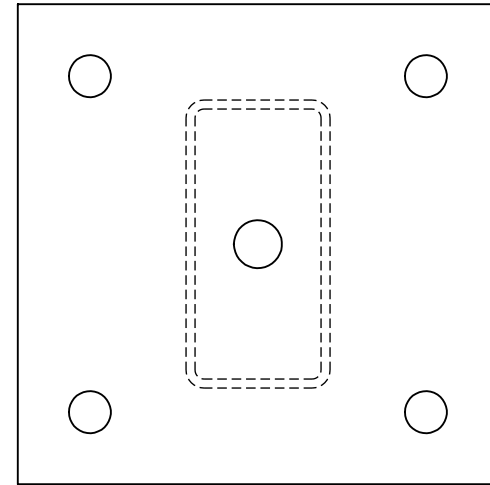


(4) PURLIN - SB

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D2 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					

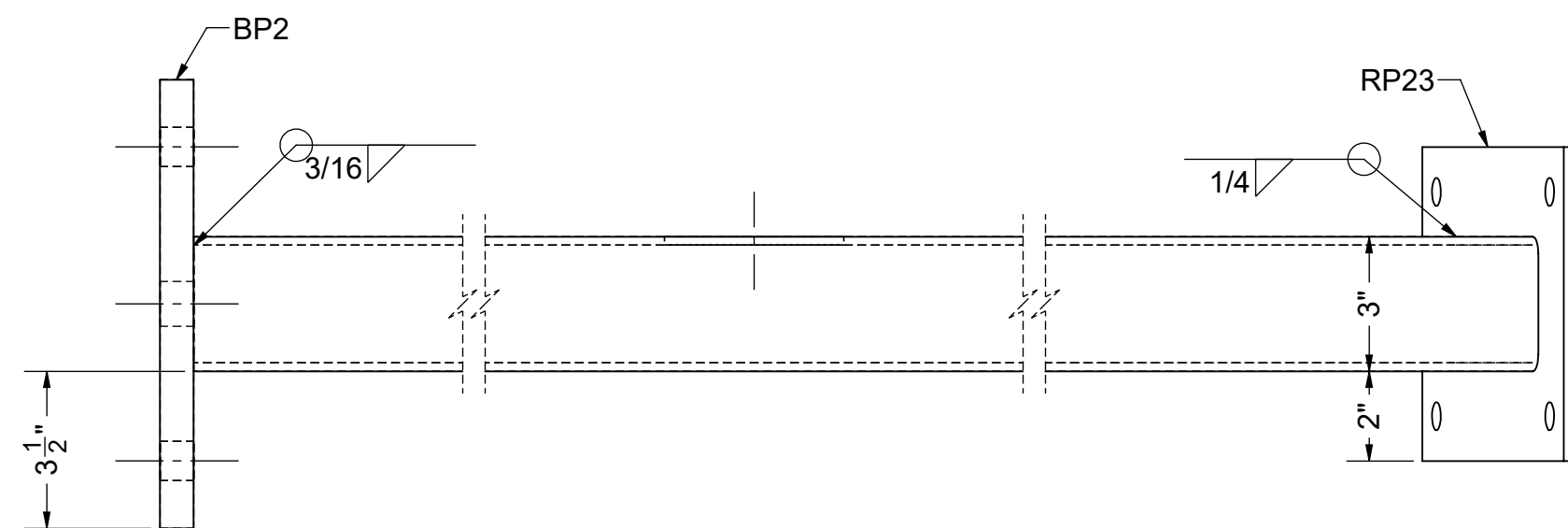
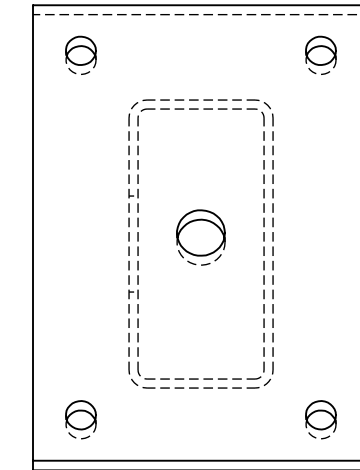
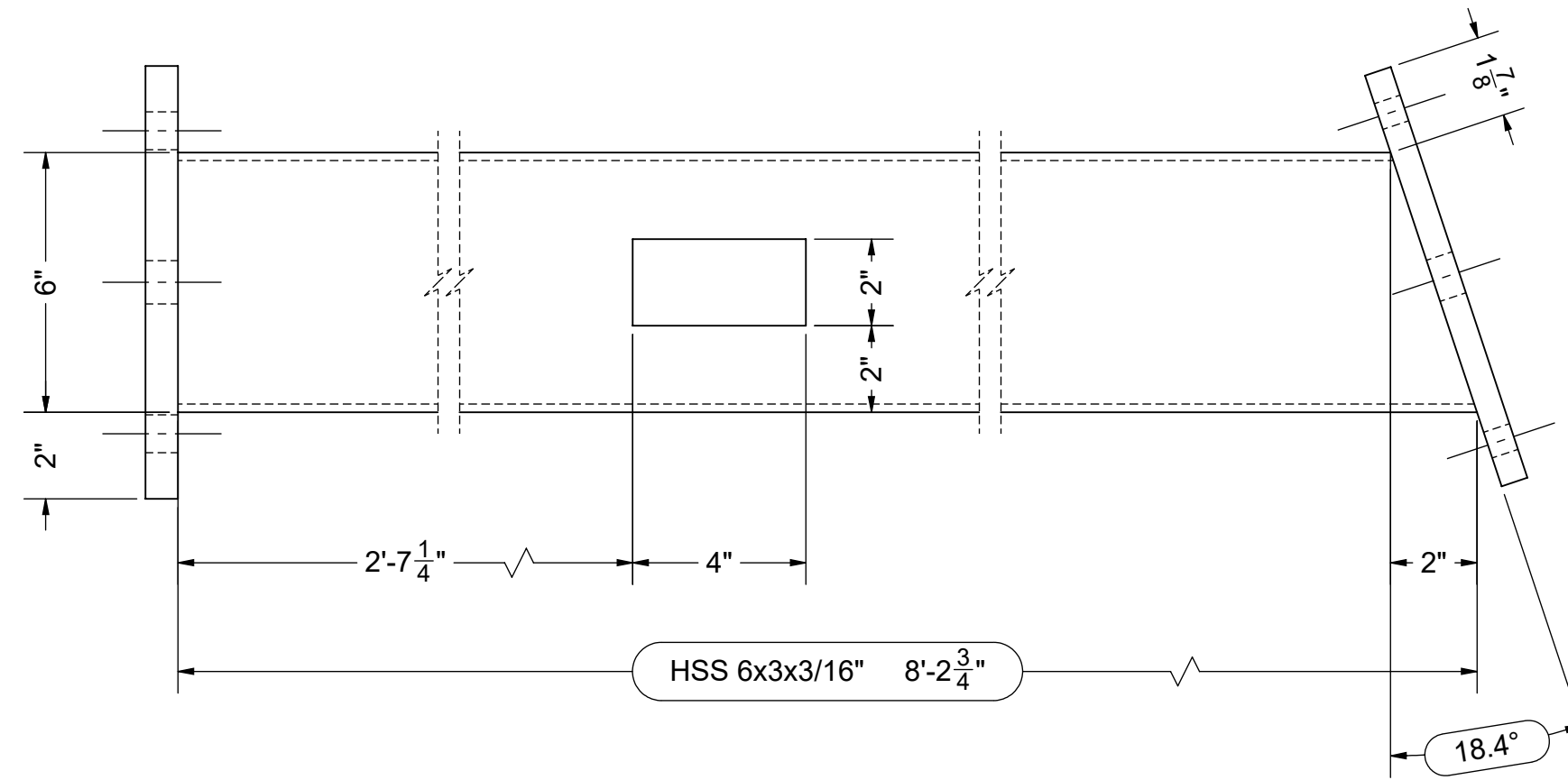
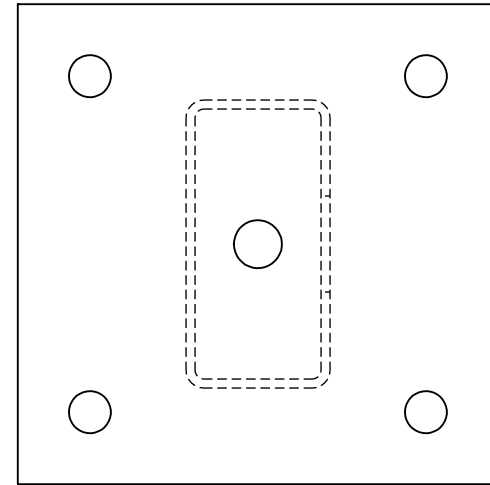


(4) POST - PA

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D3 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					

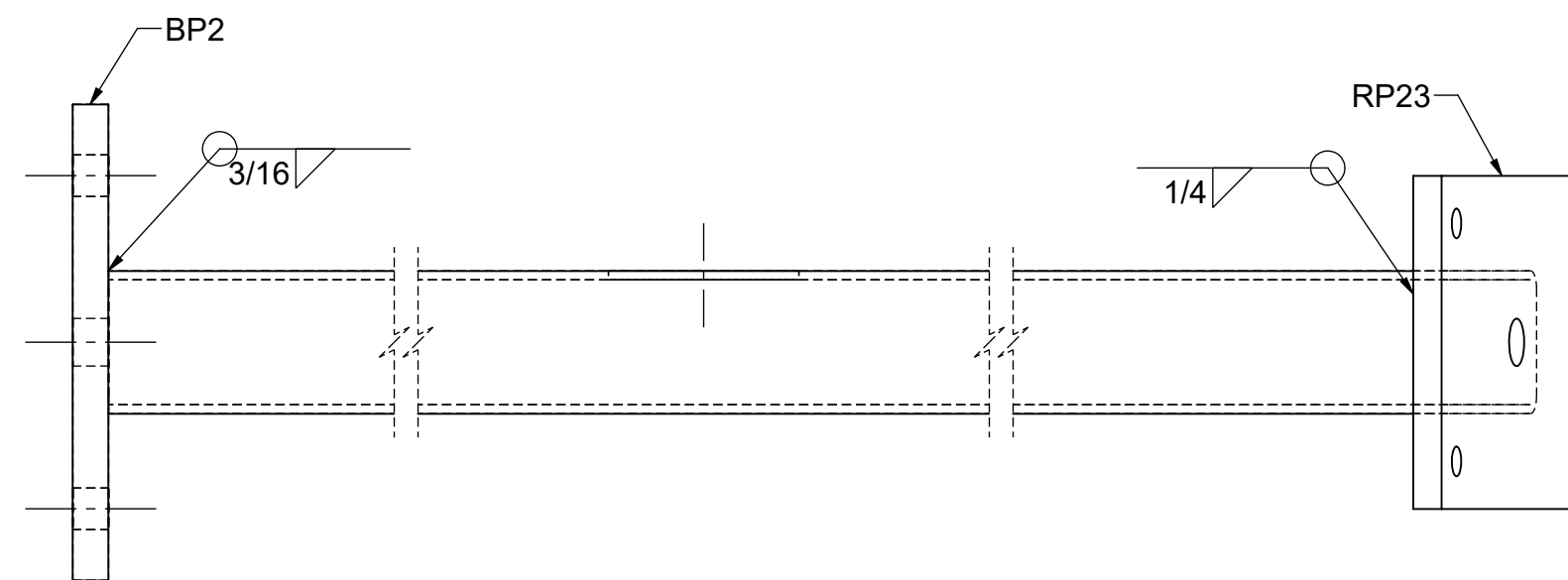
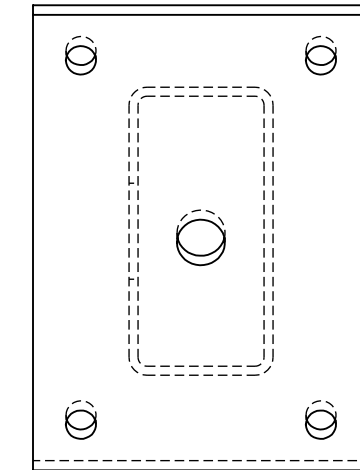
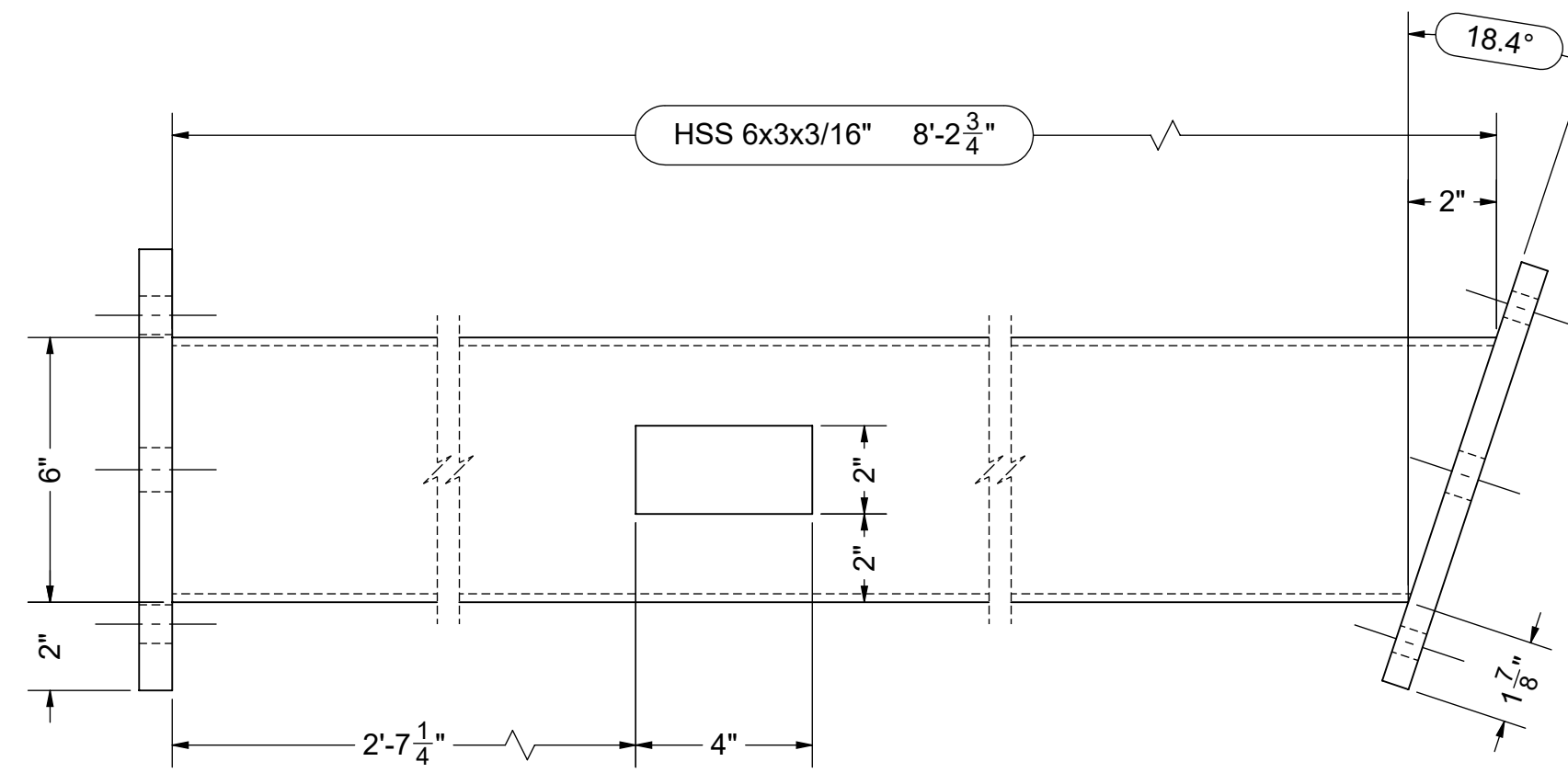
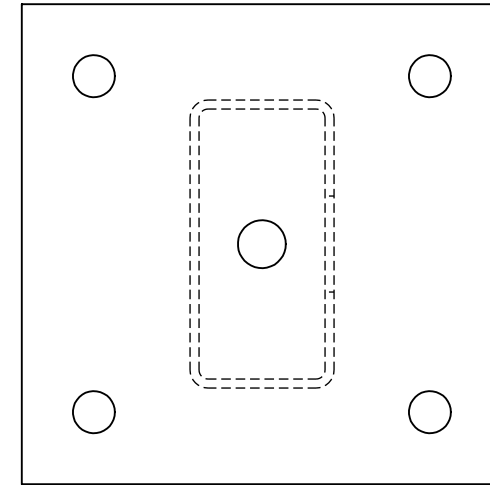


(2) POST - PB

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D4 OF 18 SHEETS
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				P.O. NO.	AM561954-L					

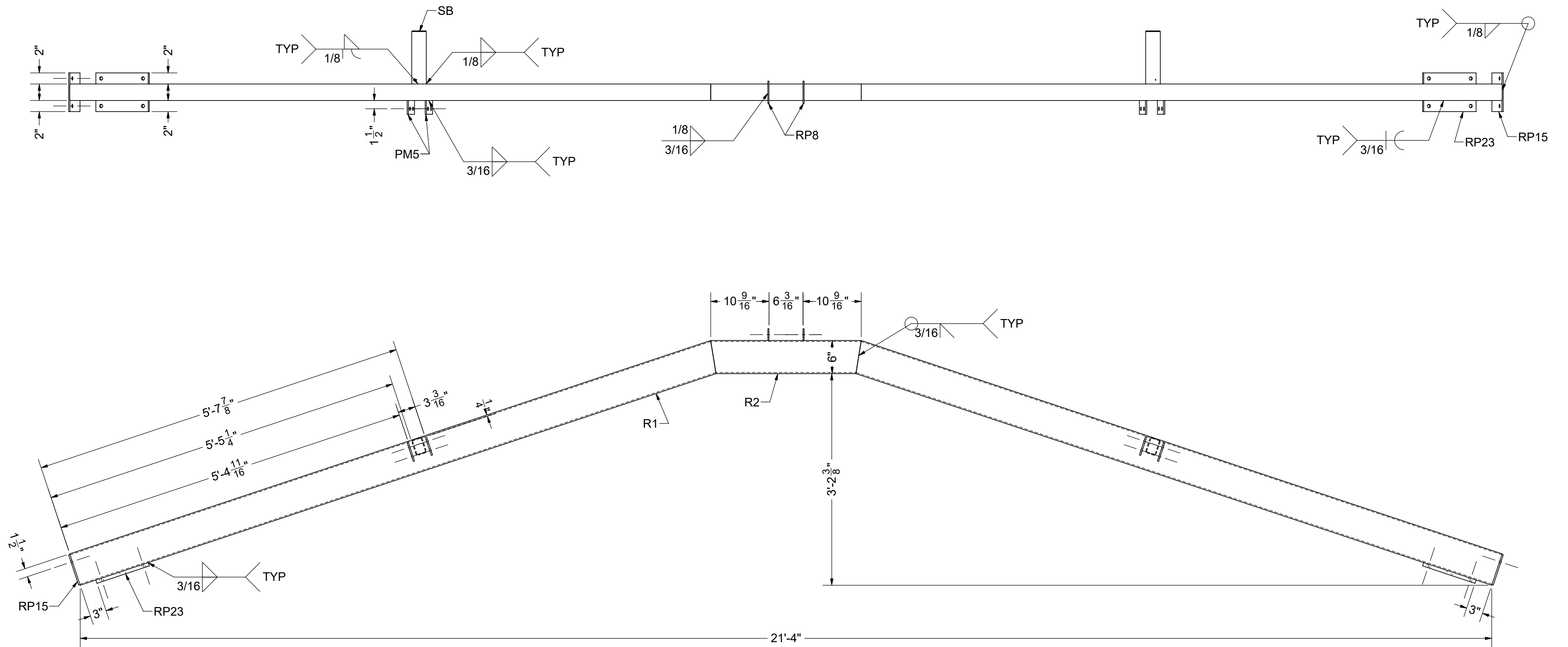


(2) POST - PC

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D5 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					

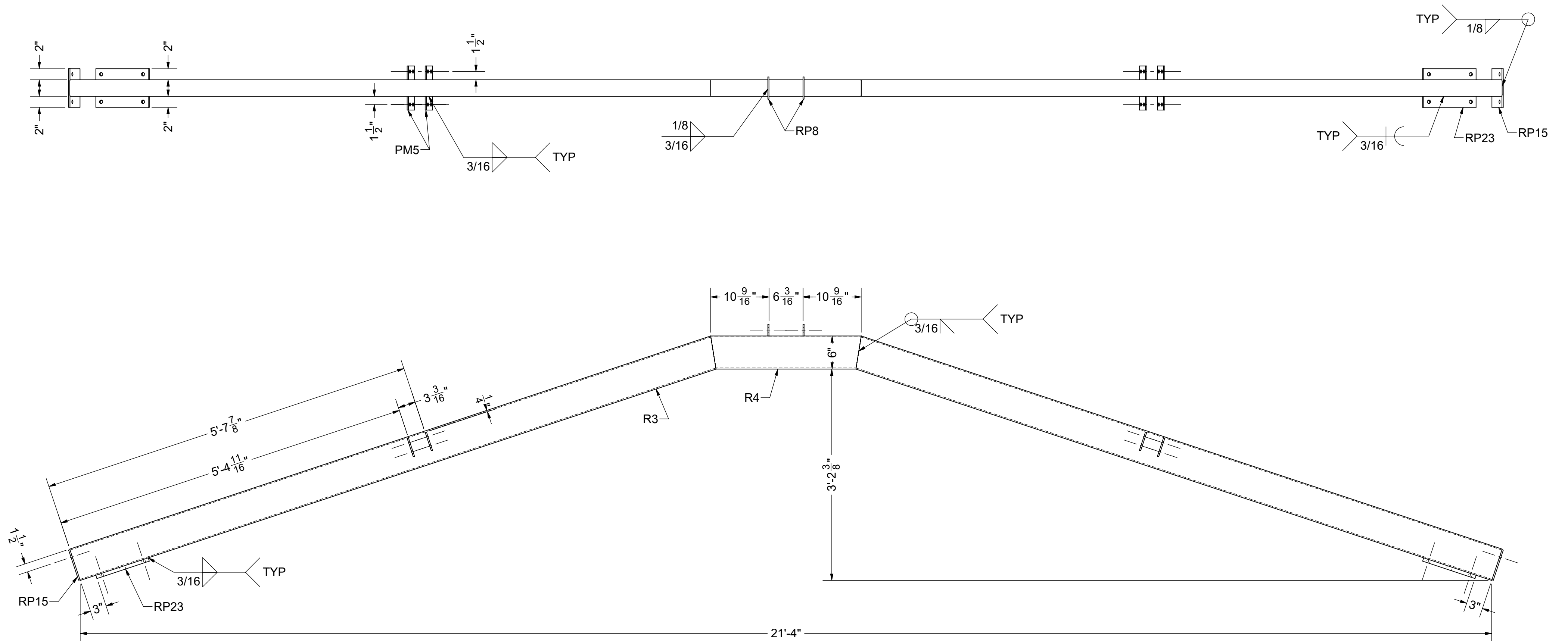


(2) RAFTER - RA

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D6 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					

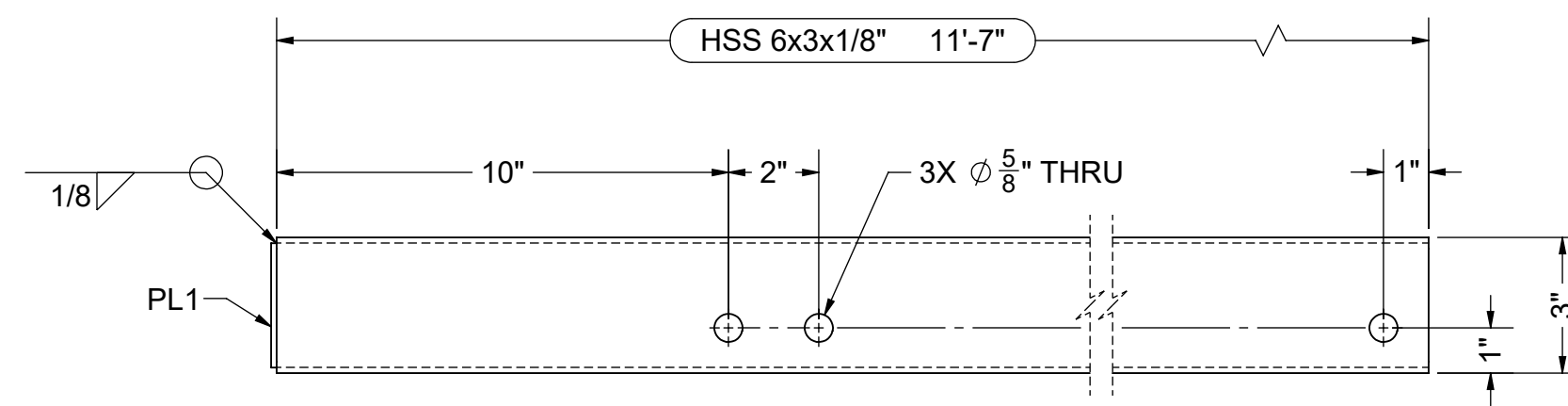
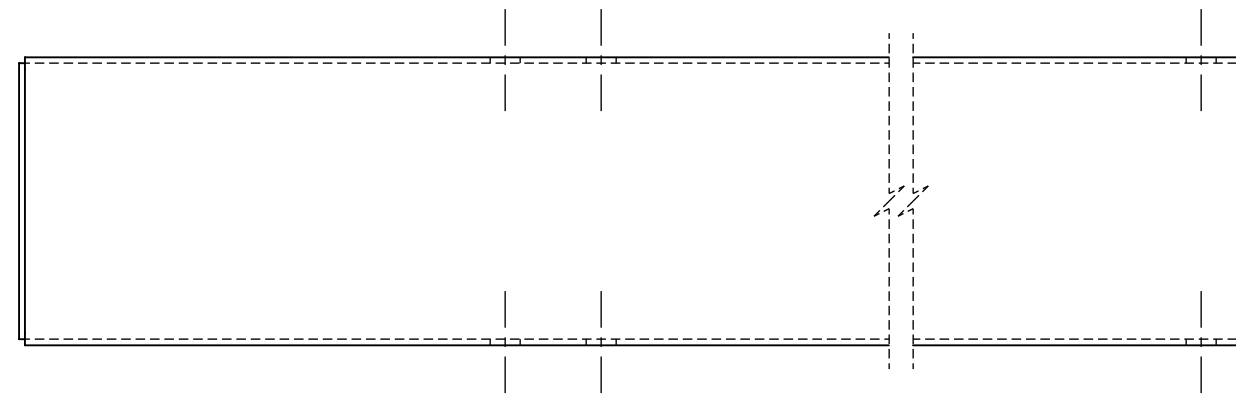


(2) RAFTER - RB

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D7 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					

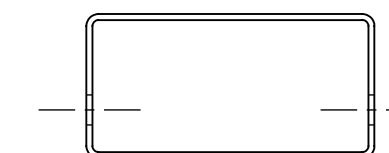
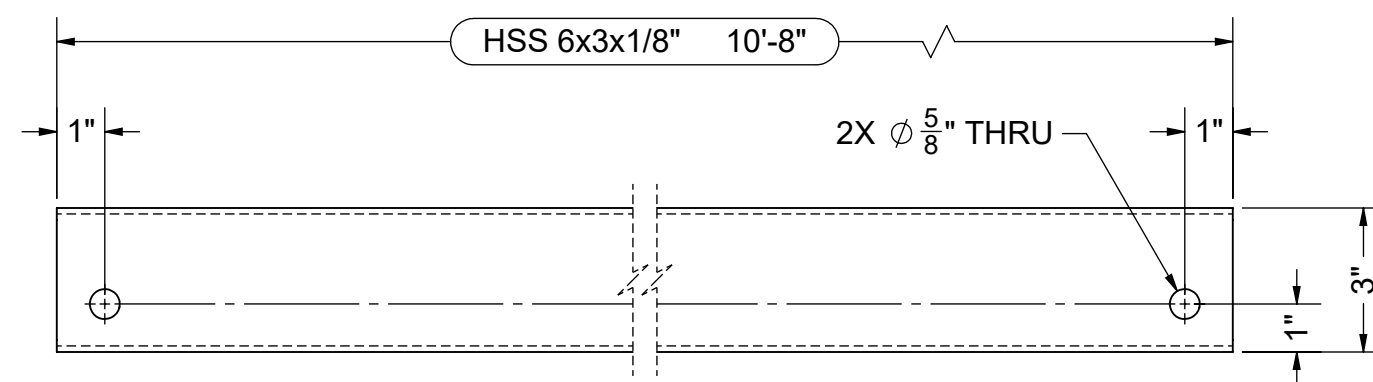
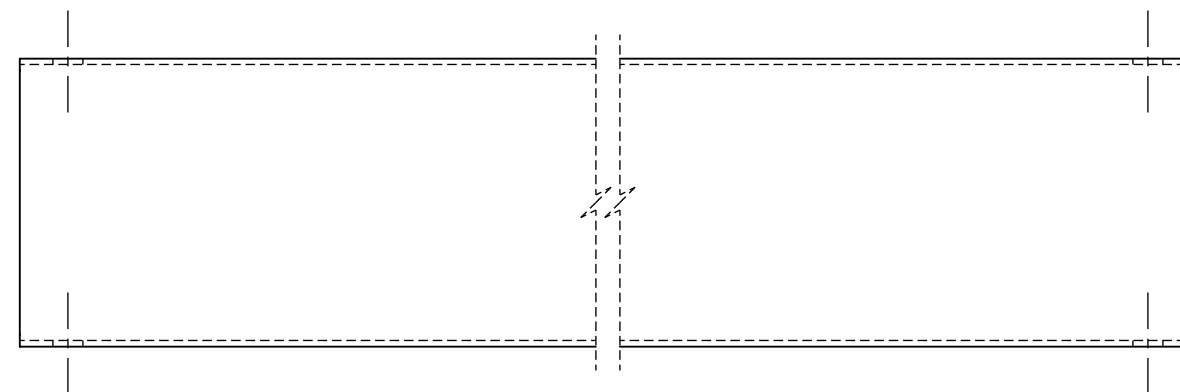


(2) RIDGE BEAM - TA

PART QTY SHOWN IS FOR (1) SHELTER

SEAL

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET D8 OF 18 SHEETS
				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			

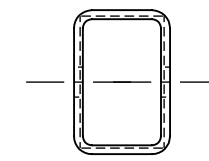
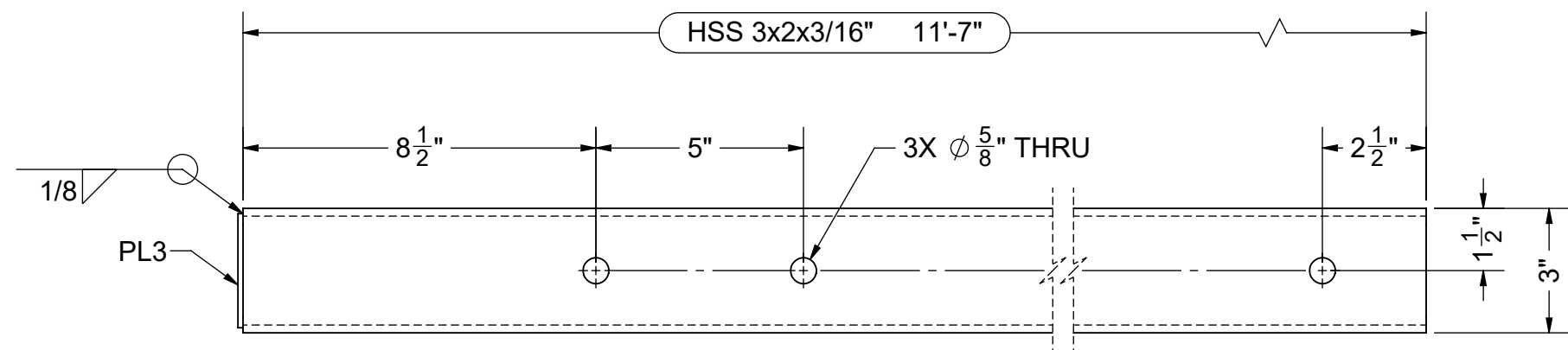
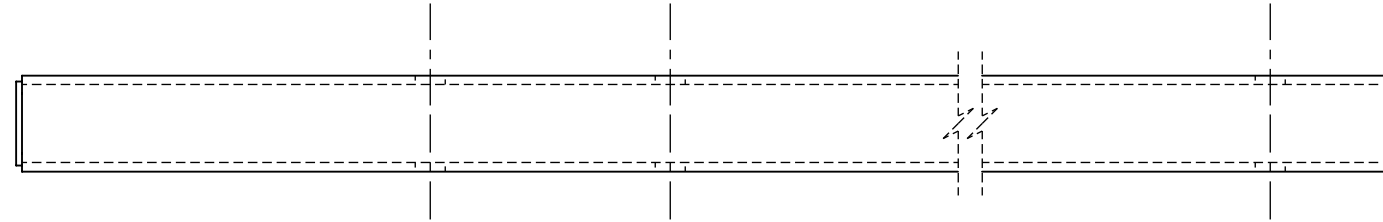


(1) RIDGE BEAM - TB

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET D9 OF 18 SHEETS
				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			

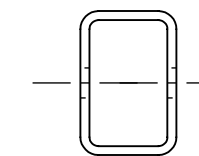
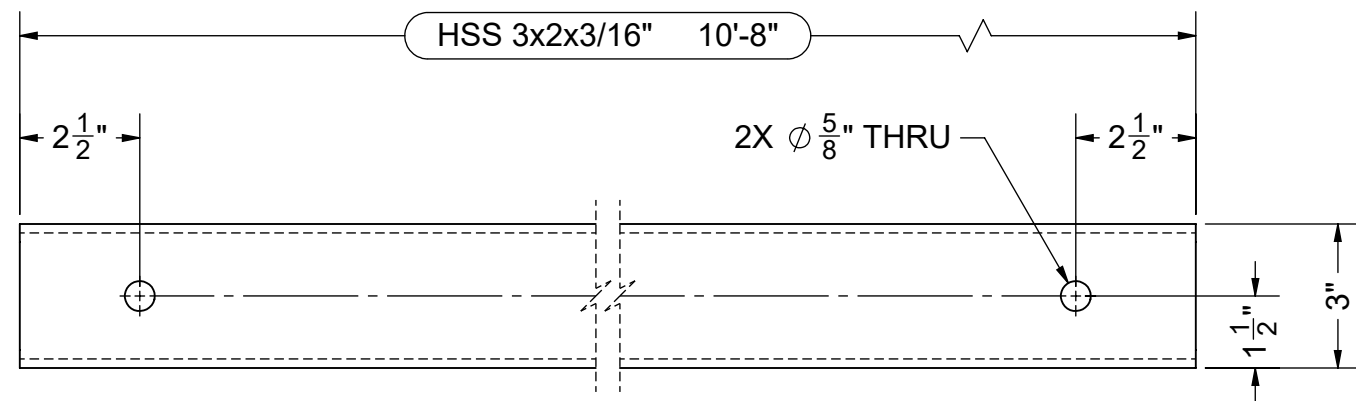
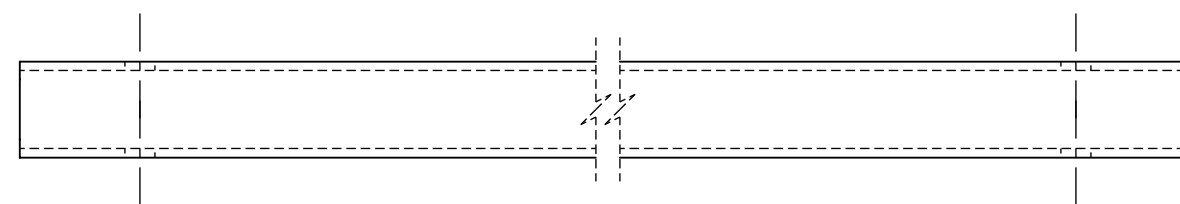


(4) EDGE BEAM - EA

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO.	221218	DRAWN BY	TG	DRAWN DATE	6/17/2024	SHEET D10 OF 18 SHEETS
				JOB NO.	221218	CHECKED BY	AY	REVISE DATE	7/9/2024	
				P.O. NO.	AM561954-L					

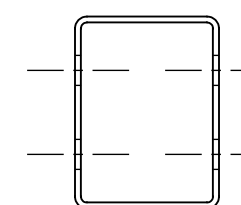
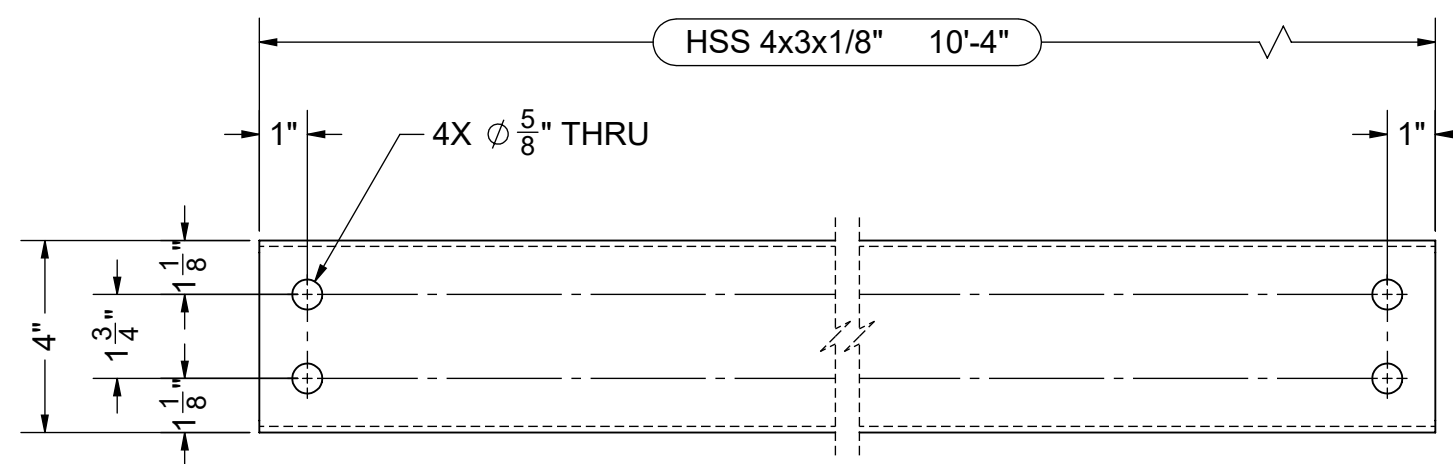
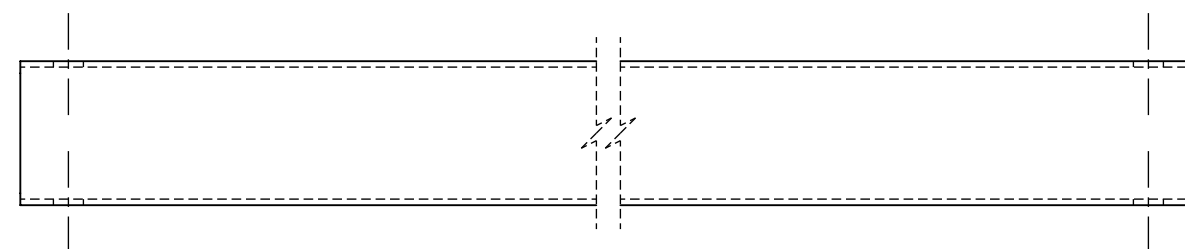


(2) EDGE BEAM - EB

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET D11 OF 18 SHEETS
				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			



(6) PURLIN - SA

SEAL

PART QTY SHOWN IS FOR (1) SHELTER

ENGINEER AMMTEC CONSULTANTS, PLLC ADDRESS: 2447 WEST 12TH ST, STE1 TEMPE, AZ 85281 PHONE: (480) 927-9696 WEB: www.ammtec.com	MANUFACTURER AMERICANA OUTDOORS ADDRESS: #2 INDUSTRIAL DRIVE SALEM, IL 62881 PHONE: (800) 851-0865 WEB: www.americana.com	PROJECT / LOCATION 17551 CHICAGO AVE LANSING, IL 60438	MODEL 24' x 34' ILLINI SHELTER	DWG. NO. 221218	DRAWN BY TG	DRAWN DATE 6/17/2024	SHEET D12 OF 18 SHEETS
				JOB NO. 221218	CHECKED BY AY	REVISE DATE 7/9/2024	
				P.O. NO. AM561954-L			

SOLAR LED INTEGRATED COMMERCIAL AREA LIGHT

Project: _____

Type: _____ Quantity: _____

The SCL2 Series solar LED luminaire is a great fit for commercial, parking lot, recreational bikeway/pathway and public space lighting applications. The self-contained, unobtrusive design integrates its solar power, adaptive control and LED technologies into a compact and efficient form. With robust construction and unequalled performance, the SCL2 series is an excellent fit wherever cost effective, full cutoff lighting is required.

Using solar power and LEDs, the SCL2 series is completely self-contained and offers significant benefits:

- Cost effective design ships fully assembled and installs in minutes
- Smart Connect provides wireless control & communication with your light
- Low installation cost and minimal site impact with no trenching, cabling or wiring
- Minimal ongoing costs with no electrical bills or bulbs to change
- Operates entirely independent from the grid and is immune to power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is “self-learning” and allows the lights to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.



**WIRELESS
CONTROL APP**

TECHNICAL SPECIFICATIONS

- Solar Module:**
- High-efficiency monocrystalline cells
 - Inconspicuously integrated into the top of luminaire
 - Used for day/night detection (no photocell required)

- Solar Lighting Controller (SLC):**
- Microcontroller-based technology
 - High-efficiency, Maximum Power Point Tracking (MPPT) battery charger
 - Built-in high-efficiency LED driver
 - Multiyear data logging
 - Automatically manages lighting performance based on environmental conditions and lighting requirements
 - Integrated into luminaire housing

- Battery:**
- High performance lithium (LiFePO₄)
 - Exceptional 10+ year lifecycle
 - High temperature tolerance
 - Contained within luminaire housing
 - Designed for easy battery changes when required

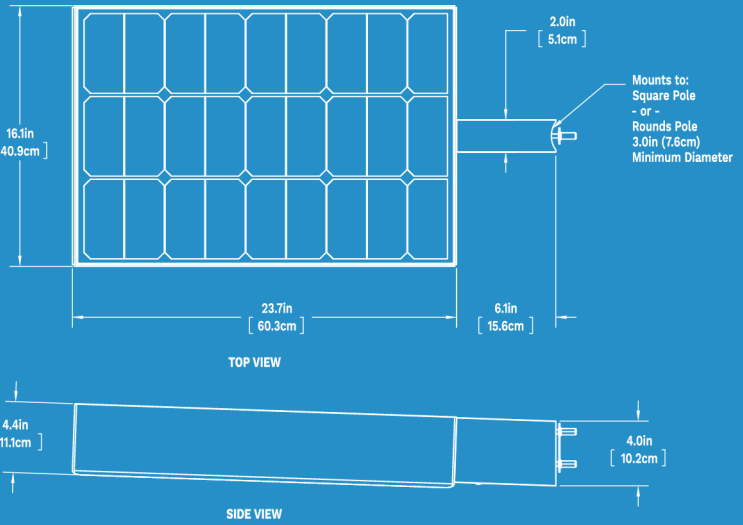
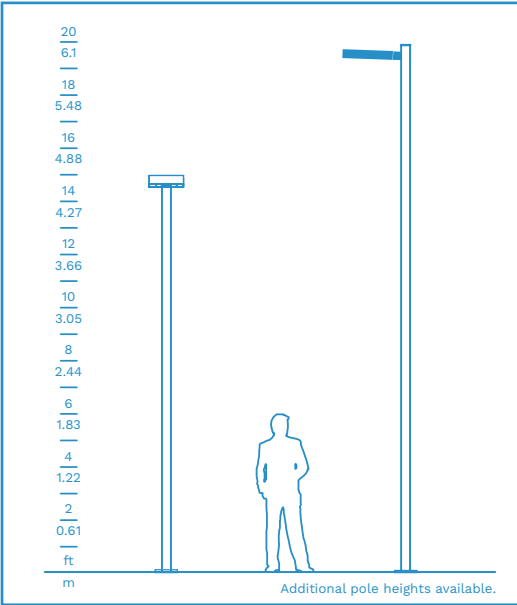
- LEDs and Optics:**
- 100,000 hour L70 lifetime LED
 - Extra Warm White (2700K), Warm White (3000K), Neutral White (4000K), and Amber (595nm) LEDs available
 - High-efficiency type 2, 3, 4, 4F, and 5, full cutoff optics
 - Typical lumen output 3250 lumens
 - Optional backlight shield
 - Wildlife-friendly amber option available

- Mechanical Construction:**
- Extruded and formed, low copper aluminum enclosure and mounting arm
 - Stainless fasteners with security fastener option
 - Architectural grade, super durable, TGIC powder coat
 - Four standard colors with custom colors available

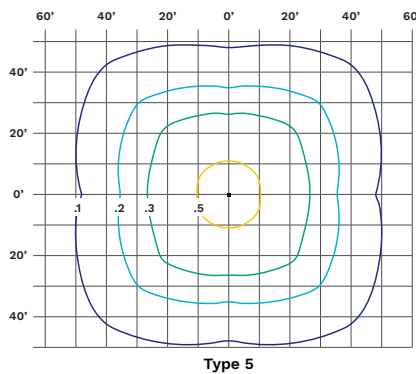
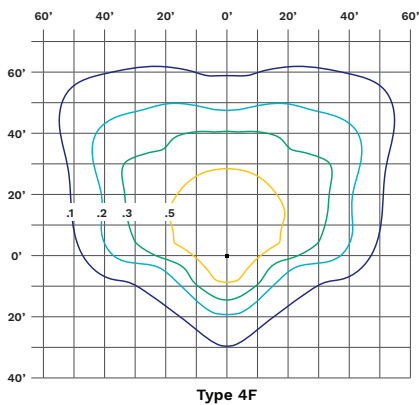
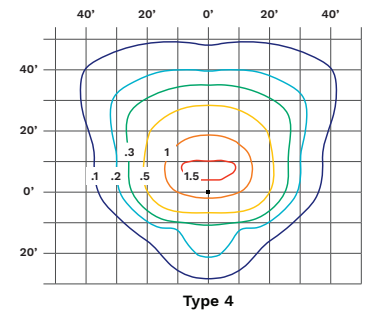
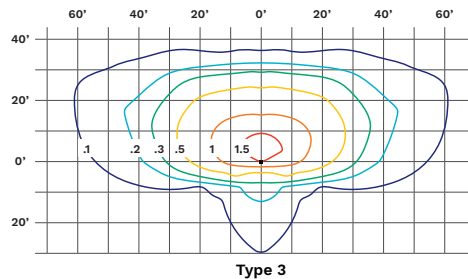
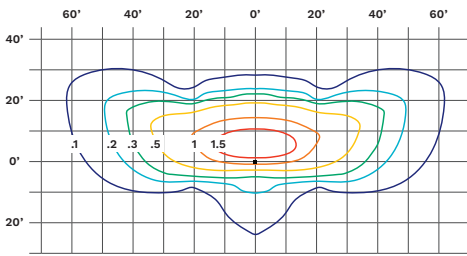
- Factory Set Lighting Profiles:**
- 11 standard duration profiles available
 - Real-time lighting profile options available
 - See lighting profile sheet for all options
 - Lighting profiles and motion sensing options are field configurable with app
 - Motion sensing capabilities optimize performance based on usage

- Wireless Controls:**
- Easy-to-use interface via iOS smartphone app
 - Configure and control lighting profiles
 - Adjust dusk and dawn thresholds
 - Motion sensing capabilities optimize performance based on usage

EPA: 0.99ft² (0.09m²) | Weight: 34lbs (15.4kg) including battery



PHOTOMETRICS (IES files available on our website)



Notes:

- Photometrics based on 20 ft mounting height
- Light levels in foot candles are calculated using 3250 lumens at 4000K color temperature
- To convert to lux multiply light levels by 10.7
- Typical lumen levels based off of Type 5 optic with the default profile using neutral white LEDs
- Contact us for help in choosing the right lighting profile and distribution
- Motion sensing is ON by default
- Specifications subject to change without notice

ORDER MATRIX



Series	Mounting	Finish	Distribution	LED	Lighting Profiles (Full list on website)	Options
SCL2	SPMU - Side Pole Mount Universal	BK - Black	T2 - Type 2	XW - 2700K	00 - Dusk till dawn	SEC - Security Fasteners
		BZ - Bronze	T3 - Type 3	WW - 3000K	09 - On at dusk, 100% for 3 hours, dim to 30%, brighten to 100% one hour before dawn, off at dawn (DEFAULT)	MSO - Motion Sensor Off
	NMNT - No Mount	SV - Silver	T4 - Type 4	NW - 4000K		BLS - Backlight Shield
		WH - White	T4F - Type 4F	AMB - Amber	TX0000 - On at dusk until time between 1800 & 0600. X = O (Off) or D (Dim). 0000 = time to dim or turn off.	
		CC - Custom	T5 - Type 5			

DIVISION 31 – EARTHWORK

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing trees, shrubs, groundcovers, and grass to remain.
 - 2. Removing existing trees, shrubs, groundcovers, and grass.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Disconnecting and capping or sealing site utilities.
 - 7. Temporary erosion and sedimentation control measures.

1.2 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 31 Section "Earth Moving."
 - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. See Civil Engineering Drawings for additional information.

3.3 TREE PROTECTION

- A. Erect and maintain temporary fencing around tree protection zones as indicated on drawings prior to commencement of other site work and clearing. Remove fence when construction is complete.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Architect.

3.4 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 - 1. Arrange with utility companies to shut off indicated utilities.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's written permission.
- C. Removal of underground utilities is included in Sections covering site utilities.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches below exposed subgrade.
 - 4. Use only hand methods for grubbing within tree protection zone.
 - 5. Chip removed tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil beneath paved areas and as needed to provide minimum depths indicated.
- C. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
- D. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

3.8 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 - 1. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION 311000

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Preparing subgrades for slabs-on-grade, walks, pavements, lawns and grasses, and exterior plants.
 - 2. Excavating and backfilling for buildings and structures.
 - 3. Drainage course for slabs-on-grade.
 - 4. Subbase course for concrete walks and pavements.

1.2 DEFINITIONS

- A. Backfill: Soil material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Course 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: Course 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 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: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

- J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.3 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.

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: ASTM D 2487 Soil Classification Groups CL, ML, SM, SC-SM, and SW, 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 OL, OH, MH, CH, 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. Aggregate 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 (37.5-mm) 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. Filter / Geotextile Fabric: Nonwoven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:
 - 1. Grab Tensile Strength: 110 lbf; ASTM D 4632.
 - 2. Tear Strength: 40 lbs; ASTM D 4533.
 - 3. Puncture Resistance: 50 lbf; ASTM D 1833.
 - 4. Water Flow Rate: 150 gpm per sq. ft.; ASTM D 4491.
 - 5. Apparent Opening Size: No. 50; ASTM D 4751.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing." during earthwork operations.

3.2 EXCAVATION

- 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.

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.

3.6 SUBGRADE INSPECTION

- A. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment 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 or utility pipe 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. 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 Division 03 Section "Cast-in-Place Concrete."
- D. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- E. 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 698:
 - 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 lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 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 Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1/2 inch.
 - 3. Pavements: 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.

3.14 SUBBASE AND BASE COURSES

- A. Place subbase course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course under pavements and walks 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 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

- 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 will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.

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. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 312000

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 321216 - ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Hot-mix asphalt paving.
- B. Related Sections:
 - 1. Division 31 Section "Earth Moving" for aggregate subbase and base courses and for aggregate pavement shoulders.
 - 2. Division 32 Section "Sport Court Surfacing" for color coating.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include technical data and tested physical and performance properties.
 - 1. Job-Mix Designs: For each job mix proposed for the Work.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by authorities having jurisdiction or the DOT of state in which Project is located.
- B. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of state or local DOT for asphalt paving work.
 - 1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
 - 1. Tack Coat: Minimum surface temperature of 60 deg F.
 - 2. Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at time of placement.
 - 3. Asphalt Surface Course: Minimum surface temperature of 60 deg F at time of placement.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. Coarse Aggregate: ASTM D 692, sound; angular crushed stone, crushed gravel, or cured, crushed blast-furnace slag.
- B. Fine Aggregate: ASTM D 1073, sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.
- C. Mineral Filler: ASTM D 242, rock or slag dust, hydraulic cement, or other inert material.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: Shall be graded and mixed to comply with Mix IL-19.0 of the Standard Specifications.
- B. Asphalt Surface: Shall be graded and mixed to comply with Mixture "D" of the Standard Specifications.
- C. Tack Coat: ASTM D 977 or AASHTO M 140 emulsified asphalt, or cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.

2.3 AUXILIARY MATERIALS

- A. Herbicide: Commercial chemical for weed control, registered by the EPA. Provide in granular, liquid, or wettable powder form.

2.4 MIXES

- A. Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction and complying with the following requirements:
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Binder Course: Hot Mix Asphalt Binder Course, IL-19.0, N50.
 - 3. Surface Course: Hot Mix Asphalt Surface Course, Mix "D", N50.

PART 3 - EXECUTION

2.5 EXAMINATION

- A. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
- B. Proceed with paving only after unsatisfactory conditions have been corrected.

2.6 PATCHING

- A. Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompress existing unbound-aggregate base course to form new subgrade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 - 1. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompress existing unbound-aggregate base course to form new subgrade.
- C. Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, hot-mix asphalt paving at a rate of 0.05 to 0.15 gal./sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Patching: Fill excavated pavements with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

2.7 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
- C. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

2.8 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Spread mix at minimum temperature of 250 deg F.
 - 2. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.

- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

2.9 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
 - 1. Clean contact surfaces and apply tack coat to joints.
 - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
 - 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
 - 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

2.10 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

2.11 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Base Course: Plus or minus 1/2 inch.
 - 2. Surface Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 - 1. Base Course: 1/4 inch.
 - 2. Surface Course: 1/8 inch.
 - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.
 - 4. No ponding will be allowed on sport court surfaces.

2.12 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections. Contractor will coordinate testing for subgrade proof roll inspection, aggregate base compaction testing, and asphalt thickness and density testing.
- B. Replace and compact hot-mix asphalt where core tests were taken.
- C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

2.13 DISPOSAL

- A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill.

END OF SECTION 321216

SECTION 321313 - CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes exterior cement concrete pavement for the following:

- 1. Concrete paving

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete pavement mixture.
- C. Mockup: Provide 4'x4' mockup for each finish type to serve as the basis for all work, to be maintained on site until after construction. Mockup can be part of the finished area.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.
- C. Provide 2-year warranty on materials and workmanship.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- B. Plain-Steel Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.
- C. Plain Steel Wire: ASTM A 82, as drawn.
- D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice."

2.2 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout the Project:
 - 1. Portland Cement: ASTM C 150, Type I, II, gray
 - a. Fly Ash: ASTM C 618, Class F.
 - b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- A. Normal-Weight Aggregates: ASTM C 33, coarse aggregate, uniformly graded. Provide aggregates from a single source.
- B. Water: ASTM C 94/C 94M.
- C. Air-Entraining Admixture: ASTM C 260.
- D. Chemical Admixtures: ASTM C 494/C 494M, of type suitable for application, certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

2.3 CURING MATERIALS

- A. Water: Potable.
- B. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
- C. Clear Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

2.4 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: 1/2" thick polyethylene, closed cell, expansion joint filler w/ strip cap
- B. Joint Sealant / Caulk: Sonneborn, Sonolastic TX 1 or approved equal

2.5 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:
 - 1. Compressive Strength (28 Days): 3500 psi.
 - 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 - 3. Slump Limit: 4 inches, plus or minus 1 inch.
 - 4. Air Content: 5-1/2 percent plus or minus 1.5 percent.

2.6 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Proof-roll prepared subbase surface below concrete pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.4 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness to match jointing of existing adjacent concrete pavement.
- E. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.5 CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed pavement surfaces with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.6 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

3.7 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by curing and sealing compound.

3.8 PAVEMENT TOLERANCES

- A. Comply with tolerances of ACI 117 and as follows:

1. Elevation: 1/4 inch.
2. Thickness: Plus 3/8 inch, minus 1/4 inch.
3. Surface: Gap below 10-foot-long, unlevelled straightedge not to exceed 1/4 inch.
4. Joint Spacing: 3 inches.
5. Contraction Joint Depth: Plus 1/4 inch, no minus.
6. Joint Width: Plus 1/8 inch, no minus.

3.9 REPAIRS AND PROTECTION

- A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
- B. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement.
- C. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

3.10 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
 1. Testing Services: Tests shall be performed according to ACI 301.
 2. Contractor to pull 4 cylinders for every 50 CY of concrete for compression testing. One at 7 days, two at 28 days and a spare.

END OF SECTION 321313

SECTION 321823.53 -SPORT COURT SURFACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor shall provide all equipment and materials and do all work necessary to construct the sport courts including all pavement and color-coat surfacing.

1.2 SUBMITTALS

- A. Certificates: Submit copies of material's certificates signed by the material producer and the Contractor certifying that each item complies with or exceeds specified requirements.
- B. Shop Drawings: Submit striping plan for basketball court, pickleball courts, and existing tennis courts.

1.3 QUALITY ASSURANCE

- A. Standards of Manufacture: Work shall be in accordance with the applicable sections of the State of Illinois, Department of Transportation, Standard Specifications for Road and Bridge Construction, current edition.
- B. The contractor must be an authorized licensed installer who has completed at least 10 Basketball, tennis, and pickleball court projects of similar magnitude and complexity.
- C. Allowable Tolerances per Section 321216.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aggregate Base Course, Bituminous Concrete Binder Course and Bituminous Concrete Surface Course per Section 321216 with the following exception: Bituminous Concrete Surface Course Shall Be Mixture N50, IL-4.75, Mix D. No recycled materials shall be permitted.
- B. Acrylic Surface Coating System: ELITE acrylic resurfacer by USA Tennis Court Construction Company 204 Industrial Drive, Lockport, IL, 815-588-3700, or approved equal.
- C. Decorative Coating: 2 coats sand-based Elite Sport Coating System multi-purpose acrylic latex coating (colors as indicated on Drawings) by USA Tennis Court Construction Company 204 Industrial Drive, Lockport, IL, 815-588-3700, or approved equal.

- D. Striping Paint: Textured white striping paint Elite Line Paint by USA Tennis Court Construction Company 204 Industrial Drive, Lockport, IL, 815-588-3700, or approved equal.
- E. Non-woven Geotextile Filter Fabric: Fabric shall be minimum weight of 5 ounces per square yard.

PART 3 - EXECUTION

3.1 GENERAL

- A. Preparation of subgrade, construction of base course and bituminous concrete per Section 312000 and Section 321216.

3.2 PLACING GEOTEXTILE FABRIC

- A. After subgrade has been prepared, apply a non-woven geotextile fabric to total surface area in accordance to manufacturer's specifications. The fabric shall overlap the adjacent fabric panel a minimum of 2 inches. The transverse joints shall be made in such a manner to avoid pick up by the paver. The direction of paving shall be in the direction of fabric panel.

3.4 PLACEMENT OF POSTS

- A. After asphalt has cured one week, core holes for basketball goal and net footings into bituminous concrete pavement to a depth and diameter indicated in the drawings. Care should be taken to avoid damaging the pavement around the net post footings. Restore damaged pavement around the footings.
- B. Install basketball goals and nets plumb per locations and heights indicated on the drawings.

3.5 PLACEMENT OF ASPHALT RESURFACER

- A. Allow bituminous concrete surface to cure for 2 weeks before asphalt resurfacer placement. Before asphalt resurfacer is applied, thoroughly wash asphalt surface to remove all excess oils, dirt, and debris. Remove all broken raveling stones. Flood asphalt surface again to determine minor depressions or "bird bath" areas which necessitate leveling with asphalt resurfacer.
- B. Apply resurfacer per manufacturer's rates and procedures to level minor depressions (less than 1/8") on the sport court surface. Fill depressions with undiluted resurfacer and strike off with a straight edge. Care should be taken to blend the outside edge of the area leveled into the existing surface to avoid unsightly ridges or shadows. Apply a minimum of two coats of resurfacer to sport court surface. However, do not exceed the maximum depth of the resurfacer material recommended by the manufacturer.

3.6 PLACEMENT OF COLOR COATING

- A. Asphalt surface shall be well cured, clean, and free of dust, dirt and debris. Clean with power vacuum, compressed air and/or water. Remove all raveling or broken asphalt, stones, and dirt.
- B. Measure and delineate colored court areas per drawings.
- C. ELITE SPORT COATING SYSTEM multi-purpose (acrylic texture course) (color-coated border and color-coated playing surface, with colors as indicated on Drawings) shall be prepared and used in accordance with the manufacturer's recommendations.
- D. Apply one coat of ELITE acrylic resurfacer course per manufacturer's rates and procedures (see drawings for limits of colored court areas). After first coat has dried, apply second coat at a 90-degree angle to the first application per manufacturer's rates and procedures.
- E. Placement of Multi-purpose ELITE SPORT COATING SYSTEM decorative Coating (acrylic finish course):
 - 1. After acrylic texture course has dried to a firm set, apply one coat of finish acrylic surface course per manufacturer's rates and procedures.
 - 2. Acrylic finish course shall include 2 parts multi-purpose decorative coating 920-27 and one part cool, clean soft water.

3.7 PLACEMENT OF STRIPING PAINT

- A. To well cured, clean, and dry sport court pavement surface, apply white striping paint per manufacturer's rates and procedures, per specifications and as indicated in the drawings. All dimensions indicated on the drawings are to the outside of the lines, except the center lines, which are equally divided between right and left service courts.
- B. All lines shall be straight, well defined with no bleeding.
- C. All lines shall be 2 inches in width.

END OF DOCUMENT 321823.53

327000 NATIVE SEEDING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This work shall consist of furnishing, transporting, and installing all seeds, plant, or other materials required for (1) the establishment of the native plant areas, (2) post-planning management until released by the Landscape Architect/ Consultant, and (3) any remedial operations in conformance with the Plans as specified in this Special Provision or as directed by the Landscape Architect/Consultant.
- B. Related work:
 - 1. Division 31, "Earthwork" for soil preparation and grading.
 - 2. Division 32, "Turf and Grasses" for finish grading and topsoil composition.

1.2 PROJECT CONDITIONS

- 1. The grade will be shaped to the elevation shown in the Plans.
- 2. The topsoil will be free of all clods, stones, roots sticks, rivulets, gullies, crusting, caking, and have a soil particle size of no larger than 2" unless using a No-till Rangeland Grass Drill or Hydro-seeder.
- 3. A temporary fuel matrix cover crop will be established in the retention areas after the first full growing season.
- 4. The retention areas shall be delineated in the field for review by the Landscape Architect/Consultant as delineated in the Plans.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Native Seed: From seed vendor for each seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
- D. Material Test Reports: For existing surface soil and imported topsoil.
- E. Planting Schedule: Indicating anticipated planting dates for each type of planting.

- F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of lawns during a calendar year. Submit before expiration of required maintenance periods.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful native plant establishment for at least 5 years including 3 compatible project examples.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
 - 1. Topsoil Analysis: As indicated in Division 2 "Exterior Plants"

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.

1.6 SCHEDULING

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion. Avoid planting during times of drought.
 - 1. Spring Planting: April 15 - June 15
 - 2. Fall Planting: September 15 - October 15
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.7 MAINTENANCE

- A. Herbicide Application
 - 1. The Contractor shall selectively treat non-native and/or otherwise objectionable weeds with an approved herbicide.
 - 2. Care should be taken not to affect surrounding desirable vegetation. The Contractor will be required to replace any vegetation affected by their herbicide other than that which was approved.
 - 3. A supply of chemical absorbent shall be maintained at the project site any time herbicides are on-site. Any chemical spills shall be properly cleaned up and reported to the Owner within 24 hours.
 - 4. The Contractor shall maintain copies at the project site of all current pesticide applicator's licenses, herbicide labels, and Material Safety Data Sheets (MSDS) for all chemicals utilized during completion of the work.

5. Herbicides may be applied using a backpack sprayer or a hand held wick applicator.
6. Herbicide application instructions given on the label shall be followed at all times.

B. Selective Mowing

1. The Contractor shall selectively mow or weed whip non-native and/or otherwise objectionable weeds, or cover crop, to minimize competition and prevent re-seeding of weeds.
2. The Contractor shall ensure cut weeds are not allowed to drop seed or smother desirable vegetation. Contractor shall remove and properly dispose of cut vegetation as necessary.
3. Care should be taken not to affect surrounding desirable vegetation. The Contractor will be required to replace any vegetation affected other than that which was approved.

C. Over Seeding

1. The Contractor shall complete supplemental seeding as necessary to achieve performance criteria given above.
2. All seeding work shall conform to section 327000 with the following exceptions.
 - a. Seeding may be completed during the growing season with prior approval.
3. The Contractor shall exercise care so as not to damage established or establishing desirable vegetation during overseeding.

D. Erosion Control

1. The Contractor shall install erosion control blanket in areas that are overseeded and as indicated on drawings.
2. All erosion control blanket work shall conform to section 329200.
3. The Contractor shall exercise care so as not to damage established or establishing desirable vegetation during installation of erosion control measures.

E. Clean Up, Repair, Removal

1. The work area shall be kept free of debris. After management work is complete, clean up any remaining materials, debris, trash, etc. generated by the Contractor.
2. After work has been completed remove tools, equipment, empty containers, and all other debris accumulated during completion of the work.
3. Repair any damages incurred during completion of the work described in this section.

F. Supplemental Watering

1. If natural rainfall of 1" per week does not occur, Contractor is responsible for supplemental watering.

1.8 WARRANTY

A. Special Warranty: Installer's standard form in which Installer agrees to repair or replace plantings that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by Owner, or incidents that are beyond Contractor's control.
2. Warranty Periods from Date of Substantial Completion:
 - a. Plants: two years from final acceptance.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials shall conform to the following requirements:
1. All seeds shall be guaranteed by the Contractor to be true to name and variety.
 2. Seed mixtures shall be proportioned by seed count and seed count percentages. Seed mixtures shall be approved by the Landscape Architect/Consultants.
 3. The seed counts and seed counts percentages indicated per acre in these specifications shall mean the total amount of pure live seed per acre for all species listed except forbs.
 4. At least 2 weeks prior to the time of seeding, the Contractor shall provide for the approval of the Landscape Architect/Consultant a written description for the grass, sedges, and forbs seed and/or plant mix showing the percentages by number of seed and/or plants of each species. This description shall also include the following;
 - a. Name and location of seed and/or plant supplier.
 - b. Origin of the various species of seed.
 - c. A statement of the purity of the grasses.
 - d. Estimated seeds per pound of each of the kinds of seed to be furnished.
 5. All seeds shall have the proper stratification and/or scarification to break seed dormancy for other than fall planting.
 6. All legumes shall be inoculated with the proper rhizobia and at appropriate time prior to planting.
 7. All seeds shall be packed and covered in such a manner as to insure adequate protection against damage and maintain dormancy while in transit, storage or during planting operations.
 8. Seeds and plants shall be true to their name as specified. The sources shall be within a 200 mile radius of the project location.
 9. Plugs must have shoot heights >12" and well developed roots that fully hold potting soil when plant and soil are removed from the plant tray. Minimum container size of 2" wide x 4" deep open bottom pots (GT 38, 32s, or 49s) is required for all plugs. Smaller sizes will not be permitted

2.2 SEED / PLUG MIXTURES

- A. See Plans

2.3 SEEDING EQUIPMENT

If the Contractor elects to use the following seeding equipment, it shall meet the following requirements. Any other equipment deemed necessary shall be subject to the approval of the Landscape Architect/Consultant.

- A. Disc: Any disc proposed for the use shall be in a good state of repair with sound, unbroken blades. The disc shall be weighted if necessary to achieve the required tillage depth.
- B. Hydraulic Seeder: Hydraulic seeding equipment shall include a pump rated and operated and no less than 100 gallons per minute and no less than 100 pounds per square inch pressure. The tank shall have a mechanical agitator powerful enough to keep the seed in suspension in the water.
- C. Rollers or Cultipackers: The roller or cultipacker shall have rollers at least six inches in diameter and shall be of sufficient weight to pulverize the clods of soil.
- D. Spinning Disc Seeder: When spinning-disc seeders are used, the individual seeds comprising the seeding mixture shall be mixed with an appropriate dispersal medium prior to sowing and seeds with awns shall be de-bearded.
- E. Tractor Drawn or Mounted Seeders: Tractor drawn or mounted seeders shall have an adjustable gate opening providing uniform flow over a width adapted to the work and shall drop the seed directly into place on the prepared seedbed. The seeder may be of the type mounted on cultipacker rollers which covers the seed and rolls the seedbed in one operation, and shall be approved by the Landscape Architect/Consultant prior to use.
- F. No-Till Planters and Drills: Rangeland type drills and no-till planters shall be designed specifically for the seeding of native grasses and forbs.
- G. Equipment shall be clean and free of weed or invasive species seed prior to each use.

2.4 MULCHES

- A. Erosion control blanket shall be DS75 EroNet as manufactured by North American Green 800.772.2040 or approved equal.
 - 1. Secure in place with Bio-Stakes manufactured by North American Green or approved equal.

PART 3 - INSTALLATION

3.1 SEEDBED PREPARATION

- A. Seedbed preparation methods shall be approved by the Landscape Architect/Consultant. Cultivation shall be accomplished at such a time that seeding may occur immediately and without delay. No seeds shall be sown until the seedbed has been approved by the Landscape Architect/Consultant. If a no-till planter is used, seedbed preparation will not be necessary. Where existing vegetation has not been disturbed, remove weed / invasive species and overseed into existing plant matrix.

3.2 SEEDING METHODS

- A. General: The Contractor shall submit for approval by the Landscape Architect/Consultant a plan and schedule for seeding and/or planting at least two weeks prior to the scheduled commencement of work. For broadcast seeders, no seeds shall be sown during high winds or when the seedbed is not in a proper condition for seeding. The Landscape Architect/Consultant shall examine and then approve any equipment to be used. Prior to starting work, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. Equipment shall be operated in a manner to insure complete coverage of the entire area to be seeded. The Landscape Architect/Consultant shall be notified 48 hours prior to beginning the seeding operations. Any gaps between areas of growth greater than eight square feet shall be resown and/or replanted.
- B. Seed shall be packaged individually and sorted by size prior to seeding. Till in separately to ensure uniform coverage of all seed types and sizes.
- C. Hydroseeding: The hydraulic seeding equipment shall include a pump rated and operated at no less than 100 gallons per minute and at no less than 100 pounds per square inch pressure. A minimum of 1,000 gallons of slurry shall be used. The tank shall have a mechanical agitator powerful enough to keep all materials in a uniform suspension in the water. Calibration of the hydraulic seeding equipment shall be accurate and to the satisfaction of the Landscape Architect/Consultant.

If the Contractor has another method for hydroseeding, he shall submit this method to the Landscape Architect/Consultant for evaluation and approval 30 days prior to his scheduled start date.

- D. No-Till or Drill Method: If a rangeland type grass drill or no-till planter is used, rolling of the seedbed will not be required. The placing of mulch will not be required when a no-till planter is used, but would be helpful on sloping ground.
- E. Install erosion control blanket on all indicated areas.

3.3 ACCEPTANCE

- A. The contractor shall be responsible for the satisfactory growth of grass and forbs on all areas and/or planted under the contract until final acceptance of the work. Acceptance shall be granted after the performance standards given in this section have been met or exceeded, and all required clean up, removal, and repair as described in this section have been completed.

END OF SECTION 327000

SECTION 327100 – NATIVE PLANT MANAGEMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section includes management of seeding and planting work to encourage growth of desirable species.

1.2 QUALITY ASSURANCE

- A. Provide at least one person who shall be present at all times during execution of this portion of the work and shall be thoroughly familiar with the type and operation of equipment and techniques being used. Said person shall have at least 5 years of experience installing and maintain native plant communities. Said person shall direct all work performed under this section.
- B. Botanical nomenclature shall follow “Plants of the Chicago Region” by F. Swink and G. Wilhelm (1994). The term non-native species shall include all those identified as introduced to the Chicago region in the above reference.

1.3 LAWS AND REGULATIONS

- A. The Contractor shall comply with applicable regulations. All materials and workmanship shall meet or exceed applicable federal, state, county and local laws and regulations.
- B. In the event of a conflict between the requirements of these Specifications and rules or regulations of Federal, State or Local agencies, the more restrictive shall govern.
- C. The use of any herbicide shall follow directions given on the herbicide label. In the case of a discrepancy between these specifications and the herbicide label, the label shall prevail.

1.4 SUBMITTALS

- A. Contractor completing the work described in this section must submit documentation of prior experience and expertise in this type of work. Submit a minimum of five references, including contact names and phone numbers, who can verify these qualifications. Work described in this section may not begin until these qualifications are approved.
- B. Prior to delivery of any materials to the site, submit a complete list of all materials to be used during this portion of the work. Include complete data on source, quantity and quality. This submittal shall in no way be construed as permitting substitution for

specific items described on the plans or in these specifications unless approved in writing by the Owner. Materials shall not be delivered to project site until this submittal has been approved.

- C. Prior to commencement of seeding or planting, submit material certificates for all seed and plant materials, signed by nursery. Planting shall not begin until this submittal is approved.
- D. Prior to commencement of seeding or planting, submit a planting schedule for native plant and seed installation.
- E. Prior to any herbicide use, submit a current copy of the State of Illinois commercial pesticide operator's or applicator's license, with certification in the appropriate categories, for each person who will be applying herbicide at the project site. A copy of each license must be maintained on site at all times during completion of the work.

1.5 SATISFACTORY PERFORMANCE

- A. Management work shall at all times be satisfactory to the Landscape Architect. When it becomes necessary, the Landscape Architect will inform the Contactor of unsatisfactory procedures and operations. If the unsatisfactory procedures and operations are not corrected promptly, the Landscape Architect may suspend the performance of any or all other Work until the unsatisfactory condition has been corrected, and such suspension shall not be the basis of any claim by the Contractor for additional compensation from the Owner nor for an extension of time to complete the Work.

1.6 SAFETY

- A. The work described in this section may involve hazardous conditions, operations, and equipment. These specifications do not purport to address all of the safety concerns, if any, associated with the completion of the work. It is the responsibility of the Contractor to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to beginning the work

PART 2 - PRODUCTS

2.1 HERBICIDE

- A. Vegetation in areas without standing water or saturated soils shall be treated with Glyphosate, N-(phosphonomethyl) glycine, trade name Roundup or approved equal.
- B. All vegetation to be treated with herbicide in areas with standing water or saturated soils shall be treated with Glyphosate, N-(phosphonomethyl) glycine in a form approved for aquatic applications such as Rodeo or approved equal.

2.2 PLANT MATERIALS

- A. All seed shall conform to section 327000.
- B. All herbaceous plants shall conform to section 327000.

2.3 EROSION CONTROL

- A. All erosion control blanket and straw mulch shall conform to section 327000.

PART 3 - EXECUTION

3.1 EVALUATION

- A. Contractor must inspect Wetland and Prairie planting work every 30 days after completion of work during the first growing season and complete management activities described herein, and any additional work as may be necessary, to ensure the following performance criteria are met or exceeded.
 - 1. Seeding completed prior to June 1 will meet the following performance criteria no later than June 30: 90% overall areal vegetative cover, with no area larger than 1 Square Yard with less than 50% cover. This criterion must be maintained throughout the first growing season. No later than September 15 of the same year, the following criteria will also be met: seedlings of a minimum of one seeded grass or sedge and two seeded forb species, excluding cover crop species, found per acre in each zone. These criteria will be applied to the next growing season for work completed after October 15.
 - 2. Wetland planting work will meet or exceed the following performance criteria throughout the first growing season: 95% survivorship of all plant materials or a dense mass of planted species apparent, as determined by the Landscape Architect.
 - 3. Throughout the first growing season non-native and/or otherwise objectionable weeds including but not limited to red and white clover, swett clover, turf grasses, thistle, ragweed, reed canary grass, purple loosestrife, common reed, and others defined by the Landscape Architect shall be controlled by the Contractor. At no time shall non-native and/or otherwise objectionable weeds be allowed to dominate any portion of the site. Furthermore, the total collective population of cattails, common reed, reed canary grass, purple loosestrife, turf grasses, thistle, and teasel cannot exceed 10%, and 2% individually, during the first three complete growing seasons after seed and plant installation.
- B. Contractor shall inspect Wetland and Prairie planting and seeding work at least once a month from May through September for two years after the first growing season and complete management activities described herein, and any additional work as may be necessary, to ensure the following performance criteria are met or exceeded.
 - 1. Seeding work will meet or exceed the following performance criteria by June

- 30 of the second growing season following seed installation: 95% overall areal vegetative cover with no area(s) larger than 1 square yards with less than 75% cover, a minimum of one planted grass or sedge and two planted forb species excluding cover crop species found per acre in each zone, and at least 25% of all seeded species found in each zone throughout the site. These performance criteria will be maintained throughout the second growing season.
2. Seeding work will meet or exceed the following performance criteria by June 30 of the third growing season following seed installation: 99% overall areal vegetative cover with no area(s) larger than 100 square feet with less than 90% cover, a minimum of one planted grass or sedge and two planted forb species excluding cover crop species found per acre in each zone, and at least 50% of all seeded species found. These performance criteria will be maintained throughout the third growing season.
 3. Wetland planting work will meet or exceed the following performance criteria throughout the second and third growing seasons: 95% survivorship of all plant materials or a dense mass of planted species apparent, as determined by Landscape Architect.
 4. Throughout the second and third growing seasons, non-native and/or otherwise objectionable weeds including but not limited to thistle, ragweed, reed canary grass, purple loosestrife, common reed, and others defined by the Landscape Architect shall be controlled by the Contractor. At no time shall non-native and/or otherwise objectionable weeds be allowed to dominate any portion of the site.

3.2 HERBICIDE APPLICATION

- A. The Contractor shall selectively treat non-native and/or otherwise objectionable weeds with an approved herbicide.
- B. Care should be taken not to affect surrounding desirable vegetation. The Contractor will be required to replace any vegetation affected by their herbicide other than that which was approved.
- C. A supply of chemical absorbent shall be maintained at the project site any time herbicides are on-site. Any chemical spills shall be properly cleaned up and reported to the Landscape Architect within 24 hours.
- D. The Contractor shall maintain copies at the project site of all current pesticide applicator's licenses, herbicide labels, and Material Safety Data Sheets (MSDS) for all chemicals utilized during completion of the work.
- E. Herbicides may be applied using a backpack sprayer or a hand held wick applicator.
- F. Herbicide application instructions given on the label shall be followed at all times.
- G. A minimum of four weed control events shall be conducted each year during the first three growing season.

3.3 SELECTIVE MOWING

- A. The Contractor shall selectively mow or weed whip non-native and/or otherwise objectionable weeds, or cover crop, to minimize competition and prevent re-seeding of weeds.
- B. The Contractor shall ensure cut weeds are not allowed to drop seed or smother desirable vegetation. Contractor shall remove and properly dispose of cut vegetation as necessary.
- C. Care should be taken not to affect surrounding desirable vegetation. The Contractor will be required to replace any vegetation affected other than that which was approved.
- D. The prairie areas shall be high mowed to 6-9 inches, 2-3 times during the first growing season and once in the spring / early summer of the second growing season.

3.4 PRESCRIBED CONTROLLED BURNING

- A. Prescribed burning may be employed as a management and weed control tool at the project site with written authorization from the Owner. Burning may be conducted annually beginning the second growing season or as approved by the Owner.
- B. Prior to the commencement of prescribed burning, the Contractor shall compile a burn plan that outlines a plan of action, identifies contingencies, and lists the names and phone numbers of emergency agencies (fire department, police department, etc.). Proper notice of intent to burn shall be given.
- C. The Contractor shall apply for and receive all required permits prior to the commencement of prescribed burning.
- D. Prescribed burns shall be conducted at the end of the 2nd and 3rd growing seasons.

3.5 OVERSEEDING

- A. The Contractor shall complete supplemental seeding as necessary to achieve performance criteria given above.
- B. All seeding work shall conform to section 327000 with the following exceptions.
- C. The Contractor shall exercise care so as not to damage established or establishing desirable vegetation during overseeding.

3.6 EROSION CONTROL

- A. The Contractor shall install erosion control blanket or straw mulch as needed in areas that are overseeded.
- B. All erosion control blanket or straw mulch installation work shall conform to section 311101.

- C. The Contractor shall exercise care so as not to damage established or establishing desirable vegetation during installation of erosion control measures.

3.7 SUPPLEMENTAL PLANTING

- A. The Contractor shall complete supplemental planting as necessary to achieve performance criteria given above.
- B. All planting work shall conform to section 327000 with the following exceptions.
- C. The Contractor shall exercise care so as not to damage established or establishing desirable vegetation during supplemental planting.

3.8 WATERING

- A. Provide temporary irrigation as necessary during dry periods for seeding and planting work to establish and/or sustain growth necessary to meet or exceed performance criteria given above.

3.9 CLEAN UP, REMOVAL, AND REPAIR

- A. The work area shall be kept free of debris. After management work is complete, clean up any remaining materials, debris, trash, etc. generated by the Contractor.
- B. After work has been completed remove tools, equipment, empty containers, and all other debris accumulated during completion of the work.
- C. Repair any damages incurred during completion of the work described in this section.

3.10 ACCEPTANCE AND GUARANTEE

- A. Acceptance shall be granted after the performance standards given in 3.1 of this section have been met or exceeded, and all required clean up, removal, and repair as described in this section have been completed.

END OF SECTION 327100

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Seeding.

1.2 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.
- E. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of grass seed.
 1. Certification of each seed mixture for turfgrass sod.
- C. Product certificates.
- D. Planting Schedule: Indicating anticipated planting dates for each type of planting.

1.4 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed

1. Topsoil Analysis: As indicated in Division 32 "Exterior Plants".

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 1. Spring Planting: April 15-June 15.
 2. Fall Planting: August 15-October 15
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.6 LAWN MAINTENANCE

- A. Initial Lawn Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
 1. Seed: 60 days from date of substantial Completion.

PART 2 - PRODUCTS

2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances Seed Species: State-certified seed of grass species, as follows:
 1. Premium Mix: available from National Seed, 630.963.8787
 - a. 30% Diva Kentucky Bluegrass
 - b. 25% Rockstar Kentucky Bluegrass
 - c. 25% Arc Kentucky Bluegrass
 - d. 10% Palmer III
 - e. 10% Double Time
 2. Premium Mix: Improved TWCA Qualified, available from National Seed, 630.963.8787
 - a. 30% Diva Kentucky Bluegrass
 - b. 20% Rockstar Kentucky Bluegrass
 - c. 20% Arc Kentucky Bluegrass
 - d. 15% Pennant H20 Perennial Ryegrass
 - e. 15% Double Time GLS Perennial Ryegrass
 3. Clesen Premium Mix: Available as through Arthur Clesen, Inc., 847.537.2177. Proportioned by weight as follows:
 - a. 30% Zinfandel or Sonoma Kentucky Bluegrass
 - b. 25% Champagne Kentucky Bluegrass
 - c. 25% Bordeaux Kentucky Bluegrass
 - d. 10% Secretariat II Perennial Ryegrass

- e. 10% Exacta II Perennial Ryegrass

2.2 SEED / PERFORMANCE CRITERIA:

- A. Mixes shall meet the following criteria, according to the National Turfgrass Evaluation Program
 - 1. Sun/Shade: Sun
 - 2. Traffic: Light traffic
 - 3. Water: None after establishment
 - 4. Maintenance: Low Level of Care
 - 5. Overall quality: >5.0 (NTEP)
 - 6. Density: 5.0-9 (dense)
 - 7. Greenup: 5.0-9 (early greenup)
 - 8. Texture: 5.0-9 (fine)
 - 9. Color: 5.0-9 (Dark green)
 - 10. Disease resistance: 5.0-9 (High resistance)
 - 11. Establishment Vigor 5.0-9 (Vigorous)

2.3 TOPSOIL

- A. Topsoil: A naturally occurring loam or silt loam (USDA texture) soil from on-site sources. Natural soil shall be a harvested loam or silt loam mineral soil, uniform in color and texture, containing no gray clay and free from grass roots, sod, weeds, rocks or stones greater than 0.75 in. diameter, stiff clay, clods, or any other substance undesirable to plant growth. The soil shall be loose, friable, and of good tilth. The particle size distribution ranges using USDA Particle Size Classes shall be as follows:

Sand	2.00 – 0.05mm	15-50%
Silt	0.05 – 0.002mm	30-70%
Clay	<0.002mm	3-20%
- B. Topsoil shall be suitable for ornamental plant growth with pH range of 5.5 to 7, and a minimum of 8 percent organic material content.
- C. Segregated Topsoil from on-site sources will be considered acceptable unless otherwise noted.

2.4 HERBICIDES

- A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- B. Starter Fertilizer: Coarse grade “endoROOTS” granular, 3-3-4 fertilizer as manufactured by Roots Inc. 800.342.6173 or approved equal.
- C. Growth Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: Country Club 17-0-17 granular fertilizer as manufactured by Lebanon Turf Products or approved equal
- D. Maintenance Fertilizer: Granular or pelleted Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: Roots Fine Grade Turf Food, 15-3-8 as manufactured by Roots Inc. 800.342.6173 or approved equal.

2.5 FERTILIZER

- A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- B. Starter Fertilizer: Coarse grade “endoROOTS” granular, 3-3-4 fertilizer as manufactured by Roots Inc. 800.342.6173 or approved equal.
- C. Growth Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
1. Composition: Country Club 17-0-17 granular fertilizer as manufactured by Lebanon Turf Products or approved equal
- D. Maintenance Fertilizer: Granular or pelleted Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: Roots Fine Grade Turf Food, 15-3-8 as manufactured by Roots Inc. 800.342.6173 or approved equal.

2.6 EROSION CONTROL BLANKET

- A. Erosion control blanket shall be DS75 EroNet as manufactured by North American Green 800.772.2040 or approved equal.
1. Secure in place with Bio-Stakes manufactured by North American Green or approved equal.

2.7 PLANTING SOIL MIX

- A. Planting Soil Mix: Topsoil mixed with the following soil amendments and fertilizers in the following quantities:
1. Ratio of Soil Conditioner to Topsoil by Volume: 1:4.
 2. Weight of Commercial Fertilizer per 1000 Sq. Ft.: 5 pounds.
 3. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: 5 pounds.

PART 3 - EXECUTION

3.1 LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Spread planting soil mix to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- C. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
 - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 - 2. Loosen surface soil to a depth of at least of 6 inches. Apply soil amendments and according to planting soil mix proportions and mix thoroughly into top 6 inches of soil. Till soil to a homogeneous mixture of fine texture.
 - 3. Remove stones larger than 1 inch in any dimension and sticks, roots, trash, and other extraneous matter.
 - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted within 7 days.
- E. Apply Starter Herbicide prior to seeding at a rate of 5-8 fl oz. per acre, wait for period indicated by manufacturer's recommendations before seeding. IF APPROVED BY PROJECT TEAM.
- F. Apply Starter Fertilizer at 10 lbs / 1000 sf. Work into soil to 1 inch depth.
- G. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- H. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

3.2 SEEDING

- A. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
- B. Sow seed at a total rate of 10 lbs /1000 sq. ft.

- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Apply erosion control blanket to all areas
- E. Protect seeded areas from hot, dry weather or drying winds by applying peat mulch or topsoil within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a depth of 3/16 inch, and roll surface smooth.
- F. Install seed under favorable weather conditions unless approved by the Owner's Representative. The conditions of the guarantee apply regardless of the date of installation. The generally accepted times for seeding are:

Spring - April 1 to May 31
 Fall - August 15 to September 31

3.3 LAWN MAINTENANCE

- A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.
- B. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches.
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water lawn at a minimum rate of 1 inch per week.
- C. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1. Mow grass 1-1/2 to 2 inches high.
- D. Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
 - 1. Use fertilizer that will provide actual nitrogen of at least 5 lb/1000 sq. ft. to lawn area.

3.4 SATISFACTORY LAWNS

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
- B. Use specified materials to reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.5 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.

END OF SECTION 329200

SECTION 329300 - PLANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Trees.
 - 2. Shrubs.
 - 3. Groundcovers.
 - 4. Perennials.

1.2 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.
- F. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product certificates.
- C. Planting Schedule: Indicating anticipated planting dates for exterior plants.
- D. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year.

1.4 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.

- B. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory.
 - 1. Report suitability of topsoil for plant growth. Test at minimum for % sand, silt and clay, % organic matter and pH. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- C. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."
- D. Select plant material grown in the same USDA Hardiness Zone as the project site. Obtain Owner approval, prior to plant selection, for each species not grown in the same hardiness zone.
- E. Preinstallation Conference: Conduct conference at Project site.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery and handling.
- B. Handle planting stock by root ball.
- C. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants and trees in shade, protect from weather and mechanical damage, and keep roots moist.

1.6 COORDINATION

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: April 15 – June 15
 - 2. Fall Planting: September 15 - October 15

1.7 WARRANTY

- A. Special Warranty: Installer's standard form in which Installer agrees to repair or replace plantings that fail in materials, workmanship, or growth within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by Owner, or incidents that are beyond Contractor's control.
 - b. Structural failures including plantings falling or blowing over.
 - 2. Warranty Periods from Date of Final Acceptance:

- a. Trees and Shrubs: One year.
- b. Ground Cover and Perennials: One year.

1.8 MAINTENANCE SERVICE

- A. Initial Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below.
 - 1. Maintenance Period for Trees and Shrubs: From initial installation until Final Acceptance.
 - 2. Maintenance Period for Ground Covers and Plants: From initial installation until Final Acceptance.

PART 2 - PRODUCTS

2.1 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, weeds, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- C. Provide balled and burlapped trees.
- D. Shrub sizes indicated on Drawings are sizes after pruning.

2.2 GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1.

2.3 PERENNIALS

- A. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed, complying with requirements in ANSI Z60.1.

2.4 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7.3, a minimum of 4 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Reuse surface soil stockpiled on-site. Test stockpiled soil or soil to be imported to verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient.
 - 2. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with approved imported or manufactured topsoil from off-site sources.

2.5 ORGANIC SOIL AMENDMENTS

- A. Soil Conditioner: One Step Soil Conditioner, available from Midwest Trading, or equal 6N800 Rt 25, St Charles, IL 60174 / Phone: 630.365.1990

2.6 FERTILIZER

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 0 percent phosphorous, and 2 percent potassium, by weight.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 0 percent phosphorous, and 10 percent potassium, by weight.

2.7 MULCHES

- A. Organic Mulch: Shredded hardwood

2.8 PLANTING SOIL MIX

- A. Planting Soil Mix: Mix topsoil with the following soil amendments and fertilizers in the following quantities:

1. Ratio of Soil Conditioner to Topsoil by Volume: 1:4
2. Weight of Commercial Fertilizer per 1000 Sq. Ft.: 5 pounds
3. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: 5 pounds

PART 3 - EXECUTION

3.1 PLANTING BED ESTABLISHMENT

- A. Loosen subgrade of planting beds to a minimum depth of 8 inches. Remove stones larger than 1 inch in any dimension and sticks, vegetation, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 1. Thoroughly blend planting soil mix off-site before spreading; or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 2. Spread planting soil mix to a minimum depth of 18 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.2 TREES AND SHRUBS

- A. Excavation of Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 1. Excavate approximately three times as wide as ball diameter.
 2. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
- B. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1.
- C. Stock with Root Balls: Set trees and shrubs plumb and in center of pit or trench with top of root ball 6 inches above adjacent finish grades.
 1. Balled and Burlapped: Remove burlap and wire baskets from tops of root balls and partially from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 2. Fabric Bag Grown: Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 3. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.

- D. Organic Mulching: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Trees in lawn areas to have a 5' diameter mulch ring. Do not place mulch within 3 inches of trunks or stems.

3.3 TREE AND SHRUB PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character.

3.4 GROUND COVER AND PERENNIAL PLANTING

- A. Set out and space ground cover 6-12 inches apart and perennials 12-24 inches apart as shown on plans.
- B. Dig holes large enough to allow spreading of roots and backfill with planting soil.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.5 PLANTING BED MULCHING

- A. Mulch backfilled surfaces of planting beds and other areas indicated. Provide mulch ring around trees in lawn areas.
 - 1. Organic Mulch: Apply 2-inch average thickness of mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

3.6 PLANT MAINTENANCE

- A. Tree and Shrub Maintenance: Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
- B. Ground Cover and Perennial Maintenance: Maintain and establish plantings by watering, weeding, fertilizing, mulching, and other operations as required to establish healthy, viable plantings.

- C. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

END OF SECTION 329300



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May 14, 2024
File No. 27912

Ms. Sharon Desjardins
Lan-Oak Park District
2550 178th Street
Lansing, IL 60538

Re: Geotechnical Investigation
Bock Park
Lansing, Illinois

Dear Ms. Desjardins:

We are submitting our report for the subsurface investigation completed at Bock Park in the Village of Lansing, Illinois.

The investigation was requested to determine current subsurface soil and water conditions at select boring locations. The findings of the field investigation and the results of laboratory testing are intended to assist in the planning, design and construction of proposed site improvements.

PROPOSED IMPROVEMENTS

We understand it is proposed to construct a new shelter supported on shallow depth foundations. Additional improvements are expected to include paved sport courts, parking lot, sidewalks, and related underground improvements.

SCOPE OF THE INVESTIGATION

The field investigation included obtaining 4 borings at the locations requested and as indicated on the enclosed location sketch. The boring locations were established using field taping methods and accuracy. Surface elevations were determined using the temporary benchmark indicated on the location sketch.

We auger drilled the structure boring to a depth of 15.0 feet below existing surface elevation. Soil samples were obtained using a split barrel sampler advanced utilizing an automatic SPT hammer. The 3 pavement area borings were drilled and sampled in a similar manner to depths of 10.0 feet. Soil profiles were determined in the field and soil samples returned to our laboratory for additional testing including determination of moisture content. Cohesive soils obtained by split barrel sampling were tested further to determine dry unit weight and unconfined compressive strength.

The results of all field determinations and laboratory testing are included in summary with this report.

8 W. COLLEGE DR. ● SUITE C ● ARLINGTON HEIGHTS, IL 60004

SOIL BORINGS ● SITE INVESTIGATIONS ● PAVEMENT INVESTIGATIONS ● GEOTECHNICAL ENGINEERING
TESTING OF ● SOIL ● ASPHALT ● CONCRETE ● MORTAR ● STEEL

RESULTS OF THE INVESTIGATION

Enclosed are boring logs indicating the soil conditions encountered at each location. Site surface conditions include pavement and topsoil conditions. The topsoil is classified as a black silt/clay mixture with traces of roots.

Pavement materials were encountered at borings B-1 to B-3. The pavement consisted of 3.0 inches to 3.5 inches of bituminous concrete over 8.5 inches to 9.0 inches of crushed limestone. The total pavement section was found to have a total thickness of 1.0 ft.

Fill soil conditions were encountered at boring location B-4. Composition of the fill includes the presence of topsoil, crushed limestone and brick extending to a depth of 1.0 foot. The limits of fill placement were not determined within the scope of this investigation. Larger debris may also be present within the fill. The fill soil conditions are found to overlie the apparent natural topsoil which was found extending to a depth of 22.0 inches at this location.

Underlying natural soil conditions include the presence of cohesive soils. These are generally classified as tough to hard clay/silt mixtures with lesser portions of sand and gravel. Boring B-1 and B-2 had seams of high moisture content and low-strength cohesive soils encountered around 6.0 feet below the surface. These conditions are likely present in other areas of the site but the limits were not discovered within the scope of this investigation.

Non-cohesive soils were also encountered as indicated at borings B-1 and B-4. These include loose to medium-dense silt/clay mixtures. The non-cohesive granular soils were encountered in a very damp to saturated condition. Cobbles and boulders may be present within the site soils at any elevation, although none were encountered while drilling.

The following table summarizes depth ranges below existing grade, the magnitude of soil strength within these ranges and other information:

<u>Boring</u>	<u>Surface Elevation (feet)</u>	<u>Depth Range Below Existing Surface (feet)</u>	<u>Soil Strength (lbs./sq.ft.)</u>	<u>Recorded Water Levels, W.D./A.D. (feet)</u>
<u>Sport Court & Parking Lot</u>				
1	100.9	1.5 to 3.5	3,000	6.5/8.0
		3.5 to 8.5	*none	
		8.5 to 9.0	3,000	
2	100.7	1.5 to 2.0	3,000	dry/dry
		2.0 to 7.0	1,500	
3	100.8	1.5 to 7.0	5,000	dry/dry
<u>Shelter</u>				
4	101.1	2.5 to 3.5	3,000	0.8/11.0
		3.5 to 7.0	6,000	
		7.0 to 10.0	4,000	
		10.0 to 12.0	3,000	

* Not recommended for support of foundations.

It is expected that the proposed improvements can be supported on undisturbed natural soils located at any elevation within the depth ranges indicated in the above table, except as noted at boring location B-1. Above these depth ranges the soils are not considered able to support any type of loading, even at reduced design bearing values, due to long-term settlement considerations.

SUBSURFACE WATER

The boring logs and the above table indicate the depth at which subsurface water was encountered in the bore holes at the time of the drilling operations and during the period of these readings. It is expected that fluctuations from the water levels recorded will occur over a period of time due to variations in rainfall, temperature, subsurface soil conditions, soil permeability and other factors not evident at the time of the water level measurements.

The levels recorded at boring B-4 indicate a perched water condition. Perched water is primarily surface precipitation falling on this site or adjacent properties and which becomes trapped in pervious soil that is underlaid by relatively impervious soil. This water often flows laterally along a path of least resistance such as uncontrolled fill, non-cohesive soil strata, or other permeable medium. This water will also drain from the embankments of open excavations. We would estimate the seasonal high ground water at 9.0 feet below the surface of boring B-3 where the soil color changed from brown to gray.

SPORT COURTS AND HMA PARKING LOT

Borings B-1 to B-3 were performed in the areas of the proposed new sports courts and parking lot. Subgrade soil preparation will need to be accomplished in all new pavement areas. Above grade areas should be cut to design subgrade elevations. Exposed subgrade soils should be leveled, compacted, and proof-rolled in the presence of the Soil Engineer.

Proof-rolling may reveal areas of unstable soil conditions. Aeration of high moisture content soils can be effective to depths of up to 1.0 foot, depending upon the equipment utilized. Removal of unstable soils may be necessary if high moisture content conditions extend to depths greater than the effective depth of aeration.

Soft or unstable soil conditions in pavement areas can often be bridged by use of an effective depth of crushed granular material. The placement of the crushed granular bridging material, possibly in conjunction with the use of an appropriate geotextile fabric, should only proceed after review of the proof-roll conditions by the Soil Engineer. Long-term settlement of pavement surfaces may occur locally as the bridged soils desiccate.

Structural fill can be placed on soils prepared to the satisfaction of the Soil Engineer. The fill should be placed in lifts not to exceed 8.0 inches when uncompacted. Each lift should exceed minimum compaction requirements prior to placement of the next lift. We recommend a minimum of 90% compaction based on the modified Proctor test, ASTM D-1557, be achieved beneath exterior improvements such as pavements and sidewalks.

SHELTER FOUNDATIONS

Based on the results of this investigation it is our opinion that continuous and isolated footing foundations may be considered for support of the picnic shelter. These foundations can be supported on undisturbed natural soils located below all pavement materials, low strength soils and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at these boring locations are indicated in the above table. A net allowable bearing value of 3,000 lbs./sq.ft. is available for design. This value can be used to size foundations for support of structure dead and live loads.

Isolated drilled pier foundations may also be considered for support of the picnic shelter. These foundations can be supported on undisturbed natural soils located below all pavement materials, low strength soils and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at these boring locations are indicated in the above table. A net allowable bearing value of 3,000 lbs./sq.ft. is available for design. This value can be used to size foundations for support of structure dead and live loads. Temporary or permanent casing may be needed to prevent caving of the soils. The casing will also reduce the volume of water seeping into the drilled shaft.

All unprotected foundations should extend at least 48.0 inches below exposed surface elevations to provide adequate protection against uplift due to freezing of the supporting soils. Weak soil conditions may be discovered locally at design foundation elevations and may require

extending the foundation to a deeper elevation. We recommend providing adequate reinforcing steel in foundation walls and piers to minimize the effects of long-term differential settlement.

DEWATERING

Excavations may require dewatering due to subsurface water seepage and/or surface precipitation. This water can be removed by standard sump and pump operations. Soils exposed at foundation, slab or undercut elevations should not be permitted to become saturated. Loss of bearing strength and stability may occur, requiring additional soil excavation.

Cohesive soils, non-cohesive soils and others can be unstable when saturated. These soils tend to cave or run when submerged or disturbed. The stability of exposed embankments is minimal to non-existent as confining soil pressures are removed. Proper drainage within excavations is necessary at all times, particularly when excavations extend below anticipated water levels and below saturated soils.

The contractor should be made responsible for designing and constructing stable temporary excavations. Also, the contractor should shore, slope, bench or restrain the sides of the excavations as required to maintain stability of both the excavation sides and bottom. In no case, should the slope, slope heights, or excavation depth exceed those in the local, state, and federal safety regulations.

CONCLUSION

The information within this report is intended to provide initial information concerning subsurface soil and water conditions on the site. Variations in subsurface conditions are expected to be present between boring locations due to naturally changing soil conditions. Variations are also expected within areas of disturbed or filled soil conditions.

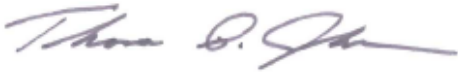
Our understanding of the proposed improvements is based on limited information available to us at the writing of this report. The findings of the investigation and the recommendations presented are not considered applicable to significant changes in the scope of the improvements or applicable to alternate site uses. We recommend that proposed foundation, pavement and grading plans be reviewed by our office to determine if additional considerations are necessary to address anticipated subsurface conditions.

The soils exposed in soil undercut areas should be evaluated for suitability prior to placement of structural fill, as previously indicated in this report. Soils and aggregates placed as structural fill should be tested as the work progresses to verify that minimum compaction requirements have been met. We recommend that soil conditions encountered at foundation elevations be tested to verify the presence of design soil strength prior to concrete placement.

If you have any questions concerning the findings or recommendations presented in this report, please let me know.

Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.



Thomas P. Johnson, P.E.
President



Martin Clarke
Project Engineer

TPJ:ek
Enc.

cc: Mr. Doug Fair – Hitchcock Design Group




SMC	SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
	Client: LAN-OAK PARK DISTRICT	
Project: BOCK PARK		
Location: LANSING, ILLINOIS		
File No. 27912	Date: 05-10-24	Scale: NONE

Client: Lan-Oak Park District

File No. 27912 Date Drilled: 5/10/24

Reference: Bock Park
Lansing, IL

Comments:

depth, ft.	Equipment: <input checked="" type="checkbox"/> D - 25 <input type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other <p style="text-align: center;">CLASSIFICATION</p> Elevation 100.9' Existing Surface
1	Bituminous concrete - 3.5" Crushed limestone - 8.5" Dark brown-gray to brown-gray clay, some silt, trace sand & gravel, damp, very tough to hard
2	
3	
4	
5	
6	
7	 Dark brown-gray to brown-gray clay, some silt, trace sand & gravel, saturated, very soft
8	Brown clay, some silt, trace sand, damp, very tough
9	
10	Gray silt, some clay, trace fine sand, very damp, medium dense
11	End of Boring

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	<input type="checkbox"/> unconfined compressive strength, tons/sq. ft. <input checked="" type="checkbox"/> penetrometer reading, tons/sq. ft. <input checked="" type="checkbox"/> standard penetration "N", blows/ft. <input checked="" type="checkbox"/> moisture content, %
X	Δ	γ	○	1.0 2.0 3.0 4.0 10 20 30 40
10	23.7	101.8	3.7	X Δ ● ○
10	20.3	109.6	4.4	X Δ ○ ^{4.4}
2	46.7	108.4	3.3	● X Δ ○ ●
2.8	21.2	112.8	2.8	● Δ ○
11	21.8			X Δ

Water encountered at 6.5 feet during drilling operations (W.D.)
 Water recorded at 8.0 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Lan-Oak Park District

File No. 27912 Date Drilled: 5/10/24

Reference: Bock Park
Lansing, IL

Comments:

depth, ft.	Equipment: <input checked="" type="checkbox"/> D - 25 <input type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other CLASSIFICATION Elevation 100.7' Existing Surface	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength
1	Bituminous concrete - 3.5"	X	Δ	∞	○
2	Crushed limestone - 8.5"				
3	Dark brown-gray to brown-gray clay, some silt, trace sand & gravel, damp, very tough	8	24.3	100.3	2.8
4					
5		8	23.6	127.0	2.3
6					
7	Dark brown-gray to brown-gray clay, some silt, trace sand & gravel, damp, tough to very tough	7	26.6	101.2	1.2
8					
9	Brown clay, some silt, trace sand & gravel damp, very tough	7	21.6	108.8	3.0
10					
End of Boring		12	20.8	110.6	3.4

- unconfined compressive strength, tons/sq. ft.
- penetrometer reading, tons/sq. ft.
- 1.0 2.0 3.0 4.0

- × standard penetration "N", blows/ft.
- Δ moisture content, %
- 10 20 30 40

Water encountered at dry feet during drilling operations (W.D.)
 Water recorded at dry feet on completion of drilling operations (A.D.)
 Water recorded at feet hours after completion of drilling operations (A.D.)

Client: Lan-Oak Park District

File No. 27912 Date Drilled: 5/10/24

Reference: Bock Park
Lansing, IL

Comments:

depth, ft.	Equipment: <input checked="" type="checkbox"/> D - 25 <input type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other
	CLASSIFICATION
	Elevation 100.8' Existing Surface
1	Bituminous concrete - 3.0"
2	Crushed limestone - 9.0"
3	Dark brown-gray to brown-gray clay, some silt, trace sand & gravel, damp, very tough to hard
4	
5	
6	Brown clay, some silt, trace sand & gravel damp, hard
7	
8	
9	
10	Gray clay, some silt, trace sand & gravel, damp, very tough

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	<input type="radio"/> unconfined compressive strength, tons/sq. ft. <input checked="" type="radio"/> penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 <input checked="" type="radio"/> standard penetration "N", blows/ft. <input checked="" type="radio"/> moisture content, % 10 20 30 40			
X	Δ	γ	○	10	20	30	40
9	23.9	102.0	3.9	X	Δ	○	
9	19.5	111.5	5.6	X	Δ	●	○ 5.6
8	20.9	110.9	4.3	X	Δ	●	○ 4.3
13	18.7	119.2	2.9	X	Δ	●	○

End of Boring

Water encountered at dry feet during drilling operations (W.D.)
 Water recorded at dry feet on completion of drilling operations (A.D.)
 Water recorded at feet hours after completion of drilling operations (A.D.)

Client: Lan-Oak Park District

File No. 27912 Date Drilled: 5/10/24

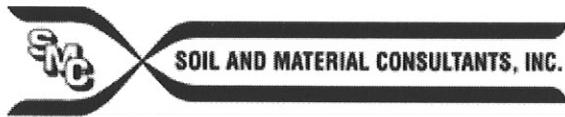
Reference: Bock Park
Lansing, IL

Comments:

depth, ft.	Equipment: <input type="checkbox"/> D - 25 <input type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other CLASSIFICATION Elevation 101.1' Existing Surface
5	(a,b,c & d) see below Dark brown-gray to brown-gray clay, some silt, trace sand & gravel, damp, very tough to hard Brown clay, some silt, trace sand & gravel damp, very tough
10	Gray clay, some silt, trace sand & gravel, damp, very tough
15	(e) see below End of Boring
20	(a) Topsoil - Fill - 2.0" (b) Crushed limestone-saturated - 8.0" (c) Brick - 2.0" (d) Black silt, some clay, trace sand & roots, damp (topsoil) - 10.0" (e) Gray silt, some clay, trace fine sand saturated, loose
25	
30	
35	
40	

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	○ unconfined compressive strength, tons/sq. ft. ● penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 X standard penetration "N", blows/ft. Δ moisture content, % 10 20 30 40
X	Δ	γ	○	
	26.5			
8	26.4	97.6	2.4	X Δ ●
12	19.8	113.4	5.0	X Δ ● ○ 5.0
11	21.2	110.6	3.7	X Δ ● ○
13	21.7	110.1	3.8	X Δ ● ○
12	24.7	104.4	2.1	X ○ Δ ●
8	23.1			X Δ

Water encountered at 0.8 feet during drilling operations (W.D.)
 Water recorded at 11.0 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)



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GENERAL NOTES

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487 (when applicable), and the modifiers noted below.

CONSISTENCY OF COHESIVE SOILS

Term	Qu-tons/sq.ft.	N (unreliable)
Very soft	0.00 – 0.25	0 – 2
Soft	0.26 – 0.49	3 – 4
Stiff	0.50 – 0.99	5 – 8
Tough	1.00 – 1.99	9 – 15
Very Tough	2.00 – 3.99	16 – 30
Hard	4.00 – 7.99	30 +
Very Hard	8.00 +	

RELATIVE DENSITY OF GRANULAR SOILS

Term	N – blows/foot
Very Loose	0 – 4
Loose	5 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	50 +

IDENTIFICATION AND TERMINOLOGY

Term	Size Range
Boulder	over 8 in.
Cobble	3 in. to 8 in.
Gravel - coarse	1 in. to 3 in.
- medium	3/8 in. to 1 in.
- fine	#4 sieve to 3/8 in.
Sand - coarse	#10 sieve to #4 sieve
- medium	#40 sieve to #10 sieve
- fine	#200 sieve to #40 sieve
Silt	0.002 mm to #200 sieve
Clay	smaller than 0.002mm

Modifying Term Percent by Weight

Trace	1 – 10
Little	11 – 20
Some	21 – 35
And	36 – 50

Moisture Content

Dry
Damp
Very Damp
Saturated

DRILLING, SAMPLING & SOIL PROPERTY SYMBOLS

CF	- Continuous Flight Auger
HS	- Hollow Stem Auger
HA	- Hand Auger
RD	- Rotary Drilling
AX	- Rock Core, 1-3/16 in. diameter
BX	- Rock Core, 1-5/8 in. diameter
NX	- Rock Core, 2-1/8 in. diameter
S	- Sample Number
T	- Type of Sample
J	- Jar
AS	- Auger Sample
SS	- Split Spoon (2 in. O.D. with 1-3/8 in. I.D.)
ST	- Shelby Tube (2 in. O.D. w/ith 1-7/8 in. I. D.)
R	- Recovery Length, in.
B	- Blows/6 in. interval, Standard Penetration Test (SPT)
N	- Blows/foot to drive 2 in. O.D. split-spoon sampler with 140 lb. hammer falling 30 in., (STP)
Pen.	- Pocket Penetrometer readings, tons/sq.ft.
W	- Water Content, % dry weight
Uw	- Dry Unit Weight of soil, lbs./cu.ft.
Qu	- Unconfined Compressive Strength, tons/sq.ft.
Str	- % Strain at Qu.
WL	- Water Level
WD	- While Drilling
AD	- After Drilling
DCI	- Dry Cave-in.
WCI	- Wet Cave-in.
LL	- Liquid Limit, %
PL	- Plastic Limit, %
PI	- Plasticity Index (LL-PL)
LI	- Liquidity Index [(W-PL)/PI]