A PROJECT OF THE
PEORIA PARK DISTRICT

ROOF REPLACEMENT
TREWYN PARK PAVILION

2219 SOUTH IDAHO STREET
PEORIA, ILLINOIS

PEORIA PARK DISTRICT
PEORIA, ILLINOIS

PROJECT NUMBER 13-022

APRIL 11, 2017

PROJECT MANUAL

PACKAGE #_____

PROJECT MANUAL INCLUDING SPECIFICATIONS FOR:

ROOF REPLACEMENT
TREWYN PARK PAVILION
2219 SOUTH IDAHO STREET
PEORIA, ILLINOIS

ENGINEER:	TERRA ENGINEERING, LTD. ATTN: KRISTEN FIELDS, S.E., P.E. 401 MAIN STREET SUITE 1130 PEORIA, ILLINOIS 61602 TELEPHONE: (309)999-0123
OWNER:	PLEASURE DRIVEWAY AND PARK DISTRICT OF PEORIA, PEORIA, ILLINOIS
TRUSTEES:	TIMOTHY J. CASSIDY, PRESIDENT ROBERT L. JOHNSON, SR. JACQUELINE J. PETTY WARREN E. RAYFORD KELLY A. CUMMINGS MATTHEW P. RYAN NANCY L. SNOWDEN
PROJECT MANAGER:	MICHAEL FRIBERG, RLA, ASLA PLANNING, DESIGN & CONSTRUCTION DIVISION BRADLEY PARK EQUIPMENT SERVICE 1314 N. PARK ROAD PEORIA, ILLINOIS 61604 TELEPHONE: (309) 686-3386
ADMINISTRATIVE STAFF:	EMILY CAHILL, EXECUTIVE DIRECTOR BRENT WHEELER, DEPUTY DIRECTOR MATT FREEMAN, SUPERINTENDENT OF PARKS JANET BUDZYNSKI, SUPERINTENDENT OF FINANCE AND ADMINISTRATIVE SERVICES BECKY FREDRICKSON, SUPERINTENDENT OF PLANNING, DESIGN AND CONSTRUCTION SHALESSE PIE, SUPERINTENDENT OF HUMAN RESOURCES

****

Address all communications regarding this work to the Project Manager listed above.

ADVERTISEMENT FOR BIDS

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

ROOF REPLACEMENT
TREWYN PARK PAVILION
2219 SOUTH IDAHO STREET
PEORIA, ILLINOIS

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

Sealed bids will be received until Tuesday, May 2, 2017 at 2:00 p.m. prevailing time, by the Owner, at the Peoria Park District Administrative Office, 1125 W. Lake Ave., Peoria, Illinois 61614. (The Board Room clock shall be the official time keeping device in respect to the bid submission deadline.)

An electronic file including Bid Documents is available at www.peoriaparks-planning.org at no charge. Bid Documents, including Plans, Specifications and Interpretations for this project may be obtained at the Planning, Design & Construction Department, Bradley Park Equipment Service, 1314 N. Park Road, Peoria, IL 61604. Telephone (309) 686-3386. A non-refundable plan deposit of Fifty dollars ($50.00) will be charged for each printed set of Bid Documents.

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

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

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

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

PLEASURE DRIVEWAY AND PARK DISTRICT
OF PEORIA, ILLINOIS

BY: TIMOTHY J. CASSIDY, President

BY: V. JOYCE MCLEMORE, Secretary

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SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. INSTRUCTIONS TO BIDDERS

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

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

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

2. PROJECT DESCRIPTION

A. The Project description generally is as follows:

1. BASE BID: Labor and Materials for: protection of existing features to remain, selective demolition including reinforced lightweight concrete roof decking and attached built-up roofing, protection and temporary shoring of interior lighting, HVAC, and ceiling systems, salvage and reconstruction of affected brick and stone masonry features, new structural steel work, new metal roof decking, new thermal insulation, new SBS modified bituminous roofing system, new copper flashings, masonry cleaning, new soffits and gutters.

B. PRE-BID MEETING :

1. A pre-bid meeting will be held at Trewyn Park Pavilion on Thursday, April 20, 2017 at 1:00 p.m.

3. CODES AND PERMITS

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

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

4. BID GUARANTY

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

5. AWARD OF CONTRACT/REJECTION OF BIDS:

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

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

6. EXECUTION OF AGREEMENT:

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

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

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

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

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

D. **INSURANCE.** Insurance requirements for this project are addressed both in the Supplementary General Conditions and in "Attachment A.5", in the "Exhibits" section of this Project Manual.

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

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

8. DEFAULT

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

9. CONTRACTOR'S QUALIFICATION STATEMENT

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

10. LIST OF SUBCONTRACTORS/PRODUCT & EQUIPMENT SUBSTITUTIONS

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

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

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

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

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

11. CONTRACT ADMINISTRATION FORMS/COSTS OF FORMS

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

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

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

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

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

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

1) **Major Subcontractors List**

2) **Contractor's Affidavit**

3) **Individual Contractor Form**

4) **Corporate or Partnership Form**

5) **Performance Bond**

6) **Labor and Material Payment Bond**

7) **Lien Waiver Forms**

8) **Weekly Workforce Report**

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

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

11) **Agreement Between Owner and Contractor**

Examples of these forms are included in the Project Manual.

12. CONSTRUCTION TIME AND LIQUIDATED DAMAGES CLAUSE:

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

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

2) Accordingly, instead of requiring any such proof, Owner and Contractor agree that as Liquidated Damages for delay (but not as a penalty) Contractor shall pay Owner TWO HUNDRED AND FIFTY DOLLARS ($250.00) for each calendar day that expires after One Hundred Twelve (112) calendar days from Notice of Award until Substantial Completion is attained. The work is tentatively scheduled to begin on May 11, 2017and be at Substantial Completion by September 1, 2017.

3) After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work necessary to achieve Final Completion within Ten (10) calendar days or any proper extension thereof granted by Owner, Contractor shall pay Owner TWO HUNDRED AND FIFTY DOLLLARS ($250.00) for each day that expires after the time specified.

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

5) **Please note: No work is permitted on or around the pavilion before June 19th , 2016.**

13. PROJECT MANUAL/PLANS & SITE VISITATION

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

B. **PLAN DEPOSIT**. An electronic file including Bid Documents is available at www.peoriaparks-planning.org at no charge. A printed set of Bid Documents, including Plans, Specifications and Interpretations for this project may be obtained at the Planning, Design & Construction Department, Bradley Park Equipment Service, 1314 N. Park Road, Peoria, IL 61604. Telephone (309) 686-3386. A non-refundable plan deposit of Fifty dollars ($50.00) will be charged for each printed set of Bid Documents.

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

14. OTHER MODIFICATIONS TO AIA-701/OTHER CONDITIONS

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

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

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

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

15. EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION/SEXUAL HARASSMENT

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

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

1) A definition of sexual harassment under state law;

2) A description of sexual harassment utilizing examples;

3) A formalized complaint procedure;

4) A statement of victim's rights;

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

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

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

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

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

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

16. BID SUBMISSION

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

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

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

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

3) The **WORKFORCE PROFILE.**

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

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

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

7) The **BID GUARANTY.**

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

9) **SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION**

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

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

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Bid From: _____

PROJECT NO. 13-022
BID FOR: ROOF REPLACEMENT
LOCATION: TREWYN PARK PAVILION

BID FORM

BID TO: PEORIA PARK DISTRICT

UNDERSIGNED:

1. Acknowledges receipt of:

   A. Project Manual and Drawings for:

   ROOF REPLACEMENT
   TREWYN PARK PAVILION

   B. Addenda: No. _____ through No. _____

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

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

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

   B. Accomplish work in accord with Contract.

   C. Complete work within specified Contract time.

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

   B. Contractor agrees that no work shall be permitted on the Pavilion before June 19, 2017.

5. **BASE BIDS**:
   A. Base Bid:
   Bidder agrees to perform all building and site work, as set forth in the Project Manual and Drawings for the sum of:

   _____ Dollars ($_____._____)

6. **UNIT PRICES**:
   A. Bidders submitting prices for the Base Bid shall submit Unit Prices for adding or deleting work. Unit Prices shall include all costs, including but not limited to preparation, labor, equipment, and materials necessary for a complete installation.

ITEM	UNIT	UNIT PRICE
Gutter, complete	LIN FT	$_____
Masonry cleaning	SQ FT	$_____
Masonry repointing	SQ FT	$_____

7. **PROPOSED SUBSTITUTION LIST:**

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

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

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

8. **BIDDERS CHECKLIST:**

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

9. **BIDDER INFORMATION**:

NAME OF BIDDER:_____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NO.: _____

BY: _____
(Signature of Authorized Official)

TITLE: _____

BIDDER'S SEAL

WITNESS: _____

END OF BID FORM

Office Use Only:
Approved: _____
Date: _____

Peoria Park District

Certificate of Equal Employment Opportunity Compliance
for
Contractors and Vendors

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

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

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

Is the Company a minority/woman owned business (MBE/WBE)? ____YES ____ NO

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

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

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

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

Rev. 6/2012

WORKFORCE PROFILE - FULL TIME ONLY

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

WORKFORCE PROFILE INSTRUCTIONS

RACE/ETHNIC IDENTIFICATION

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

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

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

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

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

DESCRIPTION OF JOB CLASSIFICATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) a description of sexual harassment utilizing examples;

(3) a formalized complaint procedure;

(4) a statement of victims rights;

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

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

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

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

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

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

SEXUAL HARASSMENT POLICY STATEMENT

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

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

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

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

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

Other conduct commonly considered to be sexual harassment includes:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ILLINOIS DRUG FREE WORKPLACE CERTIFICATION

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

Dated this _____ day of _____, 20 _____

Contractor/Vendor

_____

By: _____

SUBSTANCE ABUSE PREVENTION PROGRAM CERTIFICATION

Project Name:_____

Location:_____

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

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

_____
Contractor/Subcontractor

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____
Signature of Authorized RepresentativeDate

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

_____
Contractor/Subcontractor

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____
Signature of Authorized RepresentativeDate

CERTIFICATION OF SAFETY COMPLIANCE

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

Dated this day of _____, 20 _____.

CONTRACTOR/VENDOR: _____

By: _____

PLEASURE DRIVEWAY AND PARK DISTRICT

OF PEORIA, ILLINOIS

Individual Contractor Form

CONTRACTOR CERTIFICATION

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

_____
Contractor

By: _____

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

_____
Notary Public

My Commission Expires _____, 20_____

PLEASURE DRIVEWAY AND PARK DISTRICT

OF PEORIA, ILLINOIS

Corporate or Partnership Contractor Form

CONTRACTOR CERTIFICATION

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

_____, do hereby certify that neither
(Contractor)

_____, nor any individual presently
(Contractor)

affiliated with _____, has been barred from
(Contractor)

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

_____
Contractor

By: _____

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

_____
Notary Public

My Commission Expires _____, 20_____

MAJOR SUBCONTRACTORS LIST

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

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

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

(Attach additional sheets if required)

END OF MAJOR SUBCONTRACTORS FORM

Directory of Minority & Women Owned Business Enterprises
Compiled with Information from
City of Peoria Equal Opportunity Office
Peoria Housing Authority
Peoria Park District

Revised 3/15

Absolute Risk Management Strategies Kelly Peterson	MBE Construction Safety, Job Site Safety Plan Development, Job Site Risk Assessment, Construction OSHA Training 416 Main St., Suite 533, Peoria, IL 61602	309-256-8471 309-222-4050 Cell
Adams Septic & Sewer Services, Inc. Michelle Adams	WBE Septic and Sewer Contractor 1641 N. Tiber Ridge Ct., East Peoria, IL 61611	309-691-6113
Aerial Work Services Company	MBE Landscaping and Seeding 13805 Wadsworth Road, Wadsworth, IL	847-662-5321 847-662-5321 Fax
AFE Construction, Inc. Tommy and Monica Arbuckle	WBE General Contractor WBE P.O. Box 199, Mackinaw, IL 61755	309-303-7065 866- 491-2209 Fax
A & L Salvage, Inc. Archie Brown	MBE Clean Up, Tree Cutting & Removal, Truck Salvaging 824 W. Brons, Peoria, IL 61604	309-682-4412
Alexander Brothers Construction Co. Allester Alexander	MBE Concrete, Demolition, Excavation, Landscaping P.O. Box 1508, Peoria, IL 61605	309-673-6768
A. Lucas & Sons Steel Margaret Hanley	WBE Structural Steel Fabrication 1328 SW Washington, Peoria, IL 61602	309-673-8547 309-673-7213 Fax
Ambri Inc. Robert J. Hunt. Jr.	MBE Drywall, Flooring, Painting, Cabinetry 9101 S. Nashville Ave., Oak Lawn, IL 60453	708-233-0217 Ph and Fax
Atherton, P.A. Patricia Atherton	WBE Asphalt, Concrete, Demolition, Excavation 57 Eichorn Road, Spring Bay, IL 61611	309-822-8575 309-822-8782 Fax
A Unique Maintenance Service Andrea McKnight	MBE Commercial and Industrial Construction Cleanup 2101 N. North St., Peoria, IL 61604	309-685-7197 309-685-4472 Fax
BMI Contractors & Assoc. Sammy L. Hobson	MBE Excavating, Concrete, Site Work, Drainage 1123 MacQueen, Peoria, IL 61604	309-657-4469
Braun Excavating, Inc. Teresa Braun	WBE Demolition, Digging of Footings, Excavation, Pipe Laying 24 Gulf Stream, Bartonville, IL 61607	309-697-5454 309-697-6567 Fax
Brown, Leo Trucking, Inc. Leo Brown	MBE Trucking/Hauling P. O. Box 9057, Peoria, IL 61612	309-685-6710 309-685-0759 Fax
Buddy's Landscaping Dexter Davis	MBE Landscaping P. O. Box 1836, Bloomington, IL 61702	309-824-9211 309-454-3342 Fax
Capitol Trucking Eddie Washington	MBE Janitorial Service, Snow Removal, Trucking 2803 Creston Ln., Peoria, IL 61604	309-679-9388 309-339-5313 Cell
Central IL Construction Inc. Jessica Youngman	WBE Land Surveying 416 Germantown Rd., Germantown, IL 61548	309-383-3156
Central IL Rebar Insulators Roger Fleming	MBE Structural Steel and Rebar Replacement 4719 Ridgelawn, Peoria, IL 61615	309-258-1379 888-387-5716 Fax
Central Landscaping Donna Brandenburg	WBE Landscaping 12512 Mendell Rd., Princeville, IL 61559	309-385-4832 309-385-2644 Fax
CJL Landscaping, Inc. Rebecca J. Kelch	WBE Landscaping 10902 W. U. S. Highway 150, Brimfield, IL 61517	309-691-9200 309-691-5131 Fax

C & L Construction & Roofing Co. Jeanette Burns	WBE Roofing, Electrical, Plumbing P.O. Box 416, Peoria, IL 61651	309-672-2641
Clean Sweep Lead Abatement Ricky Walker	MBE Lead-Based Paint Removal 4014 Brighton, Peoria, IL 61615	309-689-1146
Clevenger Contractors Inc. Verlee Clevenger	WBE Guardrail, Bridge Rail, Seeding, Fencing 355 Naples Rd., P.O. Box 19, Bluffs, IL 62621	217-754-3411 217-754-3537 Fax
CNS Forestry & Landscaping LLC Christine Schilling	WBE Landscaping, Seeding, Sodding, Tree Removal 1813 1000th St., Lincoln, IL 62656	217-792-3808 217-792-3808 Fax
Cordova Construction Tina Christopher	WBE Concrete Removal, Curb & Gutter Removal, Sidewalk Removal 2424 N. Ellory Road, Peoria, IL 61615	309-674-8810
Cornerstone Builders & Developers Ron Touilly	WBE 6129 W. Southport Rd., Peoria, IL 61615	309-674-9000 309-673-7783 Fax
CSS (Construction Specialties & Services) Dave Suzuki	MBE Building Specialties, Design, Engineering, Estimating P. O. Box 120703 Peoria, IL 61614	309-685-8453
Davis Brothers Construction Company Russell Davis	MBE Trucking/Hauling 1522 W. Kettelle St. Peoria, IL 61605	309-683-6931
DECA Realty Eddie J. Washington	MBE Real Estate Broker, Appraiser 417 W. Main, Peoria, IL 61606	309-637-3322 309-682-3922 Fax
Design Air Inc. Courtney Eston	MBE Commercial Air Duct Cleaning 3806 W. Hearthwood Dr., Dunlap, IL 61525	309-693-8632 309-243-2102 Fax
Dunbar Transfer	WBE Trucking P.O. Box 315, Chillicothe, IL 61523-0315	309-303-5122
E & D Trucking and Hauling, Inc. Eddie Proctor	MBE Trucking/Hauling 1913 N. Idaho, Peoria, IL 61604	309-682-4336 309-251-6736 Cell
Earth Care Unlimited, Inc. Monica Thomley	WBE Seeding, Sodding, Landscaping 3108 Panther Grove Rd., Ashland, IL 62612	217-452-7320 217-452-7178 Fax
Economy Painting & Decorating Linda Coffman	MBE Painting 9315 W. Goetz, Hanna City, IL 61536	309-565-7300
Elegant Installations James Barrett	MBE Installation/sales custom drapery, blinds, shade, shutters 125 E. Elaine, Peoria, IL 61614	309-648-8118 309-93-0007 Fax
Fashion Floors, Inc. Yvonne Hand	WBE Floorcoverings 930 S. 2nd Street, Suite B, Pekin, IL 61554	309-353-8272 309-347-1109 Fax
Fire & Ice Heating and Air J.T. Toombs	MBE HVAC Maintenance, Installment 922 W. Smith St., Peoria, IL 61605	309-219-3708
Fuhrmann Engineering Inc. Kathy Shelter	WBE Civil Engineers / Land Surveyors 456 Fulton St., Suite 146	309-713-3498 Ext. 5
Flessner Electric	WBE Electrical 3600 S. Cameron Ln., Mapleton, IL 61547	309-697-2484
G&L Trucking & Construction	WBE 1113 W. Groveland Ave., Peoria, IL 61604	309-686-9334
Garza Heating & Cooling	MBE 1304 S. Western Ave., Peoria, IL 61605	309-645-6294
Ronald A. Givens & Associates Ronald A. Givens	MBE Insurance & Investments 2616 N. Lehman, Peoria, IL 61602	309-685-4588 309-676-3152 Fax
Gutters & More	WBE 157 Thunderbird Ln., East Peoria, IL 61611	309-694-4000 309-694-3356 Fax
Hancock Trucking, Inc. Nancy Hancock	WBE Trucking/Hauling 30570 Hancock Road, Mackinaw, IL 61755	309-447-6733

Hanley Steel, Inc. Jill Hanley	WBE Fabricated Structural and Miscellaneous Steel 8811 N. Industrial Rd., Peoria, IL 61615	309-692-5250 309-692-5251 Fax
Heart Technologies Jim Bainter, Brad Armstrong	WBE Data and Telephone, Communication and Construction 3105 N. Main Street, Peoria, IL 61611	309-427-7000 309-427-7007 Fax
Hermann & Associates Alisha Hermann	WBE Consultant Engineering 5835 N. Galena Rd., Peoria, IL 61614	309-687-5566 309-687-0571 Fax
Hopgood Painting Bruce Hopgood		309-826-4981
Horan Construction, Inc. Susan Arnholt	WBE Carpentry, Concrete, Demolition, General, Wrecking 1720 W. Chanute Road, Peoria, IL 61615	309-691-3133 309-691-1841 Fax
Infrastructure Engineering Thu Truitt	MBE Civil Engineering 456 Fulton St., Suite 104, Peoria, IL 61602	309-637-9200 309-637-9210
Intech Innovations John McCrary	WBE Audio/Video Design and Integration Washington, IL 61571	309-370-6676 309-745-9691 Fax
J Construction Frank Coates	MBE General 1810 Stever, Peoria, IL 61605	309-303-3919 Cell
JAKS Construction Inc. John Spencer	Disabled Vet Concrete Cutting, Drilling, Sealing 19319 Great Crane Rd., Bloomington, IL 61705	800-455-9662 309-455-9662 Fax
J. D. Masonry Services Hurdestine Dabbs	M/WBE Concrete 907 E. Arcadia, Peoria, IL 61603	309-453-6533 Cell
J&J Manufacturing	110 W. Walnut, Chillicothe, IL 61523	209-274-3141
J & J Construction Herman Johnson	MBE Demolition, Excavation 1710 W. Garden Street, Peoria, IL 61605	309-673-8616 309-676-8292 Fax
J & K Construction James Tilman	MBE General 4003 N. Rochelle, Peoria, IL 61615	309-685-8554 309-685-8554 Fax
JM Industrial Supply Ron Given	MBE Maintenance Items, Tools, Soaps 2323 Lakeshore, Pekin, IL 61554	309-346-5796 309-347-5100 Fax
Joseph & Associates Construction Inc. Elva Jones	M/WBE Rough and Finish Carpentry 325 Sanford St., East Peoria, IL 61611	309-550-5639 309-282-6013Fax
Kahbeah Contracting & Trucking Larry Kahbeah	MBE Trucking/Hauling 510 N. Yates, P. O. Box 56, Tallula, IL 62688	217-634-4157 217-634-4157 Fax
Kreiling Roofing Co.	WBE Slate, Wood Shakes, Tile, Thatch, Custom Fabricated Copper and Steel, Residential and Commercial 2335 W. Altorfer Dr., Peoria, IL 61615	309-673-3649
LNR Construction & Trucking Demonte Davis	MBE Concrete, Trucking 2200 Linsley St., Peoria, IL 61604	309-682-6331
Long John Trucking	MBE Trucking 11501 W. Farmington Rd., Hanna City, IL 61536	309-208-1927
LV Enterprise John L. Palmer	MBE Trucking/Hauling 303 E. Archer Avenue, Peoria, IL 61603	309-657-2420 309-682-8872 Fax
M & A Plumbing Michael Abner	MBE Plumbing 6216 N. Devonshire Avenue, Peoria, IL 61615	309-689-0133 309-689-0133 Fax
McGinnis Transportation Beth McGinnis	WBE Trucking, Tandem, 24 » Box Truck 336 Riverview Dr., Creve Cœur, IL 61610	309-369-4465 309-694-1604 Fax
M&K Heating & Cooling Reggie Williams	MBE HVAC 2406 W. Newman Parkway, Peoria, IL 61604	309-256-6129
M & L Plumbing Manzell Lawson	MBE Plumbing 1309 W. Lincoln, Peoria, IL 61605	309-674-8466

Mid-Illinois Companies, Corp.	WBE Metal Framing, Insulation, Drywall, Plaster and Exterior Insulation, Acoustical Ceilings and Wall Panels, Painting and Wall Covering, Access Flooring 905 NE Adams St., Peoria, IL 61603	309-674-0717 309-674-5802 Fax
Midwest Construction Services Sheila Shover	M/WBE Traffic Control Products, Trucking/Hauling P. O. Box 4185, Bartonville, IL 61607	309-697-1000 309-697-1004 Fax
Millennia Professional Services of IL Paul Moreno	MBE Civil Engineering, Erosion Control, Landscaping, Sewer Construction, Surveying, Retaining Walls 850 N. Main St., Morton, IL 61550	309-321-8141 309-321-8142
Molleck Electric	WBE Electrical 14926 W. Winchester Dr., Brimfield, IL 61517	309-446-3483
Ordaz Construction Co. Inc. Elizabeth Ordaz Mercer	WBE Concrete 8004 N. Sommer St., Peoria, IL 61615	309-693-3338 309-693-5505 Fax
Pendleton Excavating Darold Pendleton	MBE Excavation, Sand & Gravel 1207 W. MacQueen, Peoria, IL 61605	309-685-9133 309-685-9133 Fax
Porter, V. L. Vincent Porter	MBE Concrete, General 500 W. North, Suite 10, Springfield, IL 62704	217-744-8050
RNS Electric Inc. Regina Slonneger	WBE Electrical 28558 Irish Lane, Washington, IL 61571	309-444-5200 309-444-5201 Fax
RTM Concrete Construction Morris Stokes	MBE Concrete 2207 W. Wiswall, Peoria, IL 61605	309-637-4237
N. E. Rudd Trucking Nanette Jenkins-Rudd	WBE Trucking/Hauling P.O. Box 14, 107 Washington St., Kingston Mines, IL 61539	309-389-4150 309-389-2849 Fax
Nelton Construction Damon Nelton	MBE Concrete, Residential and Commercial Construction 1180 Upper Spring Bay Rd., East Peoria, IL 61611	309-694-9837 309-694-9852 Fax
Professional Contracting Services Inc. Don Mackey	MBE Concrete, Masonry, Carpentry, Site Work 2669 N. County Hwy. 19, Canton, IL 61520	309-647-9744 309-208-7089 Cell
Ridge Painting Vickie Ridge	MBE Painting 4216 N. Patricia Ct., Peoria, IL 61615	309-688-5610
Rufus Construction Company Rufus Nelson	MBE Painting, Roofing, Remodeling 1819 S. Idaho Street, Peoria, IL 61605	309-673-6776 309-497-9453 Cell
Searle Trucking, Inc. Debbie Searle	WBE Trucking/Hauling P. O. Box 1084, Peoria, IL 61653	309-686-0708 309-688-5365 Fax
Sherwin Baker & Associates, Inc. Sherwin Baker	MBE Construction Management, Consulting, Engineering, Technical Services 103 E. Archer, Peoria, IL 61603	309-688-4203 309-688-4203 Fax
Smeltz, V.	MBE Excavation P. O. Box 64, Washington, IL 61571	
Tabitha Ventures, Inc. Edward O. Taiwo	MBE Asphalt, Concrete, Demolition, Earthwork, Electrical, Excavation, General, HVAC, Landscaping, Painting, Plumbing, Resurfacing, Roofing, Trucking/Hauling 2000 W. Pioneer Parkway, Suite 7B, Peoria, IL 61615	309-692-1473 309-692-1564 Fax
The Communication Connection Jennifer Stone	WBE Communication, Wire and Cable, Electrical and Telephone Products 604 Filmore Street, Harrisburg, PA 17104	717-561-7267
Three Cross Development J. T. Donelson	MBE Concrete, General, Sidewalk 1519 W. Millman, Peoria, IL 61605	309-637-1238
Third Hand Landscaping Tommy Harris	MBE Landscaping 2313 W. Lincoln, Peoria, IL 61605	309-673-6702

Thompson Brothers Inc. Todd Thompson	MBE General Carpentry and Construction, Interior Finish Work, Millwork 221 Court St., Pekin, IL 61554	309-613-0254
Thornton Rave dba Illini Concrete Co. of Illinois	MBE Precast and Prestressed Concrete, Demolition, Excavating and Grading, Drainage, Aggregate Bases and Surfaces, Pavement Patching 929 E. Grove St., Suite A, Bloomington, IL 61701	309-585-2376 309-585-2472 Fax
Tilman Electric James Tilman	MBE Electrical 4003 N. Rochelle, Peoria, IL 61615	309-685-8554 309-264-3903 Cell
TOS Trucking John McCullum	MBE Trucking 11501 Farmington Rd., Hanna City, IL 61536	309-208-1927
Triple JJJ's Janitorial Benard Harris, Vicki Harris	WBE Janitorial	(309) 648-5872 jaybee1957@sbcglobal.net
Wards Custom Landscaping Wardine Smith	MBE Landscaping 3804 W. Pagewood Dr., Peoria, IL 61615	309-671-1890 309-671-1893 Fax
Whitaker Construction Lionel Whitaker	MBE Concrete, General, Curb & Gutter, Sidewalk 4010 N. Marbleway Dr., Peoria, IL 61615	309-682-9305 309-208-0476 Cell
Wiegand & Storrer Inc. Leslie Savant	WBE Horizontal Boring, Sewer, Watermain 3210 E. Washington Road, East Peoria, IL 61611	309-699-6457 309-699-9660 Fax
Willie Veneble Construction Willie Venable	MBE Construction, Concrete Removal, Demolition 1000 E. Wilcox, Peoria, IL 61605	309-686-1429 309-360-0757 Cell
Willis Electric Phyllis Willis	WBE Electrical P.O. Box 545, Chillicothe, IL 61523	309-579-2926
Wilson Tree Service Charles Wilson	Tree Service 301 E. Melbourne, Peoria, IL 61603	309-251-0626 skwccw6@yahoo.com
ZOR Restoration Marc Porch	MBE General Contractor, Restoration 206 S. Becker Ln., Peoria, IL 61605	309-550-2708

SAMPLE ADDENDUM

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

ADDENDUM NO.

PROJECT TITLE:

ISSUANCE DATE:

LOCATION:

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

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

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

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

END OF ADDENDUM NO. _____

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

Addendum No. _____
Page 1 of 1

Pleasure Driveway and Park District of Peoria, Illinois

Sample Agreement Between Owner and Contractor

This **AGREEMENT** for

ROOF REPLACEMENT
TREWYN PARK PAVILION
2219 SOUTH IDAHO STREET
PEORIA, ILLINOIS

is made as of the _____ day of _____ in the year of Two Thousand Seventeen (2017)

Between the Owner:

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

And the Contractor:

The Owner's Representative is:

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

The Architect or Engineer is:

TERRA ENGINEERING, LTD.
401 MAIN STREET SUITE 1130
PEORIA, ILLINOIS 61602

The Owner and Contractor agree as follows:

I. THE CONTRACT DOCUMENTS. The Contract Documents consist of this AGREEMENT, the Plans/Drawings for the Project dated May 4, 2016, all sections of the Project Manual dated April 11, 2017, including but not limited to the Instructions and Supplementary Instructions to Bidders, the Bid Form, the General Conditions (1997 AIA Document A201) and Supplementary General Conditions, the General Requirements, the Specifications, and other documents as enumerated in Section 10 and Attachment #1 of this AGREEMENT**,** and including addenda issued prior to the execution of this AGREEMENT. The Contract Documents form the CONTRACT between the Owner and the Contractor. The CONTRACT represents the entire and integrated contract for the construction of the Work of the Project between the parties hereto and supersedes prior proposals, contracts, negotiations, or representations, either written or oral.

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

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

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

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

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

ITEM	ADD	DEDUCT

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

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

B. SUBSTANTIAL COMPLETION. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as Liquidated Damages for delay (but not as a penalty), Contractor shall pay Owner Two Hundred and Fifty dollars ($250.00) for each calendar day that expires after One Hundred and Twelve (112) calendar days from Notice of Award until Substantial Completion is attained. The work is tentatively scheduled to begin on May 11, 2017 and be at Substantial Completion by September 1, 2017.

C. FINAL COMPLETION. After Substantial Completion if Contractor shall neglect, refuse, or fail to complete the remaining Work necessary to achieve Final Completion within Ten (10) calendar days or any proper extension thereof granted by Owner, Contractor shall pay Owner Two Hundred and Fifty dollars ($250.00) for each day that expires after the time specified.

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

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

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

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

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

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

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

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

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

- **A.** this Standard Form of Agreement Between Owner and Contractor, of the Pleasure Driveway and Park District of Peoria, Illinois.
- **B.** the Plans or Drawings titled TREWYN PARK PAVILION ROOF REPLACEMENT, dated May 4, 2016 and enumerated in ATTACHMENT #1 - "LIST OF DRAWINGS".
- **C.** Supplementary and other Conditions of the CONTRACT, and the Specifications, are those found in the Project Manual titled "ROOF REPLACMENT – TREWYN PARK PAVILION", and dated April 11, 2017 enumerated as follows:
  - **1)** Supplementary Instructions to Bidders
  - **2)** Contractor's Proposal, as accepted by the Owner
  - **3)** General Conditions of the Contract for Construction, AIA Document A201, 1997 Edition
  - **4)** Supplementary General Conditions
  - **5)** Major Subcontractor List
  - **6)** Directory of Minority & Women Owned Business Enterprises
  - **7)** Illinois Drug Free Workplace Certification
  - **8)** Contractor Certification (Individual or Corporate/Partnership)
  - **9)** Peoria Park District Certificate of Equal Employment Opportunity Compliance for Contractors and Vendors
  - **10)** Workforce Profile
  - **11)** Performance Bond
  - **12)** Labor and Material Payment Bond
  - **13)** Proof of Insurance
  - **14)** Specifications: Division 010000, "General Requirements"; Divisions 020000-350000 as applicable
  - **15)** Attachment A.5 - Insurance Requirements
  - **16)** Certificate of Safety Compliance
  - **17)** Peoria Park District Weekly Workforce Report
  - **18)** Certified Payroll Form
  - **19)** Substance Abuse Prevention Program Certification

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

Work on the Pavilion shall not begin before June 19, 2017.

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

OWNER:

_____
(Signature)

TIMOTHY J. CASSIDY, Park Board President

ATTEST:

CONTRACTOR :

_____
(Signature)

_____
(Printed Name and Title)

ATTEST:

ATTACHMENT #1 - LIST OF DRAWINGS

Number	Title	Date
G1.0	**Cover Sheet**	**5/4/2016**
G3.0	**Existing Conditions of Scope Designs**	**5/4/2016**
A1.0	**Demolition and New Work Plans**	**5/4/2016**
A3.0	**Elevations and Details**	**5/4/2016**
A6.0	**Flashing Details**	**5/4/2016**
S1.0	**General Notes**	**5/4/2016**
S2.0	**Demolition/Existing Upper Roof Details**	**5/4/2016**
S3.0	**Proposed Roof Framing Plan and Details**	**5/4/2016**
S4.0	**Proposed Roof Details**	**5/4/2016**
S5.0	**Proposed Roof Details**	**5/4/2016**

PERFORMANCE BOND

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

KNOW ALL MEN BY THEIR PRESENTS;

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

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

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

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

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

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

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

CONTRACTOR

_____
Contractor Firm Name

By: _____
Signature

_____
Title

SURETY

_____
Surety Name

By:_____
Attorney-in-Fact

_____
Resident Agent

ATTEST:

_____
Corporate Secretary (Corporations only)

LABOR & MATERIAL PAYMENT BOND

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

KNOW ALL MEN BY THESE PRESENTS:

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

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

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

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

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

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

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

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

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

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

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

ATTEST:

_____
Corporate Secretary (Corporations only)

CONTRACTOR'S AFFIDAVIT

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

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

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

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

TOTAL ALL LABOR AND MATERIAL TO COMPLETE

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

Signed this _____ day of _____, 20 _____.

Signature: _____

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

_____
Notary Public

FINAL WAIVER OF LIEN

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

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

at the premises commonly known as _____

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

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

Dated this _____ day of _____ 20 _____.

[Affix corporate seal here.]

_____
(Name of sole owner, corporation or partnership)

ATTEST:

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

WAIVER OF LIEN

GENERAL CONTRACTOR'S PARTIAL
TO COVER ONLY CERTAIN PAYMENTS

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO ALL WHOM IT MAY CONCERN:

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

_____

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

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

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here]

_____
(Name of sole owner, corporation or partnership)

ATTEST:

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

SUB-CONTRACTOR'S FINAL WAIVER OF LIEN

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

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

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

County of Peoria, State of Illinois.

The undersigned, for and in consideration of _____

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

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here.]

ATTEST:_____

_____
(Name of sole owner, corporation or partnership)

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

WAIVER OF LIEN

SUB-CONTRACTOR'S PARTIAL
TO COVER ONLY CERTAIN PAYMENTS

STATE OF ILLINOIS)
) SS
COUNTY OF PEORIA)

TO WHOM IT MAY CONCERN:

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

_____

at the premises commonly known as _____

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

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

Dated this _____ day of _____, 20 _____.

[Affix corporate seal here.]

_____
(Name of sole owner, corporation or partnership)

ATTEST:

_____
(Signature of secretary of corporation)

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

PEORIA PARK DISTRICT
Weekly Workforce Report
Instructions

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

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

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

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

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

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

Contractor/Subcontractor:_____ Project: _____

Trade & Hour Breakdown:

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

New Hires by Race & Gender

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

Total Project Employee Breakdown

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

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

SUPPLEMENTARY GENERAL CONDITIONS

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

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

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

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

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

DELETE THE LAST SENTENCE OF PARAGRAPH (1.1.1).

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

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

ADD THE FOLLOWING PARAGRAPHS TO SECTION (1.2):

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

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

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

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

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

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

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

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

6. DELETE PARAGRAPH (2.2.3) IN ITS ENTIRETY.

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

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

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

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

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

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

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

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

3.4.5 The Contractor shall carefully inspect all materials delivered on and to the Project site and reject defective materials without waiting for the Owner's Representative or other representative of Owner to observe the materials.

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

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

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

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

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

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

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

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

ADD THE FOLLOWING PARAGRAPHS TO SECTION (3.10):

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

25. ADD PARAGRAPH TO SECTION (4.2):

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

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

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

27. DELETE PARAGRAPH (4.3.10) IN ITS ENTIRETY.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

37. DELETE SECTION (4.6) IN ITS ENTIRETY.

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

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

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

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

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

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

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

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

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

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

ADD THE FOLLOWING PARAGRAPHS TO SECTION (7.2):

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

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

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

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

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

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

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

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

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

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

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

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

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

8.2.6 Provided, however, the following exceptions:

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

.2 Any unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including acts of God, or of a public enemy, acts of the Owner, acts of another Contractor in performance of a separate contract with the Owner, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather. The criteria on which the unusually severe weather shall be based is the average precipitation/temperatures received in the project area, as recorded over a period of the last five (5) years at the local area

United States Weather Station. Any extension of time due to unusually severe weather must be requested by the Contractor on the basis of documented records of the actual precipitation/temperatures during the contract time period, compared with the normal/average for the area. Also, the criteria shall include the number of excessive precipitation or extreme cold days (i.e., days in which the temperature would adversely affect the type of work being constructed) over the same period and whether or not the Contractor's force worked on said days or stage of construction was affected.

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

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

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

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

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

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

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

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

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

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

The Waiver of Lien and Contractor Affidavit forms used shall be the Peoria Park District's standard form(s): 1) "Final Waiver of Lien" (for general contractors), 2) "Waiver of Lien - General Contractor's Partial To Cover Only Certain Payments", 3) "Sub-Contractor's Final Waiver of Lien", 4) "Waiver of Lien - Sub-Contractor's Partial To Cover Only Certain Payments, and 5) "Contractor's Affidavit". (These forms are included in the Project Manual, and are the required Waiver of Lien forms for the project.)

(If the Contractor is unable to provide the required sub-contractor waiver at the time the application for payment is submitted (preferred method) alternatively, it may be provided at the time that payment is delivered by the District. If the sub-contractor waiver(s) still cannot be provided at that time, the District

will provide "two-party" checks in which the Contractor and the sub-contractor are named jointly as payees.)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IN PARAGRAPH (11.1.2) AFTER THE FIRST SENTENCE ADD:

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

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

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

ADD THE FOLLOWING SUB-PARAGRAPHS TO PARAGRAPH (11.1)

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

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

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

73. DELETE PARAGRAPH (11.4.1) AND SUBSTITUTE:

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

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

75. DELETE PARAGRAPH (11.4.1.2) IN ITS ENTIRETY.

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

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

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

78. DELETE PARAGRAPH (11.4.6) AND SUBSTITUTE:

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

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

80. DELETE PARAGRAPH (11.5.1) AND SUBSTITUTE:

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 15
LABOR, WAGE, SAFETY, AND OTHER STANDARDS

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

15.2 WAGE STANDARDS.

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

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

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

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

15.3 SAFETY STANDARDS.

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

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

15.4 EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION/SEXUAL HARASSMENT

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

15.4.1.1 That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or

women are under-utilized and will take appropriate affirmative action to rectify any such under-utilization.

15.4.1.2 That, if it hires additional employees in order to perform his contract or any portion thereof, it will determine the availability (in accordance with the Rules and Regulations of the Illinois Department of Human Rights) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not under-utilized.

15.4.1.3 That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability or an unfavorable discharge from military service.

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

15.4.1.4.1 a definition of sexual harassment under the law;

15.4.1.4.2 a description of sexual harassment utilizing examples;

15.4.1.4.3 a formalized complaint procedure;

15.4.1.4.4 a statement of victim's rights;

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

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

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

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

15.4.1.5 That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the contractor in its efforts to comply with such Act and Rules and Regulations, the contractor will

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

15.4.1.6. That it will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

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

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

15.4.2 In the event of the contractor's non-compliance with the provisions of the Illinois Human Rights Act, the contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporation, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulations.

END OF SUPPLEMENTARY GENERAL CONDITIONS

SECTION 010000 - GENERAL

A. SUMMARY OF THE WORK

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

B. OCCUPANCY BY OWNER.

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

SECTION 012600 - CHANGE ORDERS

A. OWNER'S REPRESENTATIVE'S FIELD ORDERS

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

B. PROPOSAL REQUESTS

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

C. CHANGE ORDERS

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

SECTION 012900 – PAYMENT PROCEDURES

A. SCHEDULE OF VALUES

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

B. APPLICATIONS FOR PAYMENT

1. Progress payments will be made only if specifically called for in the Agreement. In all other cases, the Contractor may submit an Application for Payment (3 copies) upon Substantial Completion (95% of the Contract Sum), with the balance of the Contract Sum to be paid at Final Completion.

a) **Paragraph #52 of the Supplementary General Conditions defines the documentation required for each payment request.**
b) Applications for payment shall be delivered to the Owner's Project Manager at:

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

SECTION 013100 - PROJECT MEETINGS

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

B. PROJECT MEETINGS
1. Project Meetings will be held per the schedule determined at the Preconstruction Conference, or as needed for proper coordination and administration of the project.

a) AGENDA
1) Review and correct or approve minutes of the previous progress meeting.
2) Review progress of the Work since last meeting, including status of submittals for approval.
3) Identify problems which impede planned progress.
4) Develop corrective measures and procedures to regain planned schedule.
5) Complete other current business.

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

SECTION 013300 - SUBMITTALS

A. Requirements for shop drawings, samples, mock-ups, product data, etc., relative to specific elements or components of the work are called out in the various sections of the Technical Specifications.
1. Submit items to allow for Owner's Representative's review and approval, potential re-submission if full approval is not given, ordering, delivery, fabrication time, etc., so as to allow the Work to proceed in a timely manner and in conformance with the project schedule.

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

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

SECTION 014000 – QUALITY/REGULATORY REQUIREMENTS

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

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

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

SECTION 014200 - REFERENCE STANDARDS AND DEFINITIONS

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

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

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

SECTION 015000 – TEMPORARY FACILITIES & CONTROLS

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

B. BARRIERS, PROTECTION OF SITE AND PROPERTY
1. GENERAL
a) Owner's improvements to remain, existing utilities, as well as adjacent site improvements shall be protected from damage by barriers, guards and coverings. Damaged work shall be replaced or repaired to condition prevailing at time of signing of contract, at no additional cost to Owner.
b) Provide 6' high, continuous chain link or orange plastic (used materials acceptable) construction fence to prohibit unauthorized personnel or public entry from the site of the Work. (Substitutions may be considered; submit request in writing to the Owner's Representative.)
c) Contractor shall provide, erect and maintain additional planking, fences, protective canopies, railings, shoring, lights, warning signs, etc., as needed for the protection of adjacent property and the public.
2. LANDSCAPE PROTECTION
a) All live, healthy trees, shrubs, etc. on the site or on the street fronts of the site, not specified to be removed and not interfering with installation of new work required hereunder, shall be protected against injury from construction operations.
b) All shade trees which are to remain and which are liable to damage during the building operations, shall be properly boxed and protected from damage during the course of construction work as directed by the Park District. **No site-related work shall occur until the required tree protection (fencing, boxing, etc.) has been installed and approved by the Owner or his representative.**
1) LIQUIDATED DAMAGES: The Owner reserves the right to charge the Contractor for damage to existing trees, and to deduct the charges from the amounts due the Contractor, based on the following schedule:
aa) Broken limbs 1" or over in diameter: $50 per caliper inch of limb
bb) Trenching or grading within the tree dripline

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

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

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

D. TEMPORARY ENVIRONMENTAL CONTROLS
1. GENERAL
   a) Provide temporary environmental controls at the site of the Work to ensure that construction operations have no harmful effects on adjacent properties and on members of the public who may come in proximity to the Work, and/or the employees of the Owner who are engaged in regular daily tasks and operations and are unable to be relocated to another work site during construction operations.
   b) Owner reserves the right to stop the Work, at the Contractor's expense, until the Contractor provides necessary control measures for the conditions listed below; additionally, the Owner reserves the right to perform or have performed necessary control measures, should the Contractor refuse to do so at the time requested and to deduct the cost of those expenses from the amount due the Contractor.
2. DUST CONTROL
   a) Provide dust control materials to minimize dust from construction operations. Prevent air-borne dust from dispersing into the atmosphere.
3. WATER CONTROL
   a). Control surface water to prevent damage to the project, the site and adjoining properties.
      1) Control fill, grading, and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas; direct drainage to proper runoff channels or storm drainage utilities.
   b) Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.
   c) Dispose of drainage water in a manner to prevent flooding, erosion silting, or runoff of silt or sediment or other damage to all portions of the site or to adjoining properties.
4. RODENT CONTROL
   a) Provide rodent control to prevent infestation of construction or storage areas.
      1) Use methods and materials which will not adversely affect conditions at the site or on adjoining properties.
5. DEBRIS CONTROL
   a) Maintain all areas free of extraneous debris, waste, and rubbish.
6. POLLUTION CONTROL
   a) Prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
   b) Provide equipment and personnel, perform emergency measures to contain all spillages, and to remove contaminated soils or liquids.
      1) Excavate and dispose of all contaminated earth off-site. Replace with suitable compacted fill and topsoil.
   c) Take special measures, as necessary, to prevent harmful substances from entering public waters, including lakes, streams, intermittent drainage channels, and storm or sanitary sewers.
7. EROSION CONTROL
   a) Plan and execute construction and earthwork in a manner to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
      1) Schedule the Work to minimize the areas of bare soil exposed at one time, if possible.
      2) Provide temporary control measures such as berms, dikes, and drains to prevent runoff of silt or sediment from the site.
      3) Comply with Section 015713.

E. PROJECT IDENTIFICATION AND SIGNAGE

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

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

F. FIELD OFFICES
1. TEMPORARY FACILITIES
   Provide and pay for temporary (new, or used if in serviceable condition) facilities and controls needed for the Work, if called out on the Drawings, which may include, but are not necessarily limited to:
   a) Temporary utilities such as heat, water, electricity, and telephone;
   b) Field office for the Contractor's personnel (required if shown on the Drawings; otherwise at the Contractor's option and expense).

      1) Conform with requirements for Engineer's Field Office Type B, as defined in Article 646.04 of the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation.
   c) Sanitary facilities;
   d) Enclosures such as tarpaulins, barricades, and canopies;
   e) Temporary fencing of the construction site;
   f) Project sign.
2. Comply with Federal, State, and local codes and regulations.
   a) Maintain temporary facilities and controls in proper and safe condition throughout the progress of the work. The Contractor is responsible for conformance with all safety codes and regulations for all Work under his jurisdiction, including that of Sub-Contractors.
3. Locate temporary facilities as shown on the Drawings, or as approved by the Owner's Representative if not shown on the Drawings.

SECTION 015713 – EROSION & SEDIMENT CONTROL

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

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

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

C. QUALITY ASSURANCE
1. Materials and methods of construction shall comply with the following standards:
   a) Illinois Department of Transportation
   b) City of Peoria

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

1) Fabric shall comply with the following physical properties:

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

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

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

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

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

      or

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

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

E. EXECUTION
1. Site Erosion And Sediment Control
   a) Contractor is responsible for fulfilling terms of City of Peoria Erosion Control Permit and all applicable portions of the “Erosion, Sediment, and Stormwater Control Ordinance of the City of Peoria”.
   b) Install control devices as shown on erosion control plan.
   c) Install additional measures as needed to control erosion and sedimentation on the site.
2. Silt Fencing Installation
   a) Install silt fencing according to details in plans. The silt fence shall be entrenched to a minimum depth of 8”.
   b) The silt fence shall be installed on the contour, with the ends extending up-slope.
   c) Install silt fencing before commencing site clearing work.
3. Ditch Check Installation
   a) Install ditch checks according to details in plans.
   b) Install ditch checks at locations shown on plans.
   c) Install additional ditch checks as needed to control erosion within drainage swales as site conditions and weather dictate.

d) Install ditch checks immediately after swales are graded.

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

SECTION 016000 – PRODUCT REQUIREMENTS

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

B. STORAGE AND PROTECTION
   1. GENERAL
      a) Contractor shall provide and maintain:
         1) Storage for materials and equipment to be installed in Project.
         2) Protection and security for stored materials and equipment, on and off site.
         3) Protection of existing on-site elements to remain.
         4) Protection of adjacent properties improvements
   2. METHODS
      a) Store off grade and cover with impervious material all moisture or water vulnerable materials.
      b) Store finished products and equipment in an enclosed building, on or off site.
      c) Maintain integrity of shipping cartons until ready for installation.
      d) Provide separate storage for combustible and non-combustible products.

e) Follow storage recommendations of product and equipment manufacturers.
f) Other methods shall be subject to Owner's prior written approval.

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

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

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

c) Replacement cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
d) Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.
aa) Rejection of Warranties: The Owner reserves the rights to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
e) The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.
f) For specific warranty requirements related to landscape materials, refer to the applicable Section.
3. SUBMITTALS
a) Submit written warranties to the Owner's Representative prior to the date certified for Substantial Completion. If the Owner's Representative's Certificate of Substantial Completion designates a commencement date for warranties other that the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner's Representative.
1) When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner's Representative within fifteen days of completion of that designated portion of the Work.
b) Form of Submittal: At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, Subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
c) Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.

d) Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.

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

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

SECTION 017300 – EXECUTION

A. GEOTECHNICAL DATA

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

B. FIELD ENGINEERING

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

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

C. COORDINATION OF TRADES AND SUB-CONTRACTORS

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

D. REFERENCE AND CONTROL POINTS PROVIDED BY OWNER

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

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

E. REFERENCE AND CONTROL POINTS PROVIDED BY THE CONTRACTOR

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

SECTION 017329 - CUTTING AND PATCHING

A. CHASES AND OPENINGS

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

SECTION 017419 – CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

A. PERIODIC CLEANING

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

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

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

SECTION 017700 - PROJECT CLOSEOUT

A. GENERAL

Work includes:
1. Substantial Completion.
2. Final Completion
3. Closeout submittals.
4. Instruction

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

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

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

3) Separate releases or Waivers of Lien for sub-contractors, suppliers and others with lien rights against the Owner, together with a list of those parties.

i) List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

SECTION 017823 - OPERATING/MAINTENANCE MANUALS & INSTRUCTION

A. GENERAL

1. Compile operating/product data and related information appropriate for Owner's maintenance and operation of products and equipment provided under the Contract.
2. Instruct Owner's personnel in operation and maintenance of products, equipment and systems.

B. OPERATIONS/MAINTENANCE MANUALS - FORM OF SUBMITTAL

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

      1) Contractor.
      2) Subcontractor.
      3) Maintenance contractor, as appropriate.
      4) Local supply source for parts and replacement.

   b) Identify area of responsibility of each contractor.

C. MANUAL FOR MATERIALS AND FINISHES

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

D. INSTRUCTION

1. Instruct the Owner's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work including, but not limited to;
   a) Mechanical
   b) Water supply
   c) Electrical service/distribution and lighting
   d) Other items or systems as required in individual sections of the Technical Specifications
2. Instructions for the Owner's Personnel: For instruction of the Owner's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the equipment or system involved.

SECTION 017839 - PROJECT RECORD DOCUMENTS (AS-BUILTS)

A. DOCUMENTS REQUIRED AT SITE

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

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

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

END OF GENERAL REQUIREMENTS

SECTION 01 43 33.75

ROOFING MANUFACTURER'S FIELD SERVICES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Conditions of the Contract and Division 07 Specification Sections apply to this Section.

1.2 SUMMARY

A. Section includes Manufacturer's field services for roofing assemblies.

B. Related Work Specified Elsewhere:
1. Roofing Material: Section 07 52 00- SBS Modified Bituminous Membrane Roofing.

1.3 REFERENCES

A. International building Code 2012, 2012 International Energy Conservation Codewith local amendments..

B. American Society of Civil Engineers (ASCE): ASCE 7, Minimum Design Loads for Buildings and Other Structures.

C. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.

D. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI): ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal.

1.4 SUBMITTALS FOR REVIEW

A. Product Data: Provide manufacturer's technical product data for each type of roofing product specified. Include data substantiating that materials comply with specified requirements.

B. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

C. Roofing System Manufacturer's Evaluation: Provide a comprehensive written assessment comparing available roofing solutions with validation of why the roofing system selection for the specific project is suitable and appropriate.

D. Roofing System Manufacturer's Report Form: Provide a copy of the report form utilized by the roofing system manufacturer for progress inspections to monitor installation and quality.

E. Online Reporting Capabilities: Provide a sample of the roofing system manufacturer's online roof inspection report as well as information about how long inspection reports are available to owner.

1.5 SUBMITTALS FOR INFORMATION

A. Manufacturer's Installation Instructions: Submit installation instructions and recommendations indicating special precautions required for installing the membrane.

B. Manufacturer's Certificate: Certify that roof system furnished is approved by Factory Mutual Global, Underwriters Laboratories, Warnock Hersey or approved third party testing facility in accordance with ASTM E108, Class [A] for external fire and meets local or nationally recognized building codes.

C. Manufacturer's Certificate: Certify that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.

D. Manufacturer's Certificate: Submit a certified copy of the roofing manufacturer's ISO 9001 compliance certificate.

E. Written certification from the roofing system manufacturer certifying the applicator is currently authorized for the installation of the specified roof system.

F. Design Loads: Submit copy of manufacturer's minimum design load calculations according to ASCE 7, Method 2 for Components and Cladding. In no case shall the design loads be taken to be less than those detailed in Design and Performance Criteria article of this specification.

G. Qualification data for firms and individuals identified in Quality Assurance Article below.

H. Test Reports: Submit ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal Products.

1.6 CONTRACT CLOSEOUT SUBMITTALS

A. Project Warranty: Provide specified warranty for the Project, executed by the authorized agent of the Manufacturer.

B. Roofing Maintenance Instructions: Provide a roof care and maintenance manual of manufacturer's recommendations for maintenance of installed roofing systems.

C. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

D. Inspection Logs: Copy of inspection reports as performed by the manufacturer shall be submitted at project closeout and include photographic documentation of installation progress, weather conditions, and personnel on the project at the time of every inspection.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this Section with not less than 12 years documented experience.

B. Installer Qualifications: Company specializing in specified roofing installation with not less than 5 years experience and authorized by roofing system manufacturer as qualified to install manufacturer's roofing materials.

C. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress. Maintain proper supervision of workmen.

D. Maintain a copy of the roof plans, details, and specifications in the possession of the Supervisor/Foreman and on the roof at all times.

E. Source Limitations: Obtain all primary components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer.
   1. The manufacturer providing the roofing system warranty must verify that they manufacture a minimum of 75% of the products utilized in the roofing system of this project. Products that are private labeled shall not be considered as manufactured by the roofing system supplier.
   2. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.

F. Source Quality Control: Manufacturer shall have in place a documented, standardized quality control program such as ISO-9001.

1.8 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Roofing Conference: Convene a pre-roofing conference approximately two (2) weeks before scheduled commencement of roofing system installation and associated work.

B. Require attendance of installer of each component of associated work: installers of deck or substrate construction to receive roofing work, installer of perimeter mineral wool and spray-polyurethane insulation, architect and/or engineer, owner, roofing system manufacturer's full time employee, and other representatives directly

concerned with performance of the Work, including (where applicable) owner's insurers, testing agencies and governing authorities. Objectives of conference include:

1. Review foreseeable methods and procedures related to roofing work, including set up and mobilization areas for stored material and work area.
2. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work performed by others.
3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
4. Review roofing system requirements (drawings, specifications and other contract documents).
5. Review required submittals both completed and yet to be completed.
6. Review and finalize construction schedule related to roofing work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
7. Review required inspection, testing, certifying and material usage accounting procedures.
8. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing (if not a mandatory requirement).
9. Record discussion of conference including decisions and agreements (or disagreements) reached and furnish a copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

C. The Owner's Representative will designate one of the conference participants to record the proceedings and promptly distribute them to the participants for record.

D. The intent of the conference is to resolve issues affecting the installation and performance of roofing work. Do not proceed with roofing work until such issues are resolved to the satisfaction of the owner. This shall not be construed as interference with the progress of Work on the part of the owner.

1.9 MANUFACTURER'S INSPECTIONS

A. When the Project is in progress, a full-time employee of the roofing system manufacturer must provide the following:

1. Report progress and quality of the work as observed. Progress reports must be published to an online system as referenced in Section 1.4.
2. Provide periodic (3 days per week) roofing installation inspections: Inspections must include; photographic documentation of work in-progress and written statements of compliance with details/shop drawings.
3. Report to the owner, architect and/or engineer in writing any failure or refusal of the contractor to correct unacceptable practices called to the contractor's attention.
4. Confirm after project completion that the manufacturer has observed no application procedures in conflict with the specifications other than those that may have been previously reported and corrected.

1.10 WARRANTY

A. Upon completion of installation, and acceptance by the owner and architect and/or engineer, the manufacturer will supply to the owner the specified warranty.

B. Installer will submit a five (5) year workmanship warranty to the membrane manufacturer with a copy directly to the owner.

C. The roofing system manufacturer must have been in continuous business operation for a period of time at least as long as the length of the roof system warranty provided for this project.

1.11 DESIGN AND PERFORMANCE CRITERIA

A. Uniform Wind Uplift Load Capacity (required for each roof section)
   1. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria.
      Attachment shall be installed exactly as given in Part 3.
      a. Design Code: ASCE 7-05, Method 2 for Components and Cladding.

B. See Attached for Wind Up Lift Requirements.

C. Drainage Calculations: Drainage shall be calculated for all roof areas to determine suitability of all plumbing and gutter accommodations are sized appropriately to manage storm water runoff.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

1.1 EXECUTION, GENERAL

A. Comply with requirements of related Division 07 Section.

1.2 GENERAL INSTALLATION REQUIREMENTS

A. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing the roof system.

B. Insurance/Code Compliance: Where required by code, install and test the roofing system to comply with governing regulation and specified insurance requirements.

1.3 FIELD QUALITY CONTROL

A. Roofing Manufacturer Representative shall perform field inspection as specified in Article titled: MANUFACTURER'S INSPECTIONS above. Inspections must include photographic documentation of installation progress, weather conditions, and personnel on the project at the time of inspection.

B. Correct defects or irregularities discovered during field inspection. Issues deemed defective must be re-inspected and determined suitable by the roofing manufacturer.

C. Require attendance of roofing materials manufacturers' representatives at site during installation of the roofing system. A copy of the specification shall also be on site at all times.

D. Frequent progress meetings shall be conducted during the performance of roof system installation and must be attended by the owner, architect or engineer, roofing system manufacturer's full time employee, and other representatives directly concerned with performance of the work.

1.4 FINAL INSPECTION

A. At the completion of the roofing installation and associated work, meet with contractor, architect or engineer, installer, installer of associated work, owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.

B. Walk roof surface areas of the building, inspect perimeter building edges as well as flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.

C. Notify the architect and/or engineer upon completion of corrections.

D. The roofing system manufacturer reserves the right to request a thermographic scan of the roof during final inspection to determine if any damp or wet materials have been installed. The thermographic scan shall be provided by the roofing contractor.

E. If core cuts verify the presence of damp or wet materials, the roofing contractor shall be required to replace the damaged areas at his own expense.

F. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.

G. Immediately correct roof leakage during construction. If the contractor does not respond within twenty four (24) hours, the owner may exercise right to correct the Work under the terms of the Conditions of the Contract.

END OF SECTION

SECTION 02 41 19

SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

B. Related Requirements:

1. Division 01 Section "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection and for dust control. Indicate proposed locations and construction of barriers.

B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

1.6 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area and the basement of the building. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1. Before selective demolition, Owner will remove the following items:

a. Furniture that is not attached to the building.

C. Notify Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Lead Based Paint: It is likely that lead based paint is present in the building and on structures and building items to be selectively demolished. It is not anticipated that lead based paint will need to be removed from the existing structures and building items to remain. It is not anticipated that lead based paint will need to be removed from the structures and building items to be selectively demolished and removed prior to disposal.

1. Contractor shall follow all regulations established by the Occupational Safety and Health Administration (OSHA) and the Illinois Environmental Protection Agency (IEPA) for all construction work regarding the presence of lead based paint.

2. Contractor shall follow all regulations established by the Occupational Safety and Health Administration (OSHA) and the Illinois Environmental Protection Agency (IEPA) regarding the disposal of structures and building items with lead based paint that are to be selectively demolished and removed.
3. Contractor shall follow all regulations established by the Occupational Safety and Health Administration (OSHA) and the Illinois Environmental Protection Agency (IEPA) regarding the disposal of any demolition debris that may contain lead based paint.

F. Storage or sale of removed items or materials on-site is not permitted.

G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Owner.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

    a. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    b. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect the floor covering, furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
4. Maintain adequate ventilation when using cutting torches.
5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
6. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
8. Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."

B. Reuse of Building Elements:

1. Do not demolish building elements beyond what is indicated on Drawings and Specifications without Owner's approval.
2. Take all precautions necessary to protect the building and the building occupants during the construction period.
3. Maintain the existing building in a weathertight condition throughout the construction period. Immediately repair damage caused by construction operations.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Take all precautions necessary to protect building items to be removed and re-installed with new work during the construction period.
3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.

B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

C. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight. Contractor shall furnish and install interior tarping protection during the removal and replacement of roofing sections so that the building interior remains watertight and weathertight. See Division 07 Section "SBS Modified Bituminous Roofing" for new roofing requirements.

1. Remove existing roof membrane, flashings, trim, copings, and roof accessories.
2. Remove existing roof deck and roofing system down to purlins.
3. Remove other miscellaneous items as indicated on the Drawings.
4. Contractor shall remove all tarping and clean beneath areas upon completion of the work above.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.8 SELECTIVE DEMOLITION SCHEDULE

A. Existing Items and Construction to Be Removed: As indicated on the Drawings.

B. Existing Items to Be Removed and Salvaged: None anticipated.

C. Existing Items to Be Removed and Reinstalled: As indicated on the Drawings.

D. Existing Items to Remain: As indicated on the Drawings.

END OF SECTION 024119

SECTION 04 01 20

MAINTENANCE OF UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes maintenance of unit masonry consisting of brick clay masonry restoration and cleaning as follows:

1. Repairing unit masonry, including replacing units.
2. Repointing joints.
3. Cleaning exposed unit masonry surfaces.

B. Related Sections:

1. Division 07 Section "Sheet Metal Flashing and Trim" for metal flashing installed in or on restored clay masonry.
2. Division 04 Section "Unit Masonry" for new clay masonry construction.

1.3 UNIT PRICES

A. Certain work of this Section is affected by unit prices specified in Division 01 Section "Unit Prices."

1. Unit prices apply to authorized work covered by estimated quantities.
2. Unit prices apply to additions to and deletions from Work as authorized by Change Orders.

1.4 DEFINITIONS

A. Very Low-Pressure Spray: Under 100 psi (690 kPa).

B. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).

C. Medium-Pressure Spray: 400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).

D. High-Pressure Spray: 800 to 1200 psi (5510 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).

E. Saturation Coefficient: Ratio of the weight of water absorbed during immersion in cold water to weight absorbed during immersion in boiling water; used as an indication of resistance of masonry units to freezing and thawing.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.

B. Samples for Verification: For the following:

1. Each type of masonry unit to be used for replacing existing units. Include sets of Samples as necessary to show the full range of shape, color, and texture to be expected.

    a. For each brick type, provide straps or panels containing at least four bricks. Include multiple straps for brick with a wide range.

2. Each type of sand used for pointing mortar; minimum 1 lb (0.5 kg) of each in plastic screw-top jars.

    a. For blended sands, provide Samples of each component and blend.
    b. Identify sources, both supplier and quarry, of each type of sand.

3. Each type of masonry patching compound in the form of briquettes, at least 3 inches (75 mm) long by 1-1/2 inches (38 mm) wide. Document each Sample with manufacturer and stock number or other information necessary to order additional material.

C. Cleaning Program. Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations. See notes regarding masonry cleaning requirements on Drawings.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons.

B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.

C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

D. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.

E. Store lime putty covered with water in sealed containers.

F. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit masonry restoration and cleaning work to be performed according to manufacturers' written instructions and specified requirements.

B. Repair masonry units and repoint mortar joints only when air temperature is between 40 and 90 deg F (4 and 32 deg C) and is predicted to remain so for at least 7 days after completion of the Work unless otherwise indicated.

C. Hot-Weather Requirements: Protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90 deg F (32 deg C) and above unless otherwise indicated.

D. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.

E. Clean masonry surfaces only when air temperature is 40 deg F (4 deg C) and above and is predicted to remain so for at least 7 days after completion of cleaning.

1.8 COORDINATION

A. Coordinate masonry restoration and cleaning with public circulation patterns at Project site. Some work is near public circulation patterns. Public circulation patterns cannot be closed off entirely, and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

1.9 SEQUENCING AND SCHEDULING

A. Order replacement materials at earliest possible date to avoid delaying completion of the Work.

B. Perform masonry restoration work in the following sequence:

1. Rake out mortar from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
2. Repair masonry, including replacing existing masonry with new masonry materials.
3. Rake out mortar from joints to be repointed.
4. Point mortar joints.
5. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
6. Clean masonry surfaces.

C. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units to comply with "Masonry Unit Patching" Article. Patch holes in mortar joints to comply with "Repointing Masonry" Article.

PART 2 - PRODUCTS

2.1 MASONRY MATERIALS

A. Building Brick: Provide building brick complying with ASTM C 62, of same vertical dimension as face brick, for masonry work concealed from view.

1. Grade SW, MW, or NW for concealed backup.
2. Minimum compressive strength of 1500 psi.

2.2 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or Type II, white, gray or both where required for color matching of exposed mortar.

B. Hydrated Lime: ASTM C 207, Type S.

C. Factory-Prepared Lime Putty: ASTM C 1489.

D. Mortar Sand: ASTM C 144 unless otherwise indicated.

1. Color: Provide natural sand or other sound stone of color necessary to produce required mortar color to match existing mortar.
2. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.

E. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.

F. Water: Potable.

2.3 MANUFACTURED REPAIR MATERIALS

A. Masonry Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching masonry.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Cathedral Stone Products, Inc.; Jahn M100 Terra Cotta and Brick Repair Mortar.
b. Conproco Corporation; Mimic or Matrix.
c. Edison Coatings, Inc.; Custom System 45.

2. Use formulation that is vapor- and water permeable (equal to or more than the masonry unit), exhibits low shrinkage, has lower modulus of elasticity than the masonry units being repaired, and develops high bond strength to all types of masonry.
3. Use formulation having working qualities and retardation control to permit forming and sculpturing where necessary.

4. Formulate patching compound used for patching brick in colors and textures to match each masonry unit being patched. Provide a sufficient number of colors to enable matching the color, texture, and variation of each unit.

2.4 CLEANING MATERIALS

A. Water: Potable.

B. Cleaner: As specified on Architectural Drawings.

2.5 ACCESSORY MATERIALS

A. Masonry Repair Anchors, Rod/Screen Tube Type: Stainless-steel screen tube with or without Type 304 stainless-steel rod, adhesive installed by injection with manufacturer's standard epoxy adhesive, complete with other devices required for installation.

B. Masking Tape: Nonstaining, nonabsorbent material, compatible with pointing mortar, joint primers, sealants, and surfaces adjacent to joints; that will easily come off entirely, including adhesive.

C. Miscellaneous Products: Select materials and methods of use based on the following:

1. Previous effectiveness in performing the work involved.
2. Little possibility of damaging exposed surfaces.
3. Consistency of each application.
4. Uniformity of the resulting overall appearance.
5. Do not use products or tools that could do the following:

    a. Remove, alter, or in any way harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
    b. Leave a residue on surfaces.

2.6 MORTAR MIXES

A. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.

1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.

B. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Owner's approval.

1. Mortar Pigments: Where mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.

C. Do not use admixtures in mortar unless otherwise indicated.

D. Mortar Proportions: Mix mortar materials in the following proportions:

1. Pointing Mortar for Brick: 1 part portland cement, 2 parts lime, and 6 parts sand.

a. Add mortar pigments to produce mortar colors required.

2. Rebuilding (Setting) Mortar: Same as pointing mortar except mortar pigments are not required.

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.

1. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.

B. Prevent mortar from staining face of surrounding masonry and other surfaces.

1. Cover sills, ledges, and projections to protect from mortar droppings.
2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
3. Immediately remove mortar in contact with exposed masonry and other surfaces.
4. Clean mortar splatters from scaffolding at end of each day.

3.2 UNUSED ANCHOR REMOVAL

A. Remove masonry anchors, brackets, wood nailers/members, and other extraneous items no longer in use unless identified as historically significant or indicated to remain.

1. Remove items carefully to avoid spalling or cracking masonry.
2. Where directed, if an item cannot be removed without damaging surrounding masonry, do the following:

a. Cut or grind off item approximately 3/4 inch (20 mm) beneath surface and core drill a recess of same depth in surrounding masonry as close around item as practical.
b. Immediately paint exposed end of item with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended dry film thickness per coat. Keep paint off sides of recess.

3. Patch the hole where each item was removed unless directed to remove and replace the masonry unit.

3.3 BRICK REMOVAL AND REPLACEMENT

A. After removal of the existing roof structure, remove bricks that are loose, out of plumb, damaged, spalled, or deteriorated, or are to be reused. Carefully demolish or remove entire units from joint to joint, without damaging surrounding masonry, in a manner that permits replacement with full-size units.

1. When removing single bricks, remove material from center of brick and work toward outside edges.

B. Support and protect remaining masonry that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.

C. Notify Owner of unforeseen detrimental conditions including voids, cracks, bulges, and loose units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.

D. Remove in an undamaged condition as many whole bricks as possible.

1. Remove mortar, loose particles, and soil from brick by cleaning with hand chisels, brushes, and water.
2. Remove sealants by cutting close to brick with utility knife and cleaning with solvents.
3. Store brick for reuse. Store off ground, on skids, and protected from weather.
4. Deliver cleaned brick not required for reuse to Owner unless otherwise indicated.

E. Clean bricks surrounding removal areas by removing mortar, dust, and loose particles in preparation for replacement.

F. Replace removed damaged brick with other removed brick in good quality, where possible, or with new brick matching existing brick, including size. Do not use broken units unless they can be cut to usable size.

G. Install replacement brick into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.

1. Maintain joint width for replacement units to match existing joints.

H. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet both replacement and surrounding bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 g/30 sq. in. per min. (30 g/194 sq. cm per min.). Use wetting methods that ensure that units are nearly saturated but surface is dry when laid.

1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
2. When mortar is sufficiently hard to support units, remove shims and other devices interfering with pointing of joints.

3.4 MASONRY UNIT PATCHING

A. Patch the following masonry units unless another type of replacement or repair is indicated:

1. Units with holes.
2. Units with chipped edges or corners.
3. Units with small areas of deep deterioration.

B. Patching Bricks:

1. Remove loose material from masonry surface. Carefully remove additional material so patch will not have feathered edges but will have square or slightly undercut edges on area to be patched and will be at least 1/4 inch (6 mm) thick, but not less than recommended by patching compound manufacturer.
2. Mask adjacent mortar joint or rake out for repointing if patch will extend to edge of masonry unit.
3. Mix patching compound in individual batches to match each unit being patched. Combine one or more colors of patching compound, as needed, to produce exact match.
4. Rinse surface to be patched and leave damp, but without standing water.
5. Brush-coat surfaces with slurry coat of patching compound according to manufacturer's written instructions.
6. Place patching compound in layers as recommended by patching compound manufacturer, but not less than 1/4 inch (6 mm) or more than 2 inches (50 mm) thick. Roughen surface of each layer to provide a key for next layer.
7. Trowel, scrape, or carve surface of patch to match texture and surrounding surface plane or contour of the masonry unit. Shape and finish surface before or after curing, as determined by testing, to best match existing masonry unit.
8. Keep each layer damp for 72 hours or until patching compound has set.

3.5 CLEANING MASONRY, GENERAL

A. Proceed with cleaning in an orderly manner. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.

B. Use only those cleaning methods indicated for each masonry material and location. Cleaning shall be performed in strict accordance with manufacturerôs instructions, and in a manner that does not damage the existing masonry and stone work.

C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry and stone surfaces.

D. Water Application Methods:

1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.

2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.

E. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.6 CLEANING BRICKWORK

A. Cold-Water Wash: Use cold water applied by low-pressure spray.

B. Hot-Water Wash: Use hot water applied by low-pressure spray.

C. Cleaning Compound: In strict accordance with manufacturerôs instructions, and in a manner that does not damage the existing masonry and stone work.

3.7 REPOINTING MASONRY

A. Rake out and repoint joints to the following extent:

1. Joints where mortar is missing or where they contain holes.
2. Cracked joints where cracks can be penetrated at least 1/4 inch (6 mm) by a knife blade 0.027 inch (0.7 mm) thick.
3. Cracked joints where cracks are 1/8 inch (3 mm) or more in width and of any depth.
4. Joints where they sound hollow when tapped by metal object.
5. Joints where they are worn back 1/4 inch (6 mm) or more from surface.
6. Joints where they are deteriorated to point that mortar can be easily removed by hand, without tools.
7. Joints where they have been filled with substances other than mortar.

B. Do not rake out and repoint joints where not required.

C. Rake out joints as follows:

1. Remove mortar from joints to depth of 2 to 2-1/2 times joint width, but not less than 3/4 inch (20 mm) or not less than that required to expose sound, unweathered mortar.
2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Owner.

    a. Cut out mortar by hand with chisel and resilient mallet. Do not use power-operated grinders without Owner's written approval.

D. Notify Owner of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.

E. Pointing with Mortar:

1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch (9 mm) until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch (9 mm). Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.
4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours including weekends and holidays.

    a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
    b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.

6. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.

F. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

END OF SECTION 040120

SECTION 04 20 00

UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Building (common) brick.
2. Mortar and grout.
3. Masonry joint reinforcement.
4. Ties and anchors.
5. Embedded flashing.
6. Miscellaneous masonry accessories.

B. Related Sections:

1. Division 07 Section "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.4 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

B. Do not apply uniform loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.

E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

2.2 BRICK

A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:

1. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.

2. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
3. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

B. Building (Common) Brick: ASTM C 62, Grade SW.

1. Application: Use where brick is indicated for concealed or exposed locations.

2.3 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Masonry Cement: ASTM C 91.

E. Mortar Cement: ASTM C 1329.

F. Colored Cement Product: Packaged blend made from portland cement and hydrated lime, masonry cement or mortar cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.

1. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.

G. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.
4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

H. Aggregate for Grout: ASTM C 404.

I. Water: Potable.

2.4 REINFORCEMENT

A. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

1. Exterior Walls: Hot-dip galvanized, carbon or Stainless steel.

2. Wire Size for Side Rods: 0.148-inch (3.77-mm) diameter.
3. Wire Size for Cross Rods: 0.148-inch (3.77-mm) diameter.
4. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches (407 mm) o.c.

B. Masonry Joint Reinforcement for Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.

2.5 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
2. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304.
3. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
4. Stainless-Steel Sheet: ASTM A 666, Type 304.
5. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
6. Stainless-Steel Bars: ASTM A 276 or ASTM a 666, Type 304.

B. Rigid Anchors: Fabricate from steel bars 1-1/2 inches (38 mm) wide by 1/4 inch (6.35 mm) thick by 24 inches (610 mm) long, with ends turned up 2 inches (51 mm) or with cross pins unless otherwise indicated.

1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

2.6 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with Division 07 Section "Sheet Metal Flashing and Trim".

B. Flexible Flashing: Provide metal flashing complying with Division 07 Section "Copper Roofing Trim & Flashings".

C. Application: See requirements in Division 07 Sections "Sheet Metal Flashing and Trim" and "Copper Roofing Trim & Flashings".

D. Solder and Sealants for Sheet Metal Flashings: As specified in Division 07 Section "Sheet Metal Flashing and Trim."

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.7 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane or PVC.

B. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

C. Weep/Vent Products: Use one of the following unless otherwise indicated:

1. Wicking Material: Absorbent rope, made from cotton or UV-resistant synthetic fiber, 1/4 to 3/8 inch (6 to 10 mm) in diameter, in length required to produce 2-inch (50-mm) exposure on exterior. Use only for weeps.
2. Round Plastic Weep/Vent Tubing: Medium-density polyethylene, 3/8-inch (9-mm) OD by 4 inches (100 mm) long.
3. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, 3/8 by 1-1/2 by 3-1/2 inches (9 by 38 by 89 mm) long.
4. Vinyl Weep Hole/Vent: One-piece, offset, T-shaped units made from flexible PVC, designed to fit into a head joint and consisting of a louvered vertical leg, flexible wings to seal against ends of masonry units, and a top flap to keep mortar out of the head joint; in color selected by Owner.

2.8 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use portland cement-lime, masonry cement or mortar cement mortar unless otherwise indicated.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Property Specification. Provide the following types of mortar for applications stated unless another type is indicated.

1. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; and for other applications where another type is not indicated, use Type N.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi (14 MPa).

3. Provide grout with a slump of 8 to 11 inches (203 to 279 mm) as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Thickness: Build single-wythe walls to actual widths of masonry units, using units of widths indicated.

B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.

1. Mix units from several pallets or cubes as they are placed.

D. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.

3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch (1.5 mm) except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
3. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm).
4. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch (1.5 mm) from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners.

C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2 inches (50 mm). Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

F. Fill space between steel framing and masonry solidly with mortar unless otherwise indicated.

3.5 MORTAR BEDDING AND JOINTING

A. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

B. Set the existing stone or cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.

1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
2. Wet joint surfaces thoroughly before applying mortar.

C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.6 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).

1. Space reinforcement not more than 8 inches (203 mm) o.c. in parapet walls.

B. Provide continuity at corners by using prefabricated L-shaped units.

3.7 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

A. Anchor masonry to structural steel and concrete where masonry abuts or faces structural steel or concrete to comply with the following:

1. Anchor masonry with anchors embedded in masonry joints and attached to structure.
2. Space anchors as indicated, but not more than 24 inches (610 mm) o.c. horizontally.

3.8 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
4. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.9 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 05 12 00

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Structural steel.
2. Grout.

B. Related Sections:
1. Division 05 Section "Metal Fabrications" for miscellaneous steel fabrications and other metal items not defined as structural steel.

1.3 DEFINITIONS

A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.4 SUBMITTALS

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

B. Shop Drawings: Show fabrication of structural-steel components.

1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
2. Include embedment drawings.
3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.

C. Welding certificates.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD.

B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

C. Comply with applicable provisions of the following specifications and documents:

1. AISC 303.
2. AISC 360.
3. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.

1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.

1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
2. Clean and relubricate bolts and nuts that become dry or rusty before use.
3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

1.7 COORDINATION

A. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

A. W-Shapes: ASTM A 992/A 992M or ASTM A 572/A 572M, Grade 50 (345).

B. Channels, Angles: ASTM A 36/A 36M.

C. Plate and Bar: ASTM A 36/A 36M.

D. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

A. High-Strength Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C, (ASTM A 563M, Class 8S) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M), Type 1, hardened carbon-steel washers; all with plain finish.

B. Zinc-Coated High-Strength Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade DH (ASTM A 563M, Class 10S) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M), Type 1, hardened carbon-steel washers.

1. Finish: Hot-dip or mechanically deposited zinc coating.

C. Threaded Rods for Adhesive Anchors: AISI Type 304 Stainless Steel conforming to ASTM F593.

1. Nuts: AISI Type 304 stainless steel conforming to ASTM F594.
2. Washers: AISI Type 304 stainless steel conforming to ASTM A240 and AISI B18.22, Type A, plain.
3. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable approved product:

2.3 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.4 FABRICATION

A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.

1. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
2. Mark and match-mark materials for field assembly.

B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.

1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.

C. Bolt Holes: Cut, drill, mechanically thermal cut, or punch standard bolt holes perpendicular to metal surfaces.

D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

E. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 1, "Solvent Cleaning."

F. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.

1. Cut, drill, or punch holes perpendicular to steel surfaces.
2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.5 SHOP CONNECTIONS

A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

2.6 GALVANIZING

A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.

1. Fill vent and drain holes that will be exposed in the finished Work unless they will function as weep holes, by plugging with zinc solder and filing off smooth.
2. Galvanize structural steel located in the roof overhang, above the roof deck, and in exterior walls.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION

A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.

B. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.

E. Splice members only where indicated.

F. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

3.4 FIELD CONNECTIONS

A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

3.5 FIELD QUALITY CONTROL

A. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.

B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.

END OF SECTION 051200

SECTION 05 31 00

STEEL DECKING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Roof deck and accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of deck, accessory, and product indicated.

B. Shop Drawings:

1. Include layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.

1.4 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Product Certificates: For each type of steel deck and mechanical fastener.

C. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."

B. FM Global Listing: Provide steel roof deck evaluated by FM Global and listed in its "Approval Guide, Building Materials" for Class 1 fire rating and Class 1-90 windstorm ratings.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.

B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."

2.2 ROOF DECK

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. ASC Profiles, Inc.; a Blue Scope Steel company.
2. Canam United States; Canam Group Inc.
3. Consolidated Systems, Inc.; Metal Dek Group.
4. DACS, Inc.
5. Epic Metals Corporation.
6. Marlyn Steel Decks, Inc.
7. New Millennium Building Systems, LLC.
8. Nucor Corp.; Vulcraft Group.
9. Roof Deck, Inc.
10. Valley Joist; Subsidiary of EBSCO Industries, Inc.
11. Verco Manufacturing Co.
12. Wheeling Corrugating Company; Div. of Wheeling-Pittsburgh Steel Corporation.

B. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 31, and with the following:

1. Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33, G60 zinc coating.
2. Deck Profile: As indicated.
3. Profile Depth: As indicated.
4. Design Uncoated-Steel Thickness: As indicated.
5. Span Condition: Four spans continuous with the cantilevered overhang, except at northwest exterior wall.
6. Side Laps: Overlapped or interlocking seam at Contractor's option.

2.3 ACCESSORIES

A. General: Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.

B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws.

C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 (4.8-mm) minimum diameter.

D. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.

E. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi (230 MPa), not less than 0.0359-inch (0.91-mm) design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.

F. Column Closures, End Closures, Z-Closures, and Cover Plates: Steel sheet, of same material, finish, and thickness as deck unless otherwise indicated.

G. Galvanizing Repair Paint: ASTM A 780.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 31, manufacturer's written instructions, and requirements in this Section.

B. Install temporary shoring before placing deck panels if required to meet deflection limitations.

C. Locate deck bundles to prevent overloading of supporting members.

D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.

E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.

F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.

G. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

H. Mechanical fasteners may be used in lieu of welding to fasten deck. Locate mechanical fasteners and install according to deck manufacturer's written instructions.

3.3 ROOF-DECK INSTALLATION

A. Fasten roof-deck panels to new steel supporting members by arc spot (puddle) welds of the surface diameter indicated or arc seam welds with an equal perimeter that is not less than 1-1/2 inches (38 mm) long, and as follows:

1. Weld Diameter: 5/8 inch (16 mm).
2. Weld Spacing: Weld edge and interior ribs of deck units with a minimum of two welds per deck unit at each support. Space welds 8 inches (203 mm) apart in the field of roof and 8 inches (203 mm) apart in roof corners and perimeter, based on roof-area definitions in FMG Loss Prevention Data Sheet 1-28.

B. Fasten roof deck panels to existing steel supporting members using mechanical fasteners.

1. Provide fasteners for adequate diaphragm shear strength and to resist the uplift pressures shown on the Drawings.
2. Fastener Spacing: Space fasteners 8 inches (203 mm) apart at each support and as indicated on the Drawings.
3. Install according to manufacturerôs written instructions.

C. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels between supports, at intervals not exceeding the lesser of 1/2 of the span or 12 inches (305 mm), and as follows:

1. Mechanically fasten with self-drilling, No. 10 (4.8-mm-) diameter or larger, carbon-steel screws.

D. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches (38 mm), with end joints as follows:

1. End Joints: Lapped 2 inches (51 mm) minimum.

E. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. Weld or mechanically fasten to substrate to provide a complete deck installation.

1. Weld cover plates at changes in direction of roof-deck panels unless otherwise indicated.

F. Flexible Closure Strips: Install flexible closure strips over partitions, walls, and where indicated. Install with adhesive according to manufacturer's written instructions to ensure complete closure.

3.4 FIELD QUALITY CONTROL

A. Welding: Inspect field welds in accordance with AWS D1.1.

3.5 PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.

END OF SECTION 053100

SECTION 05 50 00

METAL FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Steel framing and supports for mechanical and electrical equipment.
2. Steel framing and supports for applications where framing and supports are not specified in other Sections.
3. Loose bearing and leveling plates for applications where they are not specified in other Sections.

B. Related Sections:

1. Division 05 Section "Structural Steel Framing."

1.3 SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

B. Welding certificates.

1.4 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

1.6 COORDINATION

A. 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.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Stainless-Steel Bars and Shapes: Type 304 or Type 316.

2.3 FASTENERS

A. Post-Installed Anchors: Chemical anchors.

1. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 1 (A1) or Group 2 (A4) stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

2.4 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Nonshrink, Metallic Grout: Factory-packaged, ferrous-aggregate grout complying with ASTM C 1107, specifically recommended by manufacturer for heavy-duty loading applications.

2.5 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

C. Galvanize miscellaneous framing and supports where indicated and where located on the exterior of the building.

D. Prime miscellaneous framing and supports with zinc-rich primer where indicated.

2.7 LOOSE BEARING AND LEVELING PLATES

A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill plates to receive anchor bolts and for grouting.

B. Galvanize plates.

C. Prime plates with zinc-rich primer.

2.8 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

C. Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning" or SSPC-SP 3, "Power Tool Cleaning."

D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for

use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

3.3 INSTALLING BEARING AND LEVELING PLATES

A. Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of plates.

B. Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.

1. Use nonshrink, nonmetallic grout unless otherwise indicated.
2. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.4 ADJUSTING AND CLEANING

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 055000

SECTION 07 22 00

THERMAL INSULATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Conditions of the Contract and Division 01 Specification Sections apply to this section.

1.2 SUMMARY

A. Section includes roof insulation over the properly prepared deck substrate, mineral fiber insulation to be installed above and below metal deck along wall perimeter, and spray-polyurethane insulation to seal all voids in metal deck at roof perimeter along wall face.

B. Related Sections:
   1. Section 07 62 00 – Sheet Metal Flashing and Trim.

1.3 REFERENCES

A. American Society for Testing and materials (ASTM):
   1. ASTM A167 Standard Specification for Stainless and Heat-Resisting Chromium Nickel Steel Plate, Sheet and Strip.
   2. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process.
   3. ASTM B29 Standard Specification for Refined Lead.
   4. ASTM B32 Standard Specification for Solder Metal.
   5. ASTM C165 Standard Test Method for Measuring Compressive Properties of Thermal Insulation.
   6. ASTM C272 Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions.
   7. ASTM C1396 Standard Specification for Gypsum Wallboard.
   8. ASTM C728 Standard Test Methods for Fire Test of Roof Coverings.
   9. ASTM C1289 Standard Specification for Faced Rigid Polyisocyanurate Thermal Insulation.
   10. ASTM D5 Standard Test Method for Penetration of Bituminous Materials.
   11. ASTM D36 Standard Test Method for Softening Point of Bitumen (Ring and Ball Apparatus).
   12. ASTM D5147 Standard Sampling and Testing Modified Bituminous Sheet Material.

B. Cast Iron Soil Pipe Institute, Washington, D.C. (CISPI)

C. National Roofing Contractors Association (NRCA):
   1. Roofing and Waterproofing Manual.

D. Underwriters Laboratories, Inc. (UL):
   1. Fire Hazard Classifications.

E. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

F. Steel Deck Institute, St. Louis, Missouri (SDI)

G. Insulation Board, Polyisocyanurate (FS HH-I-1972)

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's specification data sheets for each product to be used in the project.

B. Shop Drawings
   1. Submit manufacturer's shop drawings indicating complete installation details of tapered insulation system, including identification of each insulation block, sequence of installation, layout, drain locations, roof slopes, thicknesses, crickets and saddles.
   2. Shop drawing shall include: Outline of roof, location of drains, complete board layout of tapered insulation components, thickness and the average "R" value for the completed insulation system.
   3. Include details of mineral wool and spray-polyurethane foam.

C. Certification
   1. Submit roof manufacturer's certification that insulation fasteners furnished are acceptable to roof manufacturer.
   2. Submit roof manufacturer's certification that insulation furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.

1.5 QUALITY ASSURANCE

A. Fire Classification, ASTM E-108.

B. Manufacturer's Certificate: Certify that roof system furnished is approved by Underwriters Laboratories or approved third party testing facility in accordance with ASTM E108, Class [A] for external fire and meets local or nationally recognized building codes.

C. Manufacturer's Certificate: Certify that the roof system is adhered properly to meet or exceed the requirements of FM [1-90].

D. Pre-installation meeting: Refer to Division 07 roofing specifications for pre-installation meeting requirements.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.

B. Store all insulation materials in a manner to protect them from the wind, sun and moisture damage prior to and during installation. Any insulation that has been exposed to any moisture shall be removed from the project site.

C. Keep materials enclosed in a watertight, ventilated enclosure (i.e. tarpaulins).

D. Store materials off the ground. Any warped, broken or wet insulation boards shall be removed from the site.

PART 2 – PRODUCTS

2.1 PRODUCTS, GENERAL

A. Refer to Division 01 Section "Common Product Requirements."

B. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.

2.2 INSULATION MATERIALS

A. Thermal Insulation Properties and Approved Insulation Boards.
   1. Rigid Polyisocyanurate Roof Insulation; ASTM C1289:
      a. Qualities: Rigid, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.
      b. Thickness: Minimum (2)layers 2.6" each.
      c. R-Value: Minimum R-30.
      d. Compliances: UL, WH or FM listed under Roofing Systems Federal Specification HH-I-1972, Class 1.
      e. Acceptable Products:
         1) ENRGY-3; Johns Manville
         2) EnergyGuard; GAF
         3) Approved Equivalent meeting or exceeding performance requirements.

   2. Dens-Deck Prime Roof Board (for use directly below roof membrane)
      a. Qualities: Nonstructural glass mat faced, noncombustible, water-resistant treated gypsum core panel.
      b. Board Size: Four feet by four feet (4'x4').
      c. Thickness: One half (1/2) inch.
      d. R-Value: .56
      e. Compliances: UL. WH or FM listed under Roofing Systems.
      f. Manufacturer: Georgia Pacific

3. Dens-Deck Fireguard: Gypsum Thermal Barrier (for use directly above metal deck, below polyisocyanurate roof insulation)
   a. Qualities: Nonstructural glass mat faced, noncombustible, water-resistant treated gypsum core panel.
   b. Board Size: Four feet by four feet (4'x4').
   c. Thickness: 5/8 inch.
   d. R-Value: .67
   e. Compliances: UL. WH or FM listed under Roofing Systems.
   f. Manufacturer: Georgia Pacific

4. Mineral Wool / Metal Deck Flute Filler (to fill all metal deck flute voids at the building perimeter).
   a. Metal Roof / Metal Deck Flute Filler manufactured from basalt rock and steel slag complying with ASTM 726 (thermal insulation – mineral fiberboard). Secure in place with friction and cold adhesive. Subject to compliance with project requirements provide Protec Metal Roof / Metal Deck Flute Filler as manufactured by ModulRTS.

5. Sprayed Polyurethane Foam Insulation (for use sealing deck flutes against air intrusion, above and below deck at building wall perimeter)
   a. Closed-Cell Slow-Rise Polyurethane Foam Insulation: C 1029, Type II, with maximum flame-spread and smoke developed indices of 25 and 450, respectively (Class 1), per ASTM E84; formulated to flow more freely in an uncured state and expand and cure more slowly than other standard spray-installed polyurethane foam insulations; in order to fill smaller voids and exert less outward pressure on adjacent substrates during installation.

      i. Minimum Density of 1.5 lb/ft^3 (24 kg/m^3), thermal resistivity of 6.2 deg. F x h x ft^2/Btu x in. at 75 deg. F (43K x m/W at 24 deg. C).
      ii. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

         1. RHH Foam Systems, Inc.
         2. Dow Chemical Company
         3. Fomo Products, Inc.
         4. Convenience Products

   b. Fifteen (15) Minute Thermal Barrier: Provide a thermal barrier coating which has been tested and approved by both the thermal barrier coating and foam insulation manufacturers to be compatible with manufacture and type of sprayed foam insulation to be installed. Subject to specified project requirements, and applicable building and fire code requirements, provide one of the following:

      i. International Fireproof Technology, Inc.; "DC-315 for foam".
      ii. Preferred Solutions, Inc.; "Stayflex 2505".
      iii. Other products will be considered subject to project requirements and published code authority approvals.

2.3 RELATED MATERIALS

A. Fiber Cant and Tapered Edge Strips: Performed rigid insulation units of sizes/shapes indicated, matching insulation board or of perlite or organic fiberboard, as per the approved manufacturer.
   1. Acceptable Manufacturers:
      a. The Garland Company, Inc.
      b. Celotex
      c. Johns Manville
      d. GAF
      e. Approved Equivalent

B. Protection Board: Pre-molded semi-rigid asphalt composition board one half (1/2) inch.

C. Roof Board Joint Tape: Six (6) inches wide glass fiber mat with adhesive compatible with insulation board facers.

D. Asphalt: ASTM D312, Type III Steep Asphalt.

E. Roof Deck Insulation Adhesive: Dual-component, high rise foam adhesive as recommended by insulation manufacturer and approved by FM indicated ratings.
   1. Tensile Strength (ASTM D412)……250 psi
   2. Density (ASTM D1875)……..8.5 lbs./gal.
   3. Viscosity (ASTM D2556)……22,000 to 60,000 cP.
   4. 2 `Peel Strength (ASTM D903)…..17 lb/in.
   5. 3 `Flexibility (ASTM D816)……Pass @ -70°F

F. Fasteners: Corrosion resistant screw fastener as recommended by roof membrane manufacturer.
   1. Factory Mutual Tested and Approved with three (3) inches coated disc for I-90 rating, length required to penetrate metal deck one inch.

PART 3 – EXECUTION

3.1 EXECUTION, GENERAL

A. Comply with Manufacturer’s installation requirements and requirements of roof system to obtain full warranty.

3.2 INSPECTOR OF SURFACES

A. Roofing contractor shall be responsible for preparing an adequate substrate to receive insulation.
   1. Verify that work which penetrates roof deck has been completed.
   2. Verify that wood nailers are properly and securely installed.
   3. Examine surfaces for defects, rough spots, ridges, depressions, foreign material, moisture, and unevenness.
   4. Do not proceed until defects are corrected.
   5. Do not apply insulation until substrate is sufficiently dry.

6. Broom clean substrate immediately prior to application.
7. Use additional insulation to fill depressions and low spots that would otherwise cause ponding water.
8. Verify that temporary roof has been completed.

3.3 INSTALLATION

A. Attachment with Mechanical Fasteners
1. Approved insulation board shall be fully attached to the deck with an approved mechanical fastening system. As a minimum, the amount of fasteners shall be in accordance with manufacturer's recommendation for FM I-90 system. Otherwise, a minimum of one fastener per two square feet shall be installed.
2. Filler pieces of insulation require at least two fasteners per piece if size of insulation is less than four square feet.
3. Spacing pattern of fasteners shall be as per manufacturer's recommendations to meet the FM requirements. Placement of any fastener from edge of insulation board shall be a minimum of three inches, and a maximum of six (6) inches.
4. Minimum penetration into deck shall be as recommended by the fastener manufacturer. There is a one (1) inch minimum for metal, wood and structural concrete decks where not specified by the manufacturer. For gypsum and cement-wood fiber decks, penetration shall be determined from pull-out test results with a minimum penetration of one and one-half (1 ½) inches.
5. Gypsum and cementitious wood fiber decks: Where the roof deck is visible from the building interior, the contractor shall ensure no penetration of fasteners through underside of the deck. Any holes or spalling caused by fastener installation shall be repaired by the roofing contractor. Where the new roof system thickness exceeds an amount so that a minimum of 1 ½ of penetration cannot be achieved with an Olympic TB Fastener, or approved equivalent, then (and only then) toggle bolts may be used to secure installation to the deck.
6. Tape joints of insulation as per manufacturer's requirements.

B. Attachment with Insulation Adhesive Approved by Factory Mutual (FM).
1. Ensure all surfaces are clean, dry, free of dirt, debris, oils, loose ore embedded gravel, un-adhered coatings, deteriorated membrane and other contaminants that may inhibit adhesion.
2. Apply insulation adhesive directly to the substrate using a ribbon pattern with one quarter to one half (1/4-1/2) inch wide beads 12 inches o.c., using either the manual applicator or an automatic applicator, at a rate of one (1) gallon per one hundred (150) square feet per cartridge.
3. Immediately place insulation boards into wet adhesive. Do not slide boards into place. Do not allow the adhesive to skin over before installing insulation boards.
4. Briefly step each board into place to ensure contact with the adhesive. Substrates with irregular surfaces may prevent the insulation board from

making positive contact with the adhesive. Relief cuts or temporary weights may be required to ensure proper contact.

5. All boards shall be cut and fitted where the roof deck intersects a vertical surface. The boards shall be cut to fit a minimum of one quarter (1/4) inch away from the vertical surface.
6. Tape joints of insulation as per manufacturer's requirements.

3.4 CLEANING

A. Remove debris and cartons from roof deck. Leave insulation clean and dry, ready to receive roofing membrane.

3.5 CONSTRUCTION WASTE MANAGEMENT

A. Remove and properly dispose of waste products generated during installation. Comply with requirements of authorities having jurisdiction.

END OF SECTION

SECTION 07 52 16

SBS MODIFIED BITUMINOUS ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cold Applied 2-Ply Rubberized Asphalt Roofing, gutters, and downspouts.

1.2 RELATED SECTIONS

A. Section 01 43 33.75 – Roofing Manufacturer's Field Services: Manufacturer quality control.

B. Section 07 22 00 – Thermal Insulation: Roof Insulation, perimeter deck insulation and fastening.

C. Section 07 61 00 – Copper Roofing Trim and Flashings: stone parapet cap and flashing.

D. Section 07 62 00 - Sheet Metal Flashing and Trim: Weather protection for base flashings.

1.3 REFERENCES

A. ASTM D 451 - Standard Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products.

B. ASTM D 1079 Standard Terminology Relating to Roofing, Waterproofing and Bituminous Materials.

C. ASTM D 2822 Standard Specification for Asphalt Roof Cement.

D. ASTM D 2824 Standard Specification for Aluminum-Pigmented Asphalt Roof Coating.

E. ASTM D 6162 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements.

F. ASTM D 6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

G. ASTM E 108 - Standard Test Methods for Fire Test of Roof Coverings

H. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.

I. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.

J. ANSI-SPRI ES-1 Wind Design Standard for Edge Systems used with Low Slope Roofing Systems.

K. ASCE 7-05, Minimum Design Loads for Buildings and Other Structures

1.4 DESIGN / PERFORMANCE REQUIREMENTS

A. Perform work in accordance with all federal, state and local codes.

B. Exterior Fire Test Exposure: Roof system shall achieve a UL slopes indicated on the Drawings as follows:
   1. Underwriters Laboratory Class A Rating.

C. Design Requirements:
   1. Uniform Wind Uplift Load Capacity
      a. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria.
         1) Design Code: ASCE 7-05, Method 2 for Components and Cladding.
      b. SEE Attached

D. Roof System membranes containing recycled or bio-based materials shall be third party certified through UL Environment.

1.5 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation instructions.

B. Design Pressure Calculations: Submit design pressure calculations for the roof area in accordance with ASCE 7-05 and local Building Code requirements. Include a roof system attachment analysis report, certifying the system's compliance with applicable wind load requirements before Work begins. Report shall be signed and sealed by a Professional Engineer registered in Illinois who has provided roof system attachment analysis for not less than 5 consecutive years.

C. Recycled or Bio-Based Materials: Provide third party certification through UL Environment of roof System membranes containing recycled or bio based materials

D. Manufacturer's Fire Compliance Certificate: Certify that the roof system furnished is approved by Underwriters Laboratories (UL) or approved third party testing facility in accordance with ASTM E108, Class A for external fire and meets local or nationally recognized building codes.

E. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic inspection and maintenance of all completed roofing work. Provide product warranty executed by the manufacturer. Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

1.6 QUALITY ASSURANCE

A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.

B. Manufacturer Qualifications: Company specializing in manufacturing products specified with documented ISO 9001 certification and minimum of twelve years of documented

experience and must not have been in Chapter 11 bankruptcy during the last five years.

C. Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience and a certified Pre-Approved Garland Contractor.

D. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress.

E. Product Certification: Provide manufacturer's certification that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.

F. Source Limitations: Obtain all components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.

1.7 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to commencing Work of this section.

B. Review installation procedures and coordination required with related Work.

C. Inspect and make notes of job conditions prior to installation:
   1. Record minutes of the conference and provide copies to all parties present.
   2. Identify all outstanding issues in writing designating the responsible party for follow-up action and the timetable for completion.
   3. Installation of roofing system shall not begin until all outstanding issues are resolved to the satisfaction of the Architect.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.

B. Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4 inches above ground level and covered with "breathable" tarpaulins.

C. Stored in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on end on a clean flat surface. No wet or damaged materials will be used in the application.

D. Store at room temperature wherever possible, until immediately prior to installing the roll. During winter, store materials in a heated location with a 50 degree F (10 degree C) minimum temperature, removed only as needed for immediate use. Keep materials away from open flame or welding sparks.

E. Avoid stockpiling of materials on roofs without first obtaining acceptance from the Architect/Engineer.

F. Adhesive storage shall be between the range of above 40 degree F (4 degree C) and below 80 degree F (27 degree C). Area of storage shall be constructed for flammable storage.

1.9 COORDINATION

A. Coordinate Work with installing associated metal flashings as work of this section proceeds.

1.10 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.11 WARRANTY

A. Upon completion of the work, provide the Manufacturer's written and signed NDL Warranty, warranting that, if a leak develops in the roof during the term of this warranty, due either to defective material or defective workmanship by the installing contractor, the manufacturer shall provide the Owner, at the Manufacturer's expense, with the labor and material necessary to return the defective area to a watertight condition.
   1. Warranty Period:
      a. 20 + 10 years from date of acceptance. Requires mid period inspection.

B. Installer is to guarantee all work against defects in materials and workmanship for a period indicated following final acceptance of the Work.
   1. Warranty Period:
      a. 5 years from date of acceptance.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Garland Company, Inc. (The), which is located at: 3800 E. 91st St.; Cleveland, OH 44105; Toll Free Tel: 800-321-9336; Tel: 216-641-7500; Fax: 216-641-0633.

2.2 COLD APPLIED 2-PLY ROOF SYSTEM - STRESSPLY

A. Base (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
   1. 80 mil SBS (Styrene-Butadiene-Styrene) rubber modified roofing base sheet reinforced with a dual fiberglass reinforced scrim, performance requirements according to ASTM D 5147.

B. Modified Cap (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
   1. 155 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced, rubber modified roofing membrane reinforced with a fiberglass and polyester composite scrim. ASTM D 6162, Type III Grade G.

C. Interply Adhesive: (1 and 2)
   1. Rubberized, polymer modified cold process asphalt roofing bitumen V.O.C. compliant ASTM D 3019.

D. Flashing Base Ply: One ply bonded to the prepared substrate with Interply Adhesive:
   1. 80 mil SBS (Styrene-Butadiene-Styrene) rubber modified roofing base sheet

reinforced with a dual fiberglass reinforced scrim, performance requirements according to ASTM D 5147.

E. Flashing Cap (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
   1. 155 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced, rubber modified roofing membrane reinforced with a fiberglass and polyester composite scrim. ASTM D 6162, Type III Grade G.

F. Flashing Ply Adhesive:
   1. Asphalt roofing mastic V.O.C. compliant, ASTM D 2822, Type II trowel grade flashing adhesive.

G. Surfacing: Requires 30 day wait before applying.
   1. Surface Coatings:
      a. Aluminum coating non-fibered aluminum roof coating.

2.3 ACCESSORIES:

A. Roof Insulation: In accordance with Section 07 22 00.

B. Roof Board: Provide G-P Gypsum Dens Deck Prime for proper adhesion of the self-adhered base sheet in accordance with Section 07 22 00.

C. Roof Thermal Barrier: Provide G-P Gypsum Dens Deck Fireguard secured, in accordance with roofing manufacturer requirements, to structural metal deck.

D. Walkway Pads – To be utilized for Satellite Dish: As recommended and furnished by the membrane manufacturer set in approved adhesive to control foot traffic on roof top surface and provide a durable system compliant non-slip walkway.

E. Urethane Sealant Hybrid - One part, non-sag sealant as approved and furnished by the membrane manufacturer for moving joints.
   1. Tensile Strength, ASTM D 412: 250 psi
   2. Elongation, ASTM D 412: 450%
   3. Hardness, Shore A ASTM C 920: 35
   4. Adhesion-in-Peel, ASTM C 92: 30 pli

F. Glass Fiber Cant - Glass Cant: Continuous triangular cross Section made of inorganic fibrous glass used as a cant strip as recommended and furnished by the membrane manufacturer.

2.4 EDGE TREATMENT AND ROOF PENETRATION FLASHINGS

A. Vents and Breathers: Heavy gauge aluminum and fully insulated vent that allows moisture and air to escape but not enter the roof system as recommended and furnished by the membrane manufacturer.

B. Pitch pans, Rain Collar 24 gauge stainless or 20oz (567gram) copper. All joints should be welded/soldered watertight. See details for design.

C. Drain Flashings should be 4lb (1.8kg) sheet lead formed and rolled.

D. Plumbing stacks should be 4lb (1.8kg) sheet lead formed and rolled.

E. Liquid Flashing - An asphaltic-polyurethane, low odor, liquid flashing material designed for specialized details unable to be waterproofed with typical modified membrane flashings.
   1. Tensile Strength, ASTM D 412: 400 psi
   2. Elongation, ASTM D 412: 300%
   3. Density @77 deg. F 8.5 lb/gal typical

F. Fabricated Flashings: Fabricated flashings and trim are specified in Sections 07 61 00 and 07 62 00.
   1. Fabricated flashings and trim shall conform to the detail requirements of SMACNA "Architectural Sheet Metal Manual" and/or the CDA Copper Development Association "Copper in Architecture - Handbook" as applicable.

G. Manufactured Roof Specialties: Manufactured copings, fascia, gravel stops, control joints, expansion joints, joint covers and related flashings and trim are designated on the drawings.
   1. Manufactured roof specialties shall conform to the detail requirements of SMACNA "Architectural Sheet Metal Manual" and/or the NRCA "Roofing and Waterproofing Manual" as applicable.
      a. .050” Prefinished aluminum gutter with 30-year Kynar Finish. Subject to compliance with project requirements provide Storm Class Gutter System as manufactured by Imetco, or approved equal. Provide in color as selected from Manufacturer’s full range of colors. Utilize as color for adjacent fascia material, flashings, downspouts, straps, etc. Install in strict compliance with manufacturer’s requirements, seal watertight.
      b. Provide .050” prefinished aluminum downspouts with open face, with interior and exterior faces uniformly painted to match the gutter color.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Inspect and approve the deck condition, slopes and fastener backing if applicable, parapet walls, expansion joints, roof drains, stack vents, vent outlets, nailers and surfaces and elements.

C. Verify that work penetrating the roof deck, or which may otherwise affect the roofing, has been properly completed.

D. If substrate preparation and other conditions are the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. General: Clean surfaces thoroughly prior to installation.
   1. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   2. Fill substrate surface voids that are greater than 1/4 inch wide with an acceptable fill material.
   3. Roof surface to receive roofing system shall be smooth, clean, free from loose gravel, dirt and debris, dry and structurally sound.
   4. Wherever necessary, all surfaces to receive roofing materials shall be power broom

and vacuumed to remove debris and loose matter prior to starting work.

5. Do not apply roofing during inclement weather. Do not apply roofing membrane to damp, frozen, dirty, or dusty surfaces.
6. Fasteners and plates for fastening components mechanically to the substrate shall provide a minimum pull-out capacity of 300 lbs. (136 k) per fastener. Base or ply sheets attached with cap nails require a minimum pullout capacity of 40 lb. per nail.
7. Prime decks where required, in accordance with requirements and recommendations of the primer and deck manufacturer.
8. **Coordinate gypsum thermal barrier installation with the installation of mineral wool and polyurethane insulation above deck to completely fill and seal the metal deck flutes against air intrusion into attic. Refer to drawing details.**

3.3 INSTALLATION - GENERAL

A. Install modified bitumen membranes and flashings in accordance with manufacturer's instructions and with the recommendations provided by the National Roofing Contractors Association's Roofing & Waterproofing Manual, the Asphalt Roofing Manufacturers Association, and applicable codes.

B. General: Avoid installation of modified bitumen membranes at temperatures lower than 40-45 degrees F. When work at such temperatures unavoidable use the following precautions:
   1. Take extra care during cold weather installation and when ambient temperatures are affected by wind or humidity, to ensure adequate bonding is achieved between the surfaces to be joined. Use extra care at material seam welds and where adhesion of the applied product to the appropriately prepared substrate as the substrate can be affected by such temperature constraints as well.
   2. Unrolling of cold materials, under low ambient conditions must be avoided to prevent the likelihood of unnecessary stress cracking. Rolls must be at least 40 degrees F at the time of application. If the membrane roll becomes stiff or difficult to install, it must be replaced with roll from a heated storage area.

C. Commence installation of the roofing system at the lowest point of the roof (or roof area), working up the slope toward the highest point. Lap sheets shingle fashion so as to constantly shed water

3.4 INSTALLATION COLD APPLIED ROOF SYSTEM

A. Modified Cap Ply(s): Cut cap ply sheets into 18 foot lengths and allow plies to relax before installing. Install in interplay adhesive applied at the rate required by the manufacturer. Shingle sheets uniformly over the prepared substrate to achieve the number of plys specified. Shingle in proper direction to shed water on each large area of roofing.
   1. Lap ply sheet ends 8 inches. Stagger end laps 12 inches minimum.
   2. Solidly bond to the base layers with specified cold adhesive at the rate of 2 to 2-1/2 gallons per 100 square feet.
   3. Roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps. Care should be taken to eliminate air entrapment under the membrane.
   4. Install subsequent rolls of modified across the roof as above with a minimum of 4 inch side laps and 8 inch staggered end laps. Lay modified membrane in the same direction as the underlayers but the laps shall not coincide with the laps of the base layers.
   5. Allow cold adhesive to set for 5 to 10 minutes before installing the top layer of modified membrane.
   6. Extend membrane 2 inches beyond top edge of all cants in full moppings of the cold

adhesive as shown on the Drawings.

B. Fibrous Cant Strips: Provide non-combustible perlite or glass fiber cant strips at all wall/curb detail treatments where angle changes are greater than 45 degrees. Cant may be set in approved cold adhesives, hot asphalt or mechanically attached with approved plates and fasteners.

C. Wood Blocking, Nailers and Cant Strips: Provide wood blocking, nailers and cant strips as shown and required.
   1. Provide nailers at all roof perimeters and penetrations for fastening membrane flashings and sheet metal components.
   2. Wood nailers should match the height of any insulation, providing a smooth and even transition between flashing and insulation areas.
   3. Nailer lengths should be spaced with a minimum 1/8 inch gap for expansion and contraction between each length or change of direction.
   4. Nailers and flashings should be fastened in accordance with Factory Mutual "Loss Prevention Data Sheet 1- 49, Perimeter Flashing" and be designed to be capable of resisting a minimum force of 200 lbs/lineal foot in any direction.

D. Metal Work: Provide metal flashings, counter flashings, parapet coping caps and thru-wall flashings as specified in Section 07 61 00 and. Install in accordance with the SMACNA "Architectural Sheet Metal Manual" or the NRCA Roofing Waterproofing manual.

E. Termination Bar: Provide a metal termination bar or approved top edge securement at the terminus of all flashing sheets at walls and curbs. Fasten the bar a minimum of 8 inches (203 mm) o/c to achieve constant compression. Provide suitable, sealant at the top edge.

F. Flashing Base Ply: Install flashing sheets by the same application method used for the base ply.
   1. Seal curb, wall and parapet flashings with an application of mastic and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.
   2. Prepare all walls, penetrations, expansion joints and where shown on the Drawings to be flashed with required primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
   3. Adhere to the underlying base ply with specified flashing ply adhesive unless otherwise specified. Nail off at a minimum of 8 inches (203 mm) o.c. from the finished roof at all vertical surfaces.
   4. Solidly adhere the entire flashing ply to the substrate. Secure the tops of all flashings that are not run up and over curb through termination bar fastened at 6 inches (152 mm) O.C. and sealed at top.
   5. Seal all vertical laps of flashing ply with a three-course application of trowel-grade mastic and fiberglass mesh.
   6. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work as specified.
   7. Coordinate roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices with the roofing system work.
   8. Secure the top edge of the flashing sheet using a termination bar only when the wall surface above is waterproofed, or nailed 4 inches on center and covered with an acceptable counter flashing.

G. Flashing Cap Ply: Install flashing cap sheets by the same application method used for the

base ply.

1. Seal curb, wall and parapet flashings with an application of mastic and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.
2. Prepare all walls, penetrations, expansion joints and where shown on the Drawings to be flashed with required primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
3. Adhere to the underlying base flashing ply with specified flashing ply adhesive unless otherwise specified. Nail off at a minimum of 8 inches (203 mm) o.c. from the finished roof at all vertical surfaces.
4. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work as specified.
5. Coordinate roof accessories, miscellaneous sheet metal accessory items with the roofing system work.
6. All stripping shall be installed prior to flashing cap sheet installation.
7. Heat and scrape granules when welding or adhering at cut areas and seams to granular surfaces at all flashings.
8. Secure the top edge of the flashing sheet using a termination bar only when the wall surface above is waterproofed, or nailed 4 inches on center and covered with an acceptable counter flashing.

H. Surface Coatings: Apply roof coatings in strict conformance with the manufacturer's recommended procedures.

I. Roof Walkways: Provide walkways in areas indicated on the Drawings.

3.5 INSTALLATION EDGE TREATMENT AND ROOF PENETRATION FLASHING

A. Roof Edge With Gutter:

1. Inspect the nailer to assure proper attachment and configuration. Increase slope at metal edge by additional degree of slope in first board.
2. Run one ply over the edge. Assure coverage of all wood nailers. Fasten plies with ring shank nails at 8 inches (203 mm) o.c.
3. Install roof eave fascia clips and trim.
4. Install gutter and strapping.
5. Install continuous cleat and fasten at 6 inches (152 mm) o.c.
6. Install new metal edge hooked to continuous cleat and set in bed of roof cement. Fasten flange to wood nailer every 3 inches (76 mm) o.c. staggered.
7. Prime metal edge at a rate of 100 square feet per gallon and allow to dry.
8. Strip in flange with base flashing ply covering entire flange in bitumen with 6 inches (152 mm) onto the field of the roof. Assure ply laps do not coincide with metal laps.
9. Install a second ply of modified flashing ply in bitumen over the base flashing ply, 9 inches (228 mm) on to the field of the roof.

B. Coping Cap:

1. Minimum flashing height is 8 inches (203 mm) above finished roof height. Maximum flashing height is 24 inches (609 mm). Prime vertical wall at a rate of 100 square feet per gallon and allow to dry. Where the minimum vertical dimension cannot be achieved obtain roof manufacturer’s approval for modified details acceptable to obtain full system warranty.
2. Set cant in bitumen. Run all field plies over cant a minimum of 2 inches (50 mm).
3. Attach tapered board to top of wall.

4. Install base flashing ply covering entire wall and wrapped over top of wall and down face with 6 inches (152 mm) on to field of roof and set in cold asphalt. Nail membrane at 8 inches (203 mm) o.c.
5. Install a second ply of modified flashing ply in bitumen over the base flashing ply, 9 inches (228 mm) on to the field of the roof. Apply a three-course application of mastic and mesh at all seams and allow to cure and aluminize.
6. Install continuous cleat and fasten at 6 inches (152 mm) o.c. to outside wall.
7. Install new metal coping cap hooked to continuous cleat.
8. Fasten inside cap 24 inches (609 mm) o.c. with approved fasteners and neoprene washers through slotted holes, which allow for expansion and contraction.

C. Reglet Mounted Counterflashing:
1. Minimum flashing height is 8 inches (203 mm) above finished roof height. Maximum flashing height is 24 inches. Prime vertical wall at a rate of 100 square feet per gallon and allow to dry. Where the minimum vertical dimension cannot be achieved obtain roof manufacturer’s approval for modified details acceptable to obtain full system warranty.
2. Set cant in bitumen. Run all field plies over cant a minimum of 2 inches (50 mm).
3. Install base flashing ply covering wall set in bitumen with 6 inches (152 mm) on to field of the roof.
4. Install a second ply of modified flashing ply in bitumen over the base flashing ply, 9 inches (228 mm) on to the field of the roof. Apply a three-course application of mastic and mesh at all vertical seams and allow to cure and aluminize.
5. Apply butyl tape to wall behind flashing. Secure termination bar through flashing, butyl tape and into wall. Alternatively use caulk to replace the butyl tape.
6. Cut reglet in masonry one joint above flashing.
7. Secure reglet counterflashing with expansion fasteners and caulk reglet opening.

3.6 PROTECTION

A. Provide traffic ways, erect barriers, fences, guards, rails, enclosures, chutes and the like to protect personnel, roofs and structures, vehicles and utilities.

B. Protect exposed surfaces of finished walls with tarps to prevent damage.

C. Plywood for traffic ways required for material movement over existing roofs shall be not less than 5/8 inch (16 mm) thick.

D. In addition to the plywood listed above, an underlayment of minimum 1/2 inch (13 mm) recover board is required on new roofing.

E. Special permission shall be obtained from the Manufacturer before any traffic shall be permitted over new roofing.

3.7 FIELD QUALITY CONTROL

A. Inspection: Provide manufacturer's field observations at start-up and at intervals of approximately 30 percent, 60 percent and 90 percent completion. Provide a final inspection upon completion of the Work.
1. Warranty shall be issued upon manufacturer's acceptance of the installation.
2. Field observations shall be performed by a Technical Representative employed full-time by the manufacturer and whose primary job description is to assist, inspect and approve membrane installations for the manufacturer.

3. Provide observation reports from the Technical Representative indicating procedures followed, weather conditions and any discrepancies found during inspection.
4. Provide a final report from the Technical Representative, certifying that the roofing system has been satisfactorily installed according to the project specifications, approved details and good general roofing practice.

3.8 SCHEDULES

A. Base (Ply) Sheet:
1. 80 mil SBS (Styrene-Butadiene-Styrene) rubber modified roofing base sheet reinforced with a dual fiberglass reinforced scrim, performance requirements according to ASTM D 5147.
   a. Tensile Strength, ASTM D 5147
      1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 225 lbf/in XD 225 lbf/in
      2) 50 mm/min. @ 23 +/- 2 deg. C MD 39.0 kN/m XD 39.0 kN/m
   b. Tear Strength, ASTM D 5147
      1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 300 lbf XD 300 lbf
      2) 50 mm/min. @ 23 +/- 2 deg. C MD 1335 N XD 1335 N
   c. Elongation at Maximum Tensile, ASTM D5147
      1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 4% XD 4%
      2) 50 mm/min. @ 23 +/- 2 deg. C MD 4% XD 4%
   d. Low Temperature Flexibility, ASTM D 5147, Passes -30 deg. F (-34.4 deg. C)

B. Modified Cap (Ply) Sheet:
1. 155 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced, rubber modified roofing membrane reinforced with a fiberglass and polyester composite scrim. ASTM D 6162, Type III Grade G
   a. Tensile Strength, ASTM D 5147
      1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
      2) 50 mm/min. @ 23 +/- 2 deg. C MD 54.25 kN/m XD 54.25 kN/m
   b. Tear Strength, ASTM D 5147
      1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf XD 500 lbf
      2) 50 mm/min. @ 23 +/- 2 deg. C MD 2224 N XD 2224 N
   c. Elongation at Maximum Tensile, ASTM D 5147
      1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 3.5% XD 3.5%
      2) 50 mm/min. @ 23 +/- 2 deg. C MD 3.5% XD 3.5%
   d. Low Temperature Flexibility, ASTM D 5147, Passes -30 deg. F (-34 deg. C)

C. Interply Adhesive:
1. Rubberized, polymer modified cold process asphalt roofing bitumen V.O.C. compliant ASTM D 3019. Performance Requirements:
   a. Non-Volatile Content ASTM D 4479 70%
   b. Density ASTM D1475 8.9 lbs./gal.
   c. Viscosity Stormer ASTM D562 400-500 grams
   d. Flash Point ASTM D 93 100 deg. F min. (37 deg. C)
   e. Slope: up to 3:12

D. Flashing Base Ply:
1. 80 mil SBS (Styrene-Butadiene-Styrene) rubber modified roofing base sheet reinforced with a dual fiberglass reinforced scrim, performance requirements according to ASTM D 5147.
   a. Tensile Strength, ASTM D 5147

1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 225 lbf/in XD 225 lbf/in
2) 50 mm/min. @ 23 +/- 2 deg. C MD 39.0 kN/m XD 39.0 kN/m

b. Tear Strength, ASTM D 5147
1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 300 lbf XD 300 lbf
2) 50 mm/min. @ 23 +/- 2 deg. C MD 1335 N XD 1335 N

c. Elongation at Maximum Tensile, ASTM D 5147
1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 4% XD 4%
2) 50 mm/min. @ 23 +/- 2 deg. C MD 4% XD 4%

d. Low Temperature Flexibility, ASTM D 5147:
1) Passes -30 deg. F (-34.4 deg. C)

E. Flashing Ply Adhesive:
1. Asphalt roofing mastic V.O.C. compliant, ASTM D 2822, Type II trowel grade flashing adhesive.
a. Non-Volatile Content ASTM D 4479 70 min.
b. Density ASTM D 1475 8.3 lbs./gal. (1kg/l)
c. Flash Point ASTM D 93 103 deg. F (39 deg. C)

F. Surfacing:
1. Flashing Cap (Ply) Sheet:
a. 155 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced, rubber modified roofing membrane reinforced with a fiberglass and polyester composite scrim. ASTM D 6162, Type III Grade G
1) Tensile Strength, ASTM D 5147
a) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
b) 50 mm/min. @ 23 +/- 2 deg. C MD 54.25 kN/m XD 54.25 kN/m
2) Tear Strength, ASTM D 5147
a) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf XD 500 lbf
b) 50 mm/min. @ 23 +/- 2 deg. C MD 2224 N XD 2224 N
3) Elongation at Maximum Tensile, ASTM D 5147
a) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 3.5% XD 3.5%
b) 50 mm/min. @ 23 +/- 2 deg. C MD 3.5% XD 3.5%
4) Low Temperature Flexibility, ASTM D 5147, Passes -30 deg. F (-34 deg. C)
2. Surface Coatings:
a. Surfacing:
1) ASTM D 2824 aluminum coating non-fibered aluminum roof coating non-fibered aluminum roof coating having the following characteristics:
a) Flash Point 103 deg. F (39 deg. C) min.
b) Weight/Gallon 7.9 lbs./gal. (1.0 g/cm3)

END OF SECTION

SECTION 07 61 00

COPPER ROOFING TRIM & FLASHINGS

PART 1 - GENERAL

1.1 SUMMARY

A. General: Work includes provision of copper roofing / trim (coping) over existing stone surfaces on the two upper roof parapets of the existing structure. Existing stone surfaces vary in size and profile, all dimensions and profiles must be verified and documented by Contractor prior to work. It is the intent that, after these stone and brick surfaces are fully pointed, that the top surfaces of these elements will be fully covered by new welded copper roofing/trim to shed water and protect the top surfaces and adjacent vertical surfaces for a watertight installation. Work includes copper roofing (coping coverings), flashing, and trim fully coordinated with new roofing and masonry restoration work.

B. Section Includes:

1. Flat locked and soldered roofing trim / coping
2. Custom-designed copper roofing trim / coping at stone parapet features

C. Related Requirements:

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections.
2. Section 07 52 16 Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing
3. Section 07 92 00 Joint Sealants.

1.2 COORDINATION

A. Coordinate copper roofing with masonry restoration work, flashing, trim, parapets, walls and other adjoining work to provide permanently watertight, secure, and noncorrosive installation.

1.3 ACTION SUBMITTALS

A. Product data including metal manufacturer’s specifications, installation instructions, and general recommendations for roofing applications. Include certification or other data substantiating that materials comply with requirements.

B. Shop Drawings showing manner of forming, joining, and securing copper roofing, and pattern of seams. Show expansion joint details and waterproof connections to adjoining work and at obstructions and penetrations. Identify material thicknesses, joining materials and types. Shop drawings shall reflect field verified dimensions fully coordinated with SBS roofing work and other sheet metal flashing work.

C. Samples: Submit representative sample of material for Architect and Owner review and approval.

1.4 PERFORMANCE REQUIREMENTS

Delegated Design: The contractor shall engage a licensed professional structural engineer, registered in the state of Illinois for the design of the anchorage, materials and spacing of copper roofing, trim and flashings. Fastening and detail design shall shed water, maintain top surfaces of stone dry, and shall accommodate normal seasonal thermal movement while maintaining the installation water-tight. Fasteners employed shall be non-corrosive stainless steel. Delegated design information shall be incorporated into shop drawing and materials submittals. The delegated design engineer shall review, stamp and sign submittals for conformance with the design prior to submission to the Architect for review.

A. Installation Requirements: Fabricator is responsible for installing system, including anchorage to substrate and necessary modifications to meet specified and drawn requirements and maintain visual design concepts in accordance with Contract Documents and following installation methods as stipulated in the “Copper in Architecture” handbook published by the Copper Development Association Inc. (CDA).
   1. Drawings are diagrammatic and are intended to establish basic dimension of units, sight lines, and profile of units.
   2. Make modifications only to meet field conditions and to ensure fitting of system components.
   3. Obtain Architect’s approval of modifications. Where modifications require alteration of delegated design anchorage systems, Contractor shall obtain the Delegated Design Engineer’s approval of modifications prior to submittal to Architect.
   4. Attachment considerations: Account for site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening and fracturing connection between units and building structure or between components themselves.
   5. Accommodate building structure deflections in system connections to structure.
   6. Seams, where lapped for movement shall be profiled + shingled to shed water.

B. Performance Requirements:
   1. System shall accommodate movement of components without buckling, failure of joint sealants, undue stress on fasteners, or other detrimental effects when subjected to seasonal temperature changes and live loads.
   2. Design system capable of withstanding building code requirements for negative wind pressure.

C. Interface with Adjacent Systems:
   1. Integrate design and connections with adjacent construction.
   2. Accommodate allowable tolerances and deflections for structural members in installation.

1.5 QUALITY ASSURANCE

A. Fabricator’s Qualifications: Company specializing in copper sheet metal roofing and trim work with three years of experience in similar size and type of installations.

B. Installer: A firm with 3 years of successful experience with installation of copper roofing and trim of type and scope equivalent to Work of this Section.

C. Industry Standard: Except as otherwise shown or specified, comply with applicable recommendations and details in the "Copper in Architecture" handbook published by the Copper Development Association Inc. (CDA). Conform to field verified profiles and dimensions.

D. Wind Uplift: Provide roof assemblies meeting wind uplift ratings as required by code.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling, and Unloading: Protect material faces.

B. Acceptance at Site: Examine each panel and accessory as delivered and confirm that finish is undamaged. Do not accept or install damaged material.

C. Storage and Protection:
1. Stack pre-formed material to prevent twisting, bending, and abrasions.
2. Provide ventilation.
3. Prevent contact with materials which may cause discoloration, staining or galvanic action.

1.7 WARRANTY

A. Warrant installed system and components to be free from defects in material and workmanship for period of 2 years.

B. Include coverage against leakage and damages to finishes.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering materials that may be incorporated in the Work include, but are not limited to, the following:
1. Hussey Copper, Ltd.
2. Luvata, Inc.
3. PMX Industries, Inc.
4. Revere Copper Products, Inc.
5. Approved equal.

2.2 MATERIALS

A. Copper Roofing Sheets: Cold-rolled copper sheet complying with ASTM B 370 temper H00, unless otherwise indicated, and as follows:
1. Weight: 20 oz. per sq. ft. (0.0270-inch thick) (0.69-mm) unless otherwise indicated.

B. Miscellaneous Materials: Provide materials and types of fasteners, solder, protective coatings, separators, sealants and accessory items as recommended by copper sheet manufacturer for copper roofing work.

C. Accessories: Except as indicated as work of another specification Section, provide components required for a complete roof system, including trim, copings, fascias, cleats, flashings, sealants, gaskets, and closure strips.
   1. Sealing Tape; Pressure-sensitive 100 percent solids polyisobutylene compound sealing tape with release paper backing. Provide permanently elastic, non-sag, non-toxic, non-staining tape.
   2. Joint Sealant: One-part, copper compatible elastomeric polyurethane sealant as tested by sealant manufacturer for copper substrates. Refer to Division 07.
   3. Cleats:
      a. Concealed type as indicated in the “Copper in Architecture” handbook published by the Copper Development Association Inc. (CDA) for flat seam spaced on 12-inch (300-mm) centers.
      b. Fabricate cleats to allow thermal movement of copper roof panels while preventing copper panel distortion due to wind uplift forces.
   4. Trim, Closure Pieces, and Accessories:
      Same material, thickness, and finish as adjacent copper roof panels, brake formed to required profiles.
      Comply with standards conforming to recognized industry standard sheet metal practice.

D. Bituminous Coating: SSPC-Paint 12, Cold-Applied Aslpahtl Mastic (Extra Thick Film), nominally free of sulfur, compounded for 15-mil dry film thickness per coat.

E. Screws & Bolts: Copper, bronze, brass or passivated stainless steel (300 Series) of sufficient size and length to sustain imposed stresses.

F. Cleats: 20 oz. cold-rolled copper, as required to sustain loads 2-inch (50mm) wide x 3” (75-mm) long.

G. Solder: ASTM B32; Provide 50-50 tin/lead or lead free alternative of similar or greater strength solder. Killed acid flux.

H. Flux: Muriatic acid neutralized with zinc or approved brand of soldering flux.

2.3 FABRICATION

A. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of the “Copper in Architecture” handbook published by the Copper Development Association (CDA) and other recognized industry practices. Fabricate for waterproof and weather-resistant performance with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrate. Comply with material manufacturer’s instructions and recommendations for forming material. Form exposed copper work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
   1. Fabricate to allow for adjustments in field for proper anchoring and joining.
   2. Form sections true to shape, accurate in size, square, free from distortion and defects.

3. Cleats: Fabricate cleats and starter strips of same material as sheet, interlockable with sheet in accordance with CDA recommendations.
4. Tin edges of copper sheets and cleats at soldered joints for flat lock and soldered system.
5. Flat Panel Seams:
    a. Fabricate flat seams for solid soldered dry joints.
    b. Fabricate seams for panels to be installed in overlapped, interlocking shingle manner.
    c. Fold two adjacent edges over 180 degrees for width of 3/4" and other two adjacent areas under ¾" (19 mm). Refer to CDA "Copper in Architecture" handbook.
    d. Fabricate flat seam roofing from pans 18" (450mm) by 24" (600mm) in size.

2.4 FINISHES

A. Natural weathering mill finished copper. No applied finish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. General: Examine conditions and proceed with work when substrates are ready.

B. Confirm that substrate system is even, smooth, sound, clean, dry, and free from defects.

3.2 PREPARATION

A. Clean surfaces to receive copper roofing and trim. Substrate to be smooth and free from defects.

3.3 INSTALLATION

A. Manufacturer's Recommendations: Except as otherwise shown or specified, comply with recommendations and instructions of manufacturer of copper being fabricated and installed.

B. General:
1. Separate dissimilar metals by painting each metal surface in area of contact with a bituminous coating by applying rubberized asphalt or butyl underlayment to each metal surface, or by other permanent separation as recommended by the manfacturers of dissimilar metals.
2. Form and fabricate sheets, seams, strips, cleats, valleys, ridges, edge treatments, integral flashings, and other components of copper roofing trim to profiles, patterns, and drainage arrangements shown and as required for permanently leakproof construction. Provide for thermal expansion and contraction of the work. Seal joints as shown and as required for leakproof construction. Shop-fabricate materials to greatest extent possible.
3. Sealant-Type Joints: Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1"(25 mm) into sealant. Form joints to conceal sealant completely. When ambient temperature is moderate at time of installation, 40 degrees to 70 degrees F

(4 degrees 21 degrees C), set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher or lower ambient temperatures. Do not install sealant-type joints at temperatures below 40 degrees F (4 degrees C). Comply with requirements of Division 07 “Joint Sealant” Sections for handling and installing sealants.

4. Fabricate and install work with lines and corners of exposed units true and accurate. Form exposed faces flat and free of buckles, excessive waves, and avoidable tool marks considering temper and reflectivity of metal. Provide uniform, neat seams with minimum exposure of solder, and sealant. Except as otherwise shown, fold back sheet metal to form a hem on concealed side of exposed edges.
5. Conceal fasteners and expansion provisions where possible in exposed work, and locate so as to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
6. Tin uncoated copper surfaces and cleats at edges of sheets to be soldered, for a width of 1-1/2” (38mm), using solder recommended for copper work.

C. Flat Seam Roofing Trim:
1. Install copper work in accordance with the “Copper in Architecture” handbook published by the Copper Development Association (CDA).
2. Flat Seam Metal Roof Trim Panels: Fasten system to substrate with concealed metal cleats and screws/nails at spacing required to resist code required uplift.
3. Align, level, and plumb system with structure.
4. Fasten cleats using cleats mated to folded flat seams and fastener pattern to resist design loads with stainless steel screws or masonry anchors of sufficient length and profile to penetrate and anchor to substrate.
5. Fully seat adjacent panel on two sides to achieve continuous engagement of seam joint.
6. Apply flux and fully sweat seams with solder to achieve watertight installation.
7. Install cleats to allow roof panels to thermally move.
8. Install expansion battens at 25 to 30 feet (7500mm to 9000mm).

3.4 CLEANING AND PROTECTION

A. Remove protective film (if any) from exposed surfaces of copper roofing promptly upon installation. Strip with care to avoid damage to finishes.

B. Upon completion of each area of soldering, carefully remove flux and other residue from surfaces. Neutralize acid flux by washing with baking soda solution, and then flushing clear water rinse. Use special care to neutralize and clean surfaces.

C. Clean exposed metal surfaces of substances that would interfere with uniform oxidation and weathering.

D. Provide final protection in a manner acceptable to installer that ensures that copper roofing is without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Conditions of the Contract and Division 01 Specification Sections apply to this section.

1.2 SUMMARY

A. Provide all labor, equipment, and materials to fabricate and install the following.
   1. Edge strip and flashing
   2. Fascia, scuppers, and trim.
   3. Coping cap at parapets.
   4. Fascia and edge metal.
   5. Gutters, scuppers and down spouts.

B. Related Sections:
   1. Division 07 Section Common Work Results for Thermal and Moisture Protection.

C. Related Work Specified Elsewhere:
   1. Division 07 Section Modified Bituminous Membrane Roofing

1.3 REFERNECES

A. American Society for Testing and Materials (ASTM)
   1. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (galvannealed) by the Hot-Dip Process.
   2. ASTM A792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by Hot Dip Process.
   3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
   4. ASTM B221 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

B. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI)
   1. ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal.

C. Underwriters Laboratories (UL)

D. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
   1. 1993 Edition Architectural Sheet Metal Manual

E. National Roofing Contractors Association (NRCA)
   1. Roofing and Waterproofing Manual

F. American Society of Civil Engineers (ASCE)
   1. ASCE 7-05 Minimum Design Loads for Buildings and Other Structures.

1.4 SUBMITTALS FOR REVIEW

A. Product Data:
   1. Provide manufacturer's specification data sheets for each product.
   2. Metal material characteristics and installation recommendations.
   3. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specified can be approved.

B. Samples: Submit two (2) samples, illustrating typical metal edge, coping, gutters, fascia extenders for material and finish.

C. Shop Drawings
   1. For manufactured and ANSI/SPRI approved shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.
   2. Indicate material profile, jointing pattern, jointing details, fastening methods, flashing, terminations, and installation details.
   3. Indicate type, gauge and finish of metal.

D. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

1.5 SUBMITTALS FOR INFORMATION

A. Design Loads: Any material submitted as equal to the specified material must be accompanied by a report signed and sealed by a professional engineer licensed in the state in which the installation is to take place. This report shall show that the submitted equal meets the wind uplift and perimeter attachment requirements according to ASCE 7-05 and ANSI/SPRI ES-1. Substitution requests submitted without licensed engineer approval will be rejected for non-conformance.

B. Factory Mutual Research Corporation's (FMRC) wind uplift resistance classification: The roof perimeter flashing shall conform to the requirements as defined by the FMRC Loss Prevention Data Sheet 1-49.

C. A letter from an officer of the manufacturing company certifying that the materials furnished for this project are the same as represented in tests and supporting data.:

D. Mill production reports certifying that the steel thickness are within allowable tolerances of the nominal or minimum thickness or gauge specified.

E. Certification of work progress inspection. Refer to Quality Assurance Article below.

F. Certifications:
   1. Submit roof manufacturer's certification that metal fasteners furnished are acceptable to roof manufacturer.
   2. Submit roof manufacturer's certification that metal furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.

1.6 CONTRACT CLOSEOUT SUBMITTALS

A. General: Comply with Division 01 requirements.

B. Special Project Warranty: Provide specified warranty for the Project, executed by the authorized agent of the Manufacturer.

C. Roofing Maintenance Instructions. Provide a manual of manufacturer's recommendations for maintenance of installed roofing systems.

D. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

1.7 QUALITY ASSURANCE

A. Engage an experienced roofing contractor specializing in sheet metal flashing work with a minimum of five (5) years experience.

B. Maintain a full-time supervisor/foreman who is on the job-site at all times during installation. Foreman must have a minimum of five (5) years experience with the installation of similar system to that specified.

C. Source Limitation: Obtain components from a single manufacturer. Secondary products which cannot be supplied by the specified manufacturer shall be approved in writing by the primary manufacturer prior to bidding.

D. Upon request fabricator/installer shall submit work experience and evidence of financial responsibility. The Owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.

B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials which may cause discoloration or staining.

1.9 PROJECT CONDITIONS

A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for pre-formed metal edge system.

1.10 DESIGN AND PERFORMANCE CRITERIA

A. Thermal expansion and contraction:
   1. Completed metal edge flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess on structure, anchors or fasteners, or reducing performance ability.

1.11 WARRANTIES

A. Owner shall receive one (1) warranty from manufacturer of roofing materials covering all of the following criteria. Multiple warranties are not acceptable.
   1. Pre-finished metal material shall require a written twenty (20)- year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D2244 or chalking excess of 8 unites per ASTM D659. If either occurs material shall be replaced per warranty, at no cost to the Owner.
   2. Changes: Changes or alterations in the edge metal system without prior written consent from the manufacturer shall render the system unacceptable for a warranty.
   3. Warranty shall commence on date of substantial completion or final payment, whichever is agreed by contract.
   4. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of two years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.
   5. Installing roofing contractor shall be responsible for the installation of the edge metal system in general accordance with the membrane manufacturer's recommendations.
   6. Installing contractor shall certify that the edge metal system has been installed per the manufacturer's printed details and specifications.
   7. One manufacturer shall provide a single warranty for all accessory metal for flashings, metal edges and copings, along with the warranty for metal roof areas, membrane roof areas, and any transitions between two different material types.

PART 2 – PRODUCTS

2.1 PRODUCTS, GENERAL

A. Refer to Division 01 Requirements.

B. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.

C. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01.
   1. Proposals shall be accompanied by a copy of the manufacturer's standard specification section. That specification section shall be signed and sealed by a professional engineer licensed in the state of Illinois. Substitution requests containing specifications without licensed engineer certification shall be rejected for non-conformance.
   2. Include a list of three (3) projects of similar type and extent, located within a one hundred mile radius from the location of the project. In addition, the three projects must be at least five (5) years old and be available for

inspection by the Architect, Owner or Owner's Representative.

3. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.
4. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

2.2 ACCEPTABLE MANUFACTURERS

A. The design is based upon roofing systems engineered and manufactured by

The Garland Company
3800 East 91st Street
Cleveland, Ohio 44105
Telephone: (800) 762-8225
Website: www.garlandco.com

2.3 MATERIALS

A. General: Product designations for the materials used in this section shall be based on performance characteristics of the R-MER Edge System manufactured by The Garland Company, Cleveland, OH, and shall form the basis of the contract documents.

B. Materials:
1. Minimum thickness of Aluminum to be specified in accordance with Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractor's National Association, Inc. recommendations
2. Unexposed base metal material:

a. Aluminum, ASTM B209, alloy 3105-H14, in thickness of .050" nom.

C. Finishes:

1. Exposed surfaces for coated panels:
a. Kynar finish on all surfaces exposed to view.

Weathering finish as referred by National Coil Coaters Association (NCCA).

PROPERTY	TEST METHOD	FLUOROCARBON
Pencil Hardness	ASTM D3363 NCCA II-2	HB-H
Bend	ASTM D-4145 NCCA II-19	O-T
Cross-Hatch Adhesion	ASTM D3359	no loss of adhesion
Gloss (60° angle)	ASTM D523	25+/-5%

Reverse Impact	ASTM D2794	no cracking or loss of adhesion
Nominal Thickness	ASTM D1005	

Primer	0.2 mils
Topcoat	0.8 mils
TOTAL	1.0 mils

*Subject to minimum quantity requirements

b. Color shall be as selected by Owner and shall match approved gutter and downspout finish/

2.4 RELATED MATERIALS AND ACCESSORIES

A. Metal Primer: Zinc chromate type.

B. Plastic Cement: ASTM D 4586

C. Sealant: Specified in Section 07 90 00 or on drawings.

D. Underlayment: ASTM D2178, No15 asphalt saturated roofing felt.

E. Slip Sheet: Rosin sized building paper.

F. Fasteners:
1. Stainless Steel Corrosion resistant screw fasteners as recommended by metal manufacturer. Finish exposed fasteners same as flashing metal.
2. Fastening shall conform to Factory Mutual requirements or as stated on section details, whichever is more stringent.

G. Gutter and Downspout Anchorage Devices: Material as specified for system.

PART 3 – EXECUTION

1.1 EXECUTION, GENERAL

A. Refer to Division 07 Section Common Work Results for Thermal and Moisture Protection.

1.2 PROTECTION

A. Isolate metal products from dissimilar metals, masonry or concrete with bituminous paint, tape, or slip sheet. Use gasketed fasteners where required to prevent corrosive reactions.

1.3 GENERAL

A. Secure fascia to wood nailers at bottom edge with a continuous cleat.

B. Fastening of metal to walls and wood blocking shall comply with building code standards.

C. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.

D. Allow sufficient clearances for expansion and contraction of linear metal components. Secure metal using fasteners as required by the system. Exposed face fastening will be rejected.

1.4 INSPECTION

A. Verify that curbs are solidly set and nailing strips located.

B. Perform field measurements prior to fabrication.

C. Coordinate work with work of other trades.

D. Verify that substrate is dry, clean and free of foreign matter.

E. Commencement of installation shall be considered acceptance of existing conditions.

1.5 MANUFACTURED SHEET METAL SYSTEMS

A. Furnish and install manufactured fascia systems in strict accordance with manufacturer's printed instructions.

B. Provide factory-fabricated accessories including, but not limited to, fascia extenders, miters, joint covers, etc. Refer to Source limitation provision in Part 1.

1.6 SHOP-FABRICATED SHEET METAL

A. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.

B. Hem exposed edges.

C. Angle bottom edges of exposed vertical surfaces to form drip.

D. Lap corners with adjoining pieces fastened and set in sealant.

E. Form joints for gravel stop fascia system, coping cap with a 3/8" opening between sections. Back the opening with an internal drainage plate formed to the profile of fascia piece.

F. Install sheet metal to comply with referenced ANSI/SPRI, SMACNA and NRCA standards.

1.7 FLASHING MEMBRANE INSTALLATION

A. Edge Metal With Gutter
   1. Position base plies of the Built-Up and/or Modified Roofing membrane over the roof edge covering nailers completely, fastening eight (8) inches on center. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.

2. Install gutter and strapping fastening six (6) inches on center.
3. Install continuous cleat on face of nailer and fasten six (6) inches on center.
4. Install new edge metal hooked to continuous cleat. Set metal flange into roofing cement, nail every three (3) inches on center, and prime at a rate of one hundred (100) square feet per gallon.
5. Strip in edge metal with base flashing membrane extending six (6) inches into roof field, followed with a cap sheet extending nine (9) inches into the roof field. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.

1.8 CLEANING

A. Clean installed work in accordance with the manufacturer's instructions.

B. Replace damaged work than cannot be restored by normal cleaning methods.

1.9 CONSTRUCTION WASTE MANAGEMENT

A. Remove and properly dispose of waste products generated. Comply with requirements of authorities having jurisdiction.

1.10 FINAL INSPECTION

A. At completion of installation and associated work, meet with Contractor, Architect, installer, installer of associated work, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.

B. Inspect work and flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish a copy of list to each party in attendance.

C. Repair or replace deteriorated or defective work found at time above inspection as required to a produce an installation which is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

D. Notify the Architect upon completion of corrections.

E. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.

F. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty-four (24) hours, the Owner will exercise rights to correct the Work under the terms of the Conditions of the Contract.

1.11 DEMONSTRATION AND TRAINING

A. At a time and date agreed to by the Owner, instruct the Owner's facility manager, or other representative designated by the Owner, on the following procedures:
1. Troubleshooting procedures.
2. Notification procedures for reporting leaks or other apparent roofing problems.
3. Maintenance.

4. The Owner’s obligations for maintaining the warranty in effect and force.
5. The Manufacturer’s obligations for maintaining the warranty in effect and force.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes sealants for the following applications:

1. Exterior joints in the following vertical surfaces and nontraffic horizontal surfaces:

a. Control and expansion joints in unit masonry.
b. Joints in and between copings, flashing, fascia trim.
c. Perimeter joints and joints between different materials listed above.

1.2 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

A. Product Data: Submit complete printed data for each joint-sealant product indicated.

B. Samples: Submit manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Preconstruction Field Test Reports: Submit preconstruction field test reports. Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.

D. Field Adhesion Test Reports: Submit field adhesion test report log.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

C. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to joint substrates as follows:

1. Locate test joints where indicated or, if not indicated, as directed by Architect.
2. Conduct field tests for each type of elastomeric sealant and joint substrate indicated.
3. Notify Architect seven days in advance of dates and times when test joints will be erected.

4. Test Method: Test joint sealants by hand-pull method described below:

    a. Install joint sealants in 60-inch- (1500-mm-) long joints using same materials and methods for joint preparation and joint-sealant installation required for the completed Work. Allow sealants to cure fully before testing.
    b. Make knife cuts from one side of joint to the other, followed by two cuts approximately 2 inches (50 mm) long at sides of joint and meeting cross cut at one end. Place a mark 1 inch (25 mm) from cross-cut end of 2-inch (50-mm) piece.
    c. Use fingers to grasp 2-inch (50-mm) piece of sealant between cross-cut end and 1-inch (25-mm) mark; pull firmly at a 90-degree angle or more in direction of side cuts while holding a ruler along side of sealant. Pull sealant out of joint to the distance recommended by sealant manufacturer for testing adhesive capability, but not less than that equaling specified maximum movement capability in extension; hold this position for 10 seconds.
    d. For joints with dissimilar substrates, check adhesion to each substrate separately. Do this by extending cut along one side, checking adhesion to opposite side, and then repeating this procedure for opposite side.

5. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:

    1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
    2. When joint substrates are wet.

B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

1.7 WARRANTY

A. Special Installer's Warranty: Submit written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

1. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range for this characteristic at each material.

B. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant in the Elastomeric Joint-Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.

C. Additional Movement Capability: Where additional movement capability is specified in the Elastomeric Joint-Sealant Schedule, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C 920 for uses indicated.

D. Stain-Test-Response Characteristics: Where elastomeric sealants are specified in the Elastomeric Joint-Sealant Schedule to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.2 ELASTOMERIC SEALANT MATERIALS

A. Elastomeric Sealant (PB); for use w/sheet metal flashing and trim: Polyurethane based, one-part elastomeric sealant complying with ASTM C920, Type S, Grade NS, Class 25.

B. One-Part Silicone Sealant (SCS); for use w/masonry: Low-Modulus Nonacid-Curing Silicone Sealant : Where joint sealants of this type are indicated, provide products complying with the following:

1. Products: Provide one of the following :

a. Dow Corning: Dow Corning 790
b. Momentive / GE: SCS2000 SilPruf
c. Sonneborn/BASF: Omniseal

2. Type and Grade: S (single component) and NS (nonsag).

3. Class: 25.
4. Additional Movement Capability: 50 percent movement in extension and 50 percent movement in compression for a total of 100 percent movement.
5. Use Related to Exposure: NT (nontraffic).
6. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.

2.3 BUTYL SEALANT

A. Mastic Sealant (MS); for use w/sheet metal flashing and trim movement joints: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

2.4 JOINT SEALANT BACKING

A. Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

1. Type C: Closed-cell material with a surface skin, unless open cell is indicated or recommended by sealant manufacturer.
2. Type O: Open-cell material.
3. Type B: Bicellular material with a surface skin.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air. Porous joint surfaces include the following:

    a. Masonry.

B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.

3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.

E. Install sealants by proven techniques to comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses provided for each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealants from surfaces adjacent to joint.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field-test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed elastomeric sealant joints as follows:

a. Perform 10 tests for the first 1000 feet (300 m) of joint length for each type of elastomeric sealant and joint substrate.
b. Perform one test for each 1000 feet (300 m) of joint length thereafter or one test per each floor per elevation.

2. Test Method: Test joint sealants by hand-pull method described below:

a. Make knife cuts from one side of joint to the other, followed by two cuts approximately 2 inches (50 mm) long at sides of joint and meeting cross cut at one end. Place a mark 1 inch (25 mm) from cross-cut end of 2-inch (50-mm) piece.
b. Use fingers to grasp 2-inch (50-mm) piece of sealant between cross-cut end and 1-inch (25-mm) mark; pull firmly at a 90-degree angle or more in direction of side cuts while holding a ruler along side of sealant. Pull sealant out of joint to the distance recommended by sealant manufacturer for testing adhesive capability, but not less than that equaling specified maximum movement capability in extension; hold this position for 10 seconds.

c. For joints with dissimilar substrates, check adhesion to each substrate separately. Do this by extending cut along one side, checking adhesion to opposite side, and then repeating this procedure for opposite side.

3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field adhesion test log.
4. Inspect tested joints and report on the following:

   a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field- adhesion hand-pull test criteria.
   b. Whether sealants filled joint cavities and are free from voids.
   c. Whether sealant dimensions and configurations comply with specified requirements.

5. Record test results in a field adhesion test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
6. Repair sealants pulled from test area by applying new sealants following same procedures used to originally seal joints. Ensure that original sealant surfaces are clean and new sealant contacts original sealant.

3.5 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Preliminary Acceptance. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

3.7 SEALANT SCHEDULE

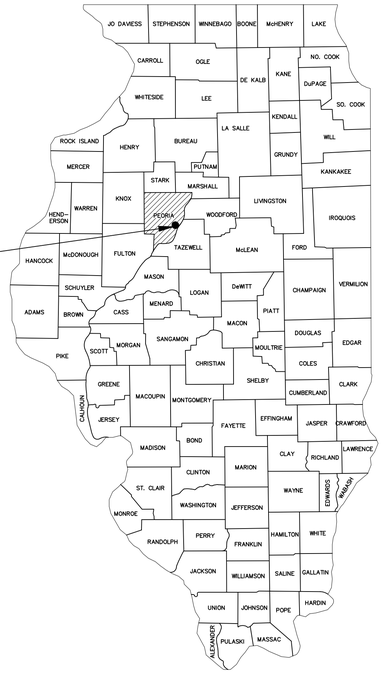
TYPE	POLYMER	EXPOSURE/TRAFFIC	USES/APPLICATIONS
SCS	Silicone	Exterior joints in vertical surfaces.	• Control and expansion joints in masonry.
MS	Polyisobutylene	Exterior concealed, non-traffic	• To seal sheet metal; heavy bodied for hooked-type expansion joints with limited movement
PB	Polyurethane	Exterior exposed, non-traffic	• To seal sheet metal / flashing applications watertight

END OF SECTION

TREWYN PARK PAVILION ROOF REPLACEMENT
2219 SOUTH IDAHO STREET
PEORIA, IL 61605

PEORIA PARK DISTRICT
PLANNING, DESIGN, AND CONSTRUCTION DIVISION
1314 N PARK ROAD
PEORIA, IL 61604

PROJECT LOCATION



N

Site Location
N.T.S.

TREWYN PARK PAVILION

INDEX OF DRAWINGS

SHEET	DESCRIPTION
G1.0	COVER SHEET
G3.0	EXISTING CONDITIONS OF SCOPE DESIGNS
A1.0	DEMOLITION AND NEW WORK PLANS
A3.0	ELEVATIONS AND DETAILS
A6.0	FLASHING DETAILS
S1.0	GENERAL NOTES
S2.0	DEMOLITION/EXISTING UPPER ROOF DETAILS
S3.0	PROPOSED ROOF FRAMING PLAN AND DETAILS
S4.0	PROPOSED ROOF DETAILS
S5.0	PROPOSED ROOF DETAILS

KRISTOPHER FIELDS
081-005714
STATE OF ILLINOIS
DATE SIGNED : 5-4-16
LIC. EXP. DATE : 11/30/2016

TREWYN PARK PAVILION ROOF REPLACEMENT
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PEORIA, IL 61605

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PHONE: 312.829.3355
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TERRA ENGINEERING, LTD.
Peoria, IL
Structural Engineer of Record

TERRA ENGINEERING LTD.

Issuance

Mark	Description	Date
	BID/PERMIT	05/04/16

Project Name: Trewyn Park Pavilion Roof Replacement
TERRA Project No.: 14-262
Title
COVER SHEET

Sheet
G1.0

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

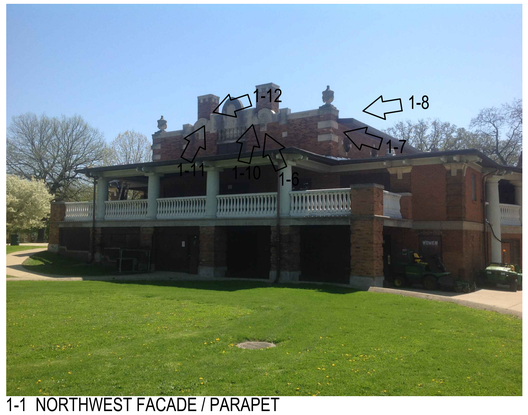
4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

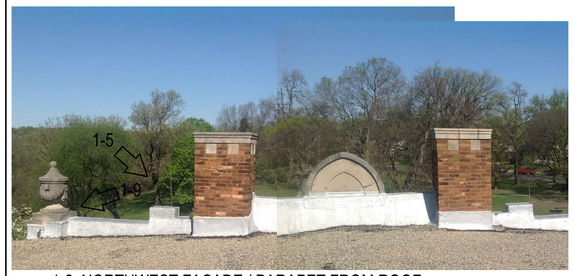
1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"



1-1 NORTHWEST FACADE / PARAPET



1-2 NORTHWEST FACADE / PARAPET FROM ROOF
(ALSO REFER TO 2/A3.0)

1-3 SOUTHEAST FACADE / PARAPET VIEWED FROM SOUTH CORNER

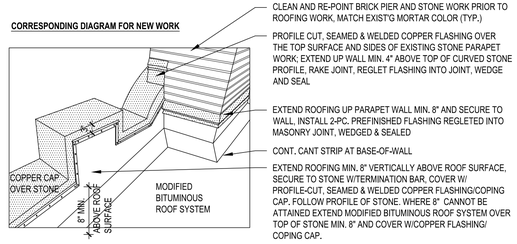
1-4 SOUTHEAST FACADE / PARAPET VIEWED FROM ROOF
(ALSO REFER TO 1/A3.0)

1 G3.0 EXISTING CONDITIONS AND SCOPE DIAGRAMS
SCALE: 1/4" = 1'-0"

PRE-CONSTRUCTION PHOTOGRAPH

1-5 NW PIER ROOF SIDE
(1 SIM, 1 OPP)

CORRESPONDING DIAGRAM FOR NEW WORK



CLEAN AND RE-POINT BRICK PIER AND STONE WORK PRIOR TO ROOFING WORK, MATCH EXISTG MORTAR COLOR (TYP.)

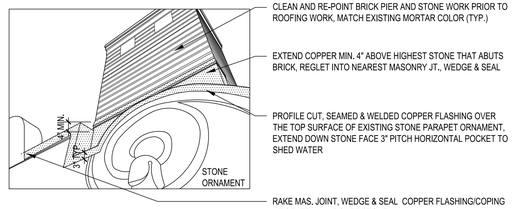
PROFILE CUT, SEAMED & WELDED COPPER FLASHING OVER THE TOP SURFACE AND SIDES OF EXISTING STONE PARAPET WORK; EXTEND UP WALL MIN. 4" ABOVE TOP OF CURVED STONE PROFILE, RAKE JOINT, REGLET FLASHING INTO JOINT, WEDGE AND SEAL

EXTEND ROOFING UP PARAPET WALL MIN. 8" AND SECURE TO WALL, INSTALL 2-PC. PREFINISHED FLASHING REGLETED INTO MASONRY JOINT, WEDGED & SEALED

CONT. CANT STRIP AT BASE-OF-WALL

EXTEND ROOFING MIN. 8" VERTICALLY ABOVE ROOF SURFACE, SECURE TO STONE W/TERMINATION BAR, COVER W/ PROFILE-CUT, SEAMED & WELDED COPPER FLASHING/COPING CAP, FOLLOW PROFILE OF STONE. WHERE 8" CANNOT BE ATTAINED EXTEND MODIFIED BITUMINOUS ROOF SYSTEM OVER TOP OF STONE MIN. 8" AND COVER W/COPPER FLASHING/ COPING CAP.

1-6 NW PIER EXT. FACE
(1 SIM, 1 OPP)



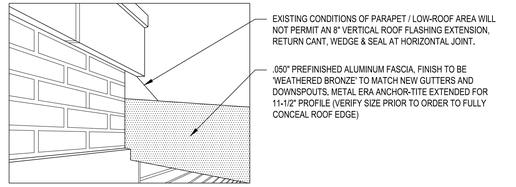
CLEAN AND RE-POINT BRICK PIER AND STONE WORK PRIOR TO ROOFING WORK, MATCH EXISTING MORTAR COLOR (TYP.)

EXTEND COPPER MIN. 4" ABOVE HIGHEST STONE THAT ABUTS BRICK, REGLET INTO NEAREST MASONRY JT., WEDGE & SEAL

PROFILE CUT, SEAMED & WELDED COPPER FLASHING OVER THE TOP SURFACE OF EXISTING STONE PARAPET ORNAMENT, EXTEND DOWN STONE FACE 3" PITCH HORIZONTAL POCKET TO SHED WATER

RAKE MAS. JOINT, WEDGE & SEAL COPPER FLASHING/COPING AT CENTRAL MARQUEE STONE

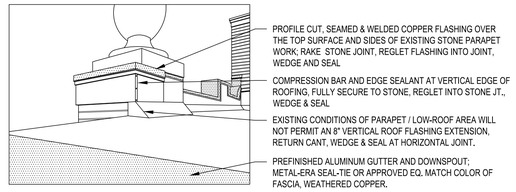
1-7 NW PIER TO ROOF CORNER
(2 SIM, 2 OPP)



EXISTING CONDITIONS OF PARAPET / LOW-ROOF AREA WILL NOT PERMIT AN 8" VERTICAL ROOF FLASHING EXTENSION, RETURN CANT, WEDGE & SEAL AT HORIZONTAL JOINT.

.050" PREFINISHED ALUMINUM FASCIA, FINISH TO BE 'WEATHERED BRONZE' TO MATCH NEW GUTTERS AND DOWNSPOUTS. METAL ERA ANCHOR-TITE EXTENDED FOR 11-1/2" PROFILE (VERIFY SIZE PRIOR TO ORDER TO FULLY CONCEAL ROOF EDGE)

1-8 W CORNER
(2 SIM, 2 OPP)



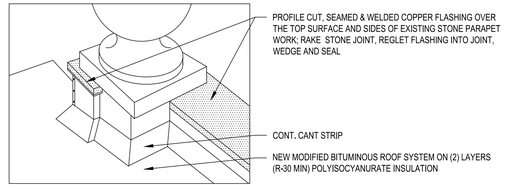
PROFILE CUT, SEAMED & WELDED COPPER FLASHING OVER THE TOP SURFACE AND SIDES OF EXISTING STONE PARAPET WORK; RAKE STONE JOINT, REGLET FLASHING INTO JOINT, WEDGE AND SEAL

COMPRESSION BAR AND EDGE SEALANT AT VERTICAL EDGE OF ROOFING, FULLY SECURE TO STONE, REGLET INTO STONE JT., WEDGE & SEAL

EXISTING CONDITIONS OF PARAPET / LOW-ROOF AREA WILL NOT PERMIT AN 8" VERTICAL ROOF FLASHING EXTENSION, RETURN CANT, WEDGE & SEAL AT HORIZONTAL JOINT.

PREFINISHED ALUMINUM GUTTER AND DOWNSPOUT; METAL-ERA SEAL-TIE OR APPROVED EQ. MATCH COLOR OF FASCIA, WEATHERED COPPER.

1-9 W CORNER
(2 SIM, 2 OPP)



PROFILE CUT, SEAMED & WELDED COPPER FLASHING OVER THE TOP SURFACE AND SIDES OF EXISTING STONE PARAPET WORK; RAKE STONE JOINT, REGLET FLASHING INTO JOINT, WEDGE AND SEAL

CONT. CANT STRIP

NEW MODIFIED BITUMINOUS ROOF SYSTEM ON (2) LAYERS (R-30 MIN) POLYISOCYANURATE INSULATION

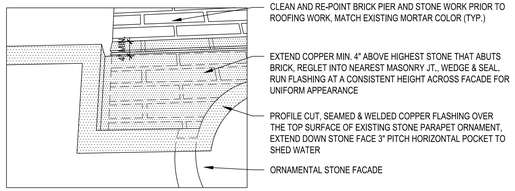
GENERAL NOTES:

1. RESTORE AND CLEAN EXISTING PENTHOUSE BRICK AND STONE PRIOR TO ROOF WORK. REMOVE ALL LOOSE MASONRY, GROUT, MORTAR, ETC. REMOVE ALL ACCUMULATED DIRT, ROOFING MATERIALS, FLASHINGS, SHEET-METAL, MASTIC, SEALANT, ETC. PATCH ALL CRACKS AND FILL ALL HOLES, RE-POINT ALL MASONRY WITH MORTAR TO MATCH EXISTING COLOR AND TEXTURE.
2. WHERE REPAIR CANNOT BE DONE TO UNITS REPLACE DAMAGED BRICK AND STONE WITH REPLACEMENT MATERIAL OF COLOR AND FINISH TO MATCH EXISTING.
3. PROTECT ALL EXISTING WORK TO REMAIN INCLUDING, BUT NOT LIMITED TO, LOW ROOFS, FLASHINGS, ROOF PENETRATIONS, VENTILATION FLUES, ETC. REPAIR OR REPLACE IF DAMAGED.
4. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, AND TECHNIQUES REQUIRED TO IMPLEMENT THE WORK.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR JOBSITE SAFETY.
6. CONTRACTOR IS SOLELY RESPONSIBLE FOR EVALUATING THE NEED FOR, DESIGN OF, AND IMPLEMENTATION OF TEMPORARY SHORING AND BRACING OF THE EXISTING STRUCTURE, WHERE REQUIRED TO IMPLEMENT THE WORK.
7. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD. SUBMITTED SHOP DRAWINGS SHALL BE BASED UPON FIELD-VERIFIED DIMENSIONS. CONTRACTOR IS RESPONSIBLE FOR PROPER FIT OF THE WORK IN THE FIELD.

PRE-CONSTRUCTION PHOTOGRAPH

1-10 PARAPET TO BRICK SM. GAP
(1 SIM)

CORRESPONDING DIAGRAM FOR NEW WORK



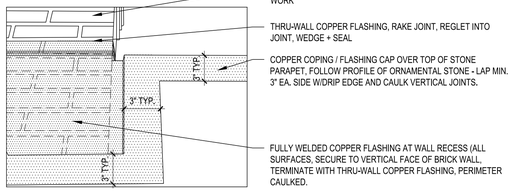
CLEAN AND RE-POINT BRICK PIER AND STONE WORK PRIOR TO ROOFING WORK, MATCH EXISTING MORTAR COLOR (TYP.)

EXTEND COPPER MIN. 4" ABOVE HIGHEST STONE THAT ABUTS BRICK, REGLET INTO NEAREST MASONRY JT., WEDGE & SEAL. RUN FLASHING AT A CONSISTENT HEIGHT ACROSS FACADE FOR UNIFORM APPEARANCE

PROFILE CUT, SEAMED & WELDED COPPER FLASHING OVER THE TOP SURFACE OF EXISTING STONE PARAPET ORNAMENT, EXTEND DOWN STONE FACE 3" PITCH HORIZONTAL POCKET TO SHED WATER

ORNAMENTAL STONE FACADE

1-11 PARAPET TO BRICK LG. GAP
(1 SIM)



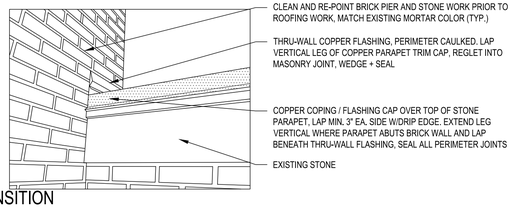
EXISTING BRICK PIER, CLEANED + TUCKPOINTED PRIOR TO WORK

THRU-WALL COPPER FLASHING, RAKE JOINT, REGLET INTO JOINT, WEDGE + SEAL

COPPER COPING / FLASHING CAP OVER TOP OF STONE PARAPET, FOLLOW PROFILE OF ORNAMENTAL STONE - LAP MIN. 3" EA. SIDE W/DRIP EDGE AND CAULK VERTICAL JOINTS.

FULLY WELDED COPPER FLASHING AT WALL RECESS (ALL SURFACES, SECURE TO VERTICAL FACE OF BRICK WALL, TERMINATE WITH THRU-WALL COPPER FLASHING, PERIMETER CAULKED.

1-12 TYP. PARAPET TO BRICK TRANSITION
(3 SIM, 3 OPP)

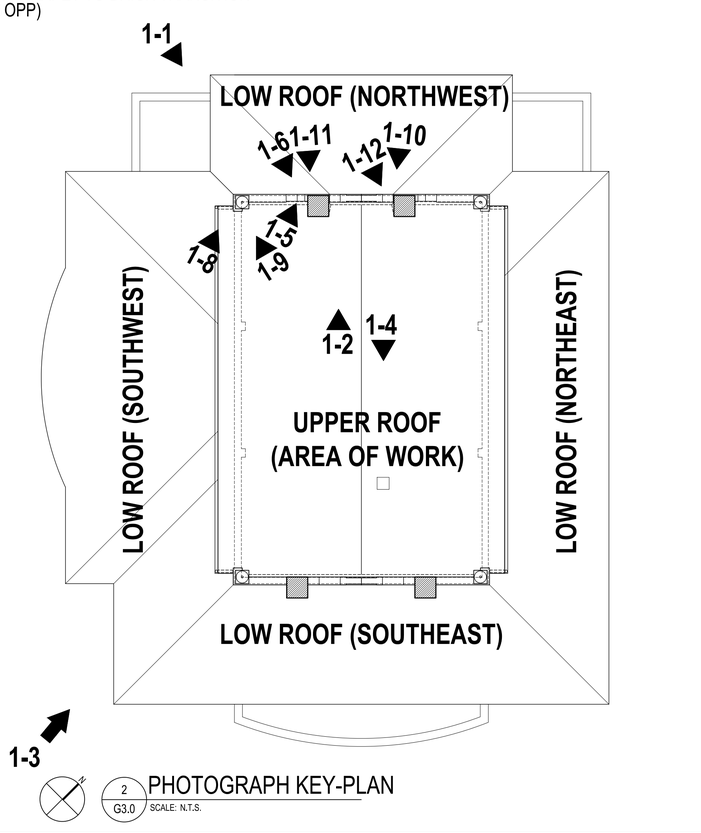


CLEAN AND RE-POINT BRICK PIER AND STONE WORK PRIOR TO ROOFING WORK, MATCH EXISTING MORTAR COLOR (TYP.)

THRU-WALL COPPER FLASHING, PERIMETER CAULKED. LAP VERTICAL LEG OF COPPER PARAPET TRIM CAP, REGLET INTO MASONRY JOINT, WEDGE + SEAL

COPPER COPING / FLASHING CAP OVER TOP OF STONE PARAPET, LAP MIN. 3" EA. SIDE W/DRIP EDGE, EXTEND LEG VERTICAL WHERE PARAPET ABUTS BRICK WALL AND LAP BENEATH THRU-WALL FLASHING, SEAL ALL PERIMETER JOINTS

EXISTING STONE



2 G3.0 PHOTOGRAPH KEY-PLAN
SCALE: N.T.S.

STATE OF ILLINOIS
TODD A. NIEMIEC
001-022702
LICENSED ARCHITECT

TREWYN PARK PAVILION ROOF REPLACEMENT

2219 SOUTH IDAHO ST
PEORIA, IL 61605

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TERRA ENGINEERING LTD.
TERRA ENGINEERING, LTD.
Peoria, IL
Structural Engineer of Record

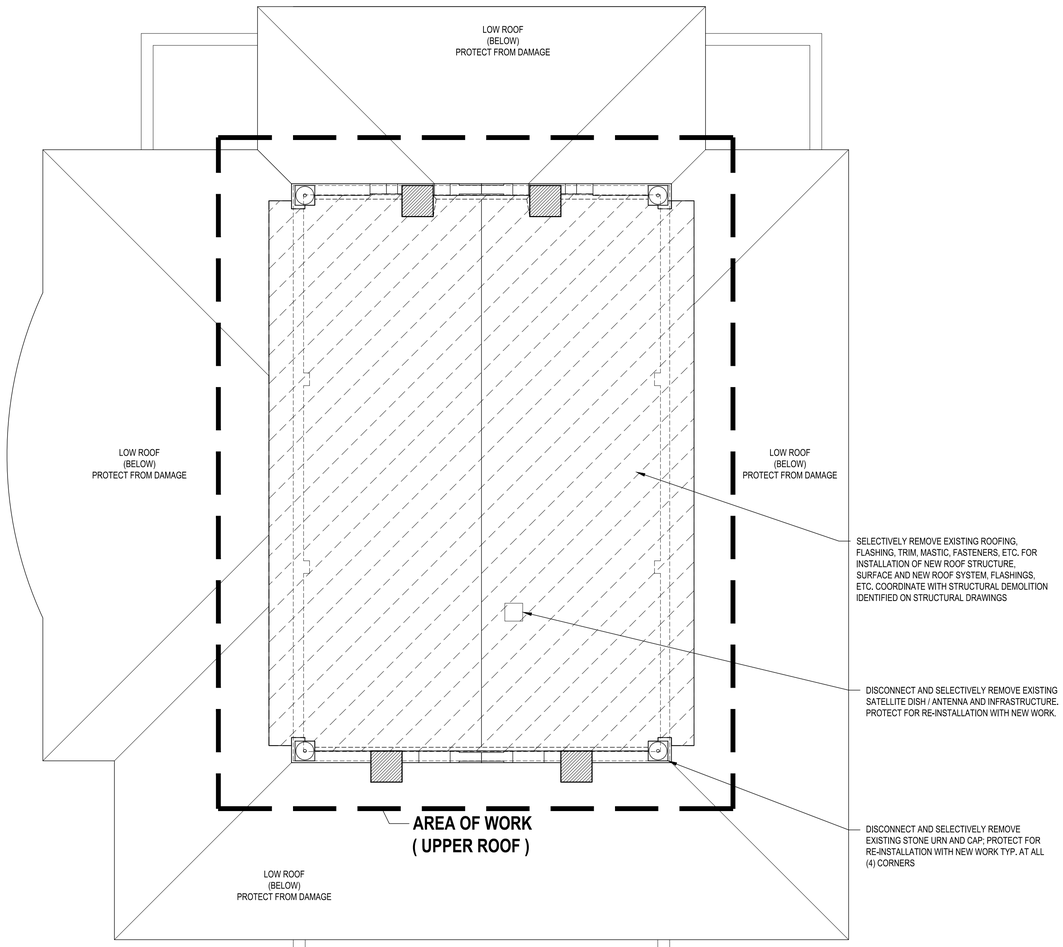
Issuance

Mark	Description	Date
1	FOR COORDINATION	02/08/16
2	FOR COORDINATION	03/18/16
3	FOR CLIENT REVIEW	03/22/16
4	REVIEW REVISIONS	03/29/16
5	BID/PERMIT	05/04/16

Project Name: Trewyn Park Pavilion Roof Replacement
SMNG-A Project No.: 1422

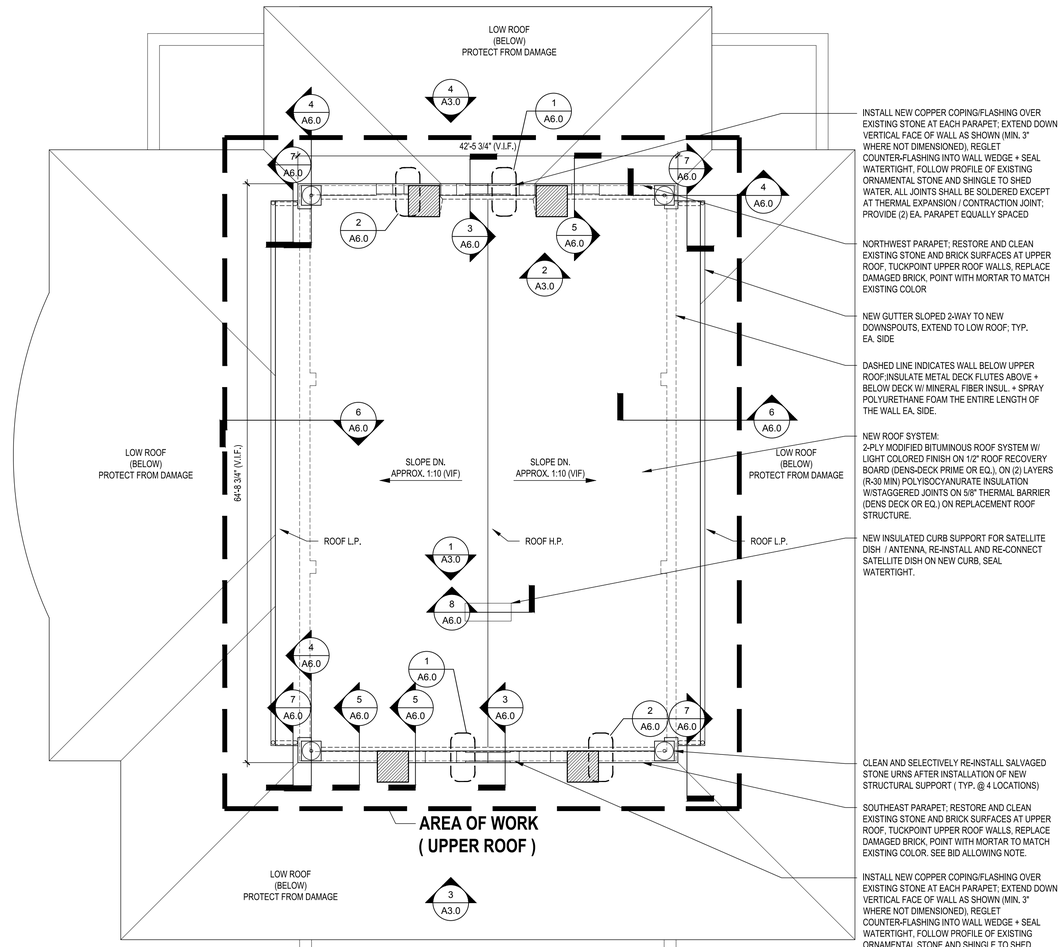
Title
EXISTING CONDITIONS & SCOPE DIAGRAMS

Sheet
G3.0



1 / A1.0 ROOF PLAN - DEMOLITION

SCALE: 1/8" = 1'



2 / A1.0 ROOF PLAN - NEW WORK

SCALE: 1/8" = 1'

GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN FIELD PRIOR TO PROCEEDING WITH WORK AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
2. THE CONTRACTOR SHALL COORDINATE ALL UTILITY DISCONNECTION, CAPPING, AND REMOVAL AS REQUIRED FOR DEMOLITION ACTIVITIES PRIOR TO COMMENCEMENT OF DEMOLITION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING NECESSARY TO IMPLEMENT THE WORK
4. EXISTING ROOFING/CURBS, MASTIC, FLASHINGS, ETC. AT UPPER ROOF SHALL BE REMOVED, AND STONE/BRICK CLEANED AND TUCK-POINTED AT UPPER ROOF WALLS PRIOR TO ROOF WORK.
5. CONTRACTOR SHALL COORDINATE ALL REMOVAL WORK WITH THE REQUIREMENTS OF NEW CONSTRUCTION WORK SHOWN ON OTHER DRAWINGS AND AS DESCRIBED IN THE PROJECT SPECIFICATIONS.
6. THE CONTRACTOR SHALL PROTECT ADJACENT AREAS FROM DAMAGE. AREAS OF WORK DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE REPLACED OR RESTORED TO ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE LEGAL DISPOSAL OF ALL DEMOLISHED MATERIALS.
8. LEAD BASED PAINT MAY BE PRESENT WITHIN THE BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE APPLICABLE FEDERAL, STATE AND LOCALE RULES AND REGULATIONS INCLUDING OSHA (1926.62) COMPLIANCE, WASTE CHARACTERIZATION AND WASTE DISPOSAL.

GENERAL NEW CONSTRUCTION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES AND SCHEDULING SEQUENCES FOR IMPLEMENTATION OF THE WORK.
2. DIMENSIONS SHOWN ARE APPROXIMATE; CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO WORK. FIELD-VERIFIED DIMENSIONS SHALL BE REFLECTED ON SHOP DRAWINGS SUBMITTED FOR REVIEW PRIOR TO WORK.
3. PROPOSED DEVIATIONS FROM DRAWINGS SHOWN (IF ANY) SHALL BE SUBMITTED TO ROOF MANUFACTURER REPRESENTATIVE AND ARCHITECT, DURING BID PERIOD, FOR REVIEW PRIOR TO SUBMISSION OF BID FOR CONSIDERATION. DEVIATIONS AFTER SUBMISSION OF BID WILL NOT BE CONSIDERED.
4. STONE AND BRICK AT THE UPPER ROOF LEVEL SHALL BE CLEANED AND TUCK-POINTED AT UPPER ROOF WALLS PRIOR TO ROOF WORK. ANY LOOSE, DAMAGED, OR DISLODGED MASONRY MATERIALS SHALL BE REMOVED AND RESTORED TO SOUND STRUCTURAL CONDITION AND SHALL MATCH ADJACENT WORK. ANY DEVIATIONS IN WALL PROFILE AFTER DEMOLITION WORK SHALL BE IDENTIFIED AND ADDRESSED ON SHOP DRAWINGS SUBMITTED FOR REVIEW, SHALL BE INCIDENTAL TO THE WORK, AND INCLUDED WITHIN THE PROJECT SCOPE.
5. A SELF-ADHERING VAPOR BARRIER SHALL BE INSTALLED OVER THE METAL DECK AT THE COMPLETION OF EACH DAYS WORK TO ENSURE WATER TIGHTNESS UNTIL THE ROOFERS BEGIN THE ROOF INSTALLATION PROCESS.

ROOF WORK GENERAL CONDITIONS:

1. ALL MATERIALS SHOULD BE PROTECTED FROM WEATHER AND FREEZING TEMPERATURES. IF TEMPERATURES ARE EXPECTED TO GO BELOW 40-DEGREES FAHRENHEIT, THEN ALL MATERIALS SHALL BE PLACED IN A HOT BOX ON SITE, OR RETURNED TO CONTRACTOR'S SHOP FOR SAFE AND DRY KEEPING. ANY MATERIALS LEFT ON SITE DURING COLD WEATHER, OR THAT BECOME WET DUE TO MOISTURE FROM IMPROPER PROTECTION, SHALL NT BE USED IN THE ROOFING ACTIVITY AND MUST BE REPLACED WITH NEW MATERIAL AT NO ADDITIONAL COST OR TIME EXTENSION TO THE CONTRACT.
2. DO NOT EXPOSE MATERIALS THAT ARE VULNERABLE TO WATER OR UV DEGRADATION IN QUANTITIES THAT CAN BE APPLIED AND PROTECTED THE SAME DAY.
3. A PORT-A-JOHN (TOILET) AND DUMPSTER SHALL BE REQUIRED ON SITE FOR USE BY CONSTRUCTION PERSONNEL / ACTIVITIES. BOTH SHALL BE PLACED IN A LOCATION PRE-APPROVED BY OWNER. BOTH SHALL BE MAINTAINED IN A CLEAN CONDITION THROUGHOUT THE DURATION OF WORK.
4. THE EXISTING BUILDING IS A SECURE FACILITY, NO CONSTRUCTION RELATED PERSONNEL SHALL ENTER THE FACILITY WITHOUT THE EXPRESS PERMISSION OF THE OWNER'S DESIGNATED REPRESENTATIVE.
5. COORDINATE WORK ACTIVITIES DAILY WITH THE OWNER'S DESIGNATED REPRESENTATIVE DURING THE COURSE OF WORK. THE OWNER REQUIRES 48- HOUR ADVANCED NOTICE PRIOR TO MOVEMENT OF MATERIALS AND EQUIPMENT TO A DIFFERENT LOCATION WITHIN THE PROPERTY. NOTIFICATION OF WORK MUST BE MADE IN WRITING TO OWNER'S REPRESENTATIVE.
6. CONTRACTOR SHALL PERFORM ALL WORK IN A PROFESSIONAL MANNER AND AS SPECIFIED IN THE CONTRACT DOCUMENTS. RAIN PRECAUTIONS MUST BE FOLLOWED DAILY. ANY LEAKS AND DAMAGE CAUSED BY LEAKS ARE THE CONTRACTOR'S RESPONSIBILITY. THE WORK AREA SHALL BE CLEANED DAILY AND ALL MATERIALS SHALL BE PROPERLY STORED AT THE END OF EACH WORK DAY.
7. THE EXISTING BUILDING, ADJACENT BUILDINGS OR STRUCTURES, WALKWAYS, SITE IMPROVEMENTS, LANDSCAPING, EXTERIOR PLANTINGS, VEHICLES, AND OTHER SURFACES IN THE VICINITY OF THE WORK SHALL BE PROTECTED FROM DIRT, DUST, DEBRIS, AND DAMAGE DUE TO CONSTRUCTION ACTIVITIES.
8. BEFORE WORKING ON AREAS OF THE WALKWAY THAT CAN PENETRATE TO AREAS BELOW, NOTIFY OWNER'S DESIGNATED REPRESENTATIVE A MINIMUM OF 48-HOURS IN ADVANCE IN ORDER TO EVACUATE THE AREA BENEATH WORK OPERATIONS.

ROOF WARRANTY:

1. UPON COMPLETION OF INSTALLATION, AND ACCEPTANCE BY OWNER'S DESIGNATED REPRESENTATIVE, THE MANUFACTURER WILL SUPPLY TO THE OWNER THE SPECIFIED WARRANTIES.
2. ROOF INSTALLER SHALL SUBMIT A THIRTY (30) YEAR WARRANTY TO MANUFACTURER AND OWNER'S DESIGNATED REPRESENTATIVE.
3. MATERIAL MANUFACTURER WILL PROVIDE AN ANNUAL SITE INSPECTION OF THE ROOF FOR THE LIFE OF THE WARRANTY.

ROOFING COMPONENT DELIVERY, STORAGE AND HANDLING:

1. DELIVER PROJECTS TO SITE WITH SEALS AND LABELS INTACT, IN MANUFACTURER'S ORIGINAL CONTAINERS, DRY AND UNDAMAGED.
2. DO NOT LEAVE UNUSED MATERIALS EXPOSED OVERNIGHT OR WHEN WORK IS NOT IN PROGRESS UNLESS PROTECTED FROM WEATHER AND OTHER MOISTURE SOURCES.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL MATERIAL AND EQUIPMENT ON THE JOB SITE AGAINST DAMAGE AND THEFT. DAMAGE TO THE FACILITY CAUSED BY THE CONTRACTOR IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED OR REPLACED AT HIS EXPENSE.

MANUFACTURER'S INSPECTIONS:

1. WHEN THE PROJECT IS IN PROGRESS, THE MATERIAL MANUFACTURER WILL PROVIDE THE FOLLOWING:
   - A. INFORM THE OWNER AS TO THE PROGRESS AND QUALITY OF THE WORK AS OBSERVED.
   - B. PROVIDE JOB SITE INSPECTIONS A MINIMUM OF FOUR DAYS A WEEK DURING PROGRESSION AS WEATHER ALLOWS.
   - C. REPORT TO THE OWNER IN WRITING ANY FAILURE OR REFUSAL OF THE CONTRACTOR TO CORRECT UNACCEPTABLE PRACTICES OR DEFICIENT WORK CALLED TO THE CONTRACTOR'S ATTENTION.

SUMMARY SCOPE OF MASONRY RESTORATION WORK:

1. IN COORDINATION WITH ROOF AND FLASHING REMOVAL WORK AND OTHER DEMOLITION WORK, THE CONTRACTOR SHALL REMOVE ALL MASTICS AND SEALANTS FROM EXISTING BRICK, STONE AND MORTAR MATERIALS. BRICK AND STONE SHALL BE TUCKPOINTED WITH POINTING MORTAR OF CUSTOM COLOR AND TYPE TO MATCH EXISTING. SAMPLES AND A MOCK-UP SHALL BE PREPARED FOR OWNER / ARCHITECT APPROVAL PRIOR TO IMPLEMENTATION OF WORK.
2. DAMAGED BRICK AND STONE SHALL BE REPAIRED, DISLODGED MATERIALS SHALL BE RE-SET TO MAINTAIN INTEGRITY OF WALL.
3. BRICK AND STONE SURFACES SHALL BE 100% CLEANED FROM LOW ROOF LEVEL UP. PRIOR TO CLEANING A 4'x4' TEST AREA SHALL BE PREPARED TO ENSURE COMPATIBILITY WITH MATERIALS AND AS A MOCK-UP FOR OWNER / ARCHITECT REVIEW.
   - A. UTILIZE SURE KLEAN 766 LIMESTONE & MASONRY PREWASH AS MANUFACTURED BY PROSOCO, INC. INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER INSTRUCTIONS. CONTACT REP. JEFF LUCAS, JN LUCAS & ASSOC., INC. WITH ANY QUESTIONS 773/731-6857.
4. EXPOSED SEALANTS FOR MASONRY, WHERE REQUIRED, SHALL BE SILICONE SEALANT IN A CUSTOM COLOR TO MATCH FINISH OF CLEAN BRICK AND STONE IN WHICH IT IS UTILIZED.

SUMMARY SCOPE OF ROOF WORK:

1. MECHANICALLY ATTACH (1) LAYER 5/8" GYPSUM THERMAL BARRIER; DENS-DECK OR EQ. TO METAL DECK.
2. MECHANICALLY ATTACH (2) LAYERS OF POLYISOCYANURATE INSULATION (R-VALUE MIN. R-30 TOTAL) THROUGH GYPSUM THERMAL BARRIER AND SECURE TO METAL DECK.
3. INSTALL ONE-HALF INCH (1/2") PRIMED DENS-DECK ROOF BOARD SET IN HIGH RISE INSULATION ADHESIVE PER ASCE 7-10 UPLIFT REQUIREMENTS AS SPECIFIED.
4. INSTALL SBS (STYRENE-UTADIENE-STYRENE) MODIFIED BASE SHEET SET IN THREE (3) GALLONS OF COLD APPLIED ADHESIVE PER SQUARE.
5. INSTALL SBS (STYRENE-BUTADIENE-STYREEN) MODIFIED MINERAL CAP SHEET SET IN THREE (3) GALLONS OF COLD APPLIED ADHESIVE PER SQUARE.
6. ALL MODIFIED MINERAL SEAMS MUST BE HEAT WELDED IN THE FIELD AND AT FLASHINGS.
7. FLASHING SHALL CONSIST OF THE FOLLOWING PROCESS:
   - A. INSTALL SBS MODIFIED BASE PLY SET IN COLD APPLIED FLASHING ADHESIVE AT FIVE (5) GALLONS PER SQUARE.
   - B. INSTALL SBS MODIFIED MINERAL CAP PLY SET IN COLD APPLIED FLASHING ADHESIVE AT FIVE () GALLONS PER SQUARE.
   - C. INSTALLER TO COAT THE WALL AND BACK OF FLASHING IN ORDER TO ENSURE PROPER ADHESION.
   - D. ALL VERTICAL MINERAL FLASHING LAPS MUST BE HEAT WELDED.
8. TERMINATION BARS SHALL BE SET ON BUTYL TAPE AND TOP SURFACES SHALL BE CONTINUOUSLY SEALED. ALL TERMINATION BARS FOR ROOFING SHALL BE CONCEALED BENEATH COPPER STONE CAP FLASHING / COPING SYSTEM (SEE NOTE 14) UNLESS SPECIFICALLY DESIGNATED OTHERWISE.
9. INSTALL MANUFACTURED PRE-FINISHED SHEET METAL EDGE FLASHINGS, GUTTERS, DOWNSPOUTS, EAVE FASCIA, AND CONTINUOUS VENTED SOFFIT AS INDICATED ON DRAWINGS.
   - A. ALL EXPOSED SHEET METAL FOR ROOFING TERMINATIONS AND EAVE FLASHINGS WILL BE 22-GAUGE ALUMINUM, KYNAR 500 FINISH SELECTED FROM MFRS. FULL RANGE OF COLOR. COLOR OF FLASHINGS SHALL MATCH SELECTED GUTTER COLOR AND FINISH. CLEATS FOR PREFINISHED ALUMINUM FLASHINGS SHALL BE 16-GA. G-90 HOT-DIPPED GALVANIZED FINISH STEEL. INSTALL BUTYL TAPE TO PREVENT DIRECT CONTACT OF MATERIALS.
   - B. FACTORY FORMED GUTTERS SHALL BE .050" ALUMINUM WITH KYNAR FINISH SELECTED FROM MFRS. FULL RANGE OF COLORS. PRODUCT SHALL BE IMETCO STORM CLASS GUTTER SYSTEM OR APPROVED EQUAL WITH FULLY WELDED CORNERS, END CAPS, AND TRANSITIONS. PROVIDE ONE EXPANSION JOINT MID-SPAN EACH SIDE. DOWNSPOUTS SHALL BE OPEN-FACE .050" PREFINISHED ALUMINUM WITH BOTH THE INTERIOR AND EXTERIOR SURFACES PAINTED TO MATCH SELECTED GUTTER FINISH.
   - C. EAVE FASCIA SHALL BE .050" PREFINISHED ALUMINUM WITH KYNAR FINISH TO MATCH GUTTER COLOR AND FINISH. ALL TERMINATIONS AND JUNCTURES SHALL BE SEALED WATER-TIGHT WITH POLYURETHANE SEALANT IN CUSTOM COLOR TO MATCH.
   - D. INSTALL CONTINUOUS .040" PREFINISHED ALUMINUM CONCEALED FASTENER VENTED SOFFIT. PRODUCT SHALL BE IMETCO FW SERIES SOFFIT SYSTEM OR APPROVED EQUAL WITH VEE GROOVES (TWO EQUALLY SPACED). PROVIDE MFR. J-CLIPS / TRIM TO CONCEAL EDGES. ALL EXPOSED COMPONENTS SHALL BE PREFINISHED WITH KYNAR FINISH TO MATCH GUTTER COLOR AND FINISH.
10. INSTALL COPPER STONE CAP FLASHING/COPING SYSTEM; SYSTEM SHALL BE DELEGATED DESIGN BY CONTRACTOR (SEE SPECIFICATION). SYSTEM SHALL BE PROFILED TO SHED WATER, BE SOLDERED WATER TIGHT, DESIGNED TO RESIST WIND UPLIFT, SHALL PROTECT ROOF ANCHORAGE COMPONENTS, AND SHALL FULLY PROTECT TOP SURFACES OF PROFILED STONE PARAPET.

ALL VISIBLE AREAS OF TUCKPOINTING REQUIRED ABOVE THE UPPER ROOFLINE SHALL BE CONSIDERED A PART OF THE BASE BID. FOR BID PURPOSES, ASSUME 500 SF ADDITIONAL TUCKPOINTING AND 10 REPLACEMENT BRICKS FOR AREAS HIDDEN BEHIND CANT STRIPS AND ROOFING MATERIALS. AFTER REMOVAL OF ROOFING MATERIALS AND CANT STRIPS, IF ADDITIONAL WORK IS NEEDED BEYOND 500 SF AND 10 BRICKS, CONTRACTOR SHALL PREPARE PROPOSAL.

SUMMARY SCOPE OF INTERIOR WORK:

WORK SHALL INCLUDE RETENTION OF EXISTING CEILING GRID AND LIGHTING, REMOVAL AND REPLACEMENT OF ALL ACOUSTIC CEILING TILE WITH THE FOLLOWING:

A. Acoustical Ceiling (APC-1): Wet formed mineral fiber acoustical panels, complying with ASTM E 1264 Classification Type III, Form 1 or 2, Pattern C, D, E.

1. LOCATIONS: GYM / MULTI-PURPOSE ROOM, ALL OTHER ROOMS WITH ACOUSTIC CEILING TILE INCLUDING BACK OF HOUSE AREAS, CONTRACTOR TO REVIEW / CONFIRM QUANTITIES IN FIELD PRIOR TO BID.
2. MANUFACTURERS AND PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
   - A. ARMSTRONG WORLD INDUSTRIES, SCHOOL ZONE FINE FISSURED.
   - B. CERTAINTEED CEILINGS CORP; PERFORMA SCHOOL BOARD.
   - C. USG CORPORATION: RARDAR CLIMAPLUS HIGH-DURABILITY.
3. NRC: NOT LESS THAN 0.55.
4. CAC: NOT LESS THAN 33.
5. EDGE: SQUARE.
6. MODULAR SIZE: 24-INCHES BY 24-INCHES.
7. THICKNESS: 5/8-INCH.
8. COLOR: WHITE.

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001-022702
STATE OF ILLINOIS
LICENSED ARCHITECT

TREWYN PARK PAVILION ROOF REPLACEMENT

2219 SOUTH IDAHO ST
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Peoria, IL
Structural Engineer of Record

Issuance

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5	BID/PERMIT	05/04/16

Project Name: Trewyn Park Pavilion Roof Replacement

SMNG-A Project No.: 1422

Title

DEMO & NEW WORK PLANS

Sheet

A1.0

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

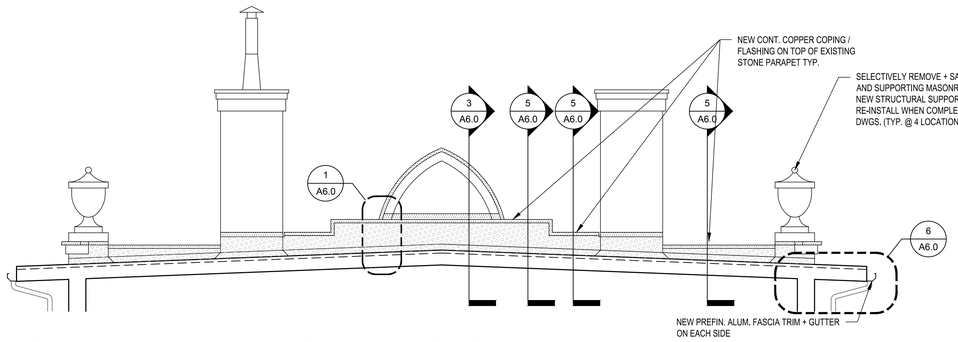
4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

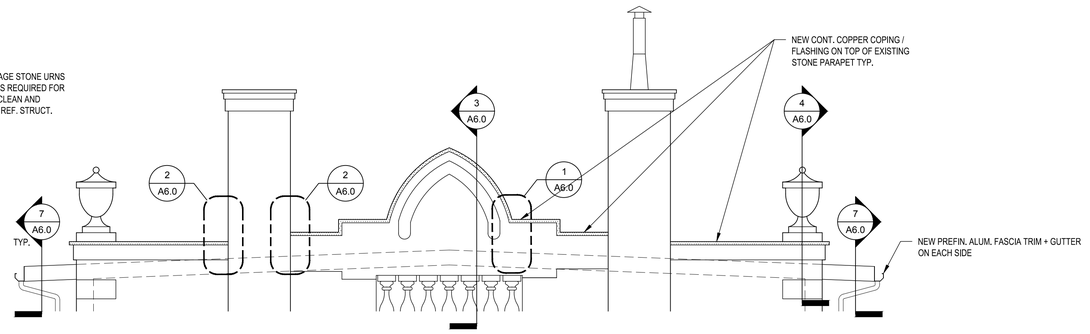
1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"



1 A3.0 SOUTHEAST PARAPET SECTION (UPPER ROOF)
SCALE: 1/4" = 1'-0"



3 A3.0 SOUTHEAST PARAPET ELEVATION (UPPER ROOF)
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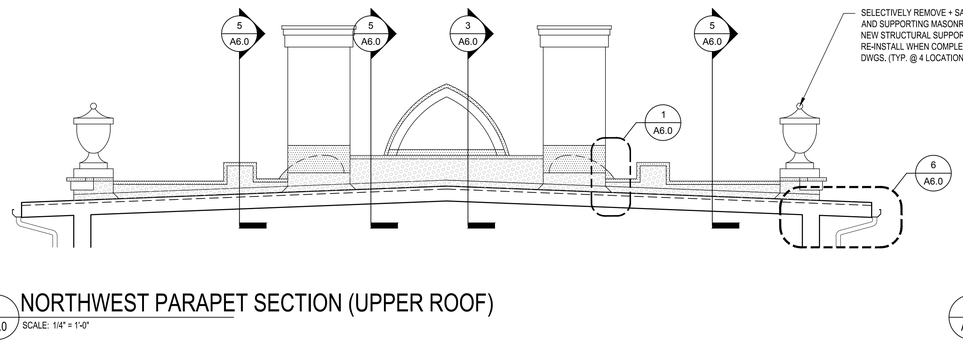

2 A3.0 NORTHWEST PARAPET SECTION (UPPER ROOF)
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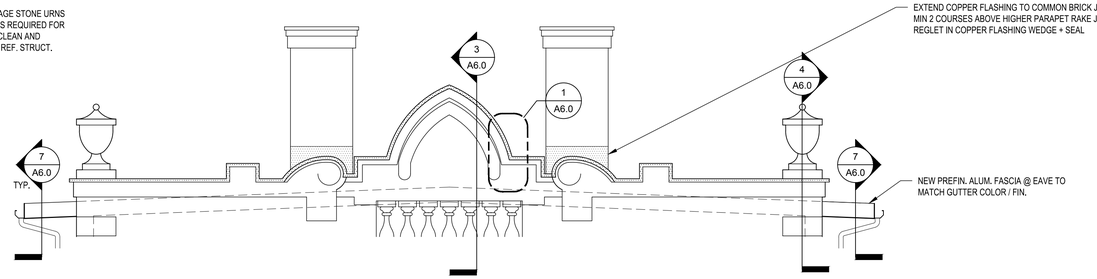

4 A3.0 NORTHWEST PARAPET ELEVATION (UPPER ROOF)
SCALE: 1/4" = 1'-0"

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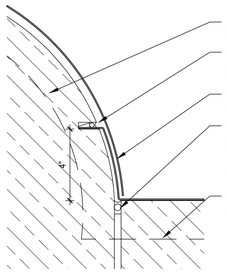
ELEVATIONS & DETAILS

Sheet

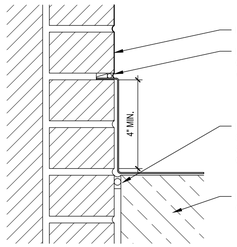
A3.0

1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0"



1 A6.0 CURVED MARQUEE PARAPET COPING DETAIL

SCALE: 3" = 1'-0"



2 A6.0 FACEBRICK & STONE PARAPET COPING DETAIL

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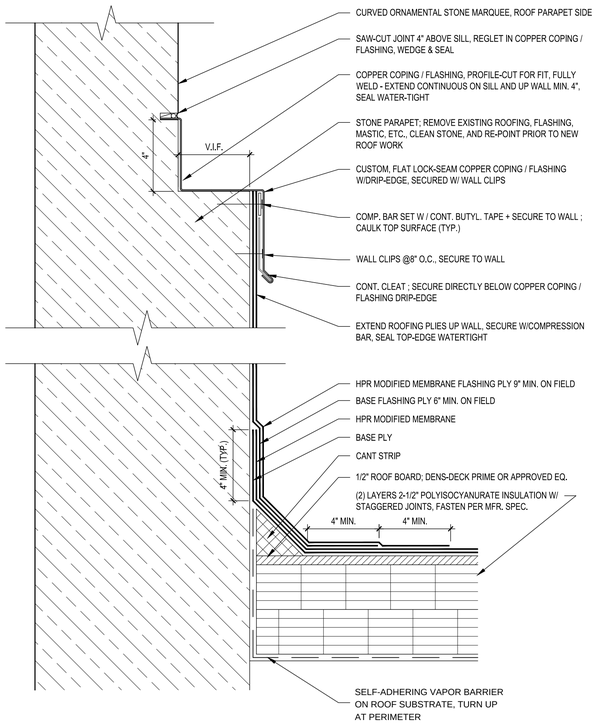

3 A6.0 STONE PARAPET COPING DETAIL

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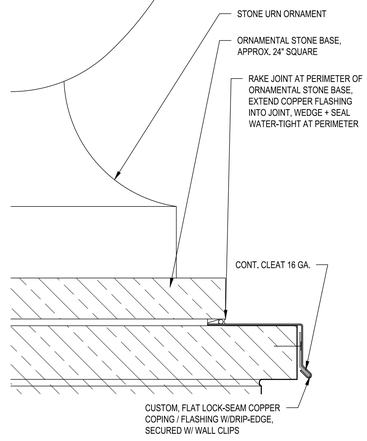

4 A6.0 STONE URN BASE COPING DETAIL

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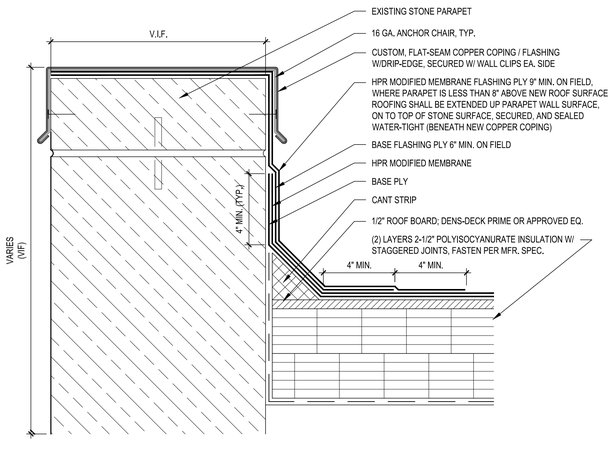

5 A6.0 STONE PARAPET COPING DETAIL

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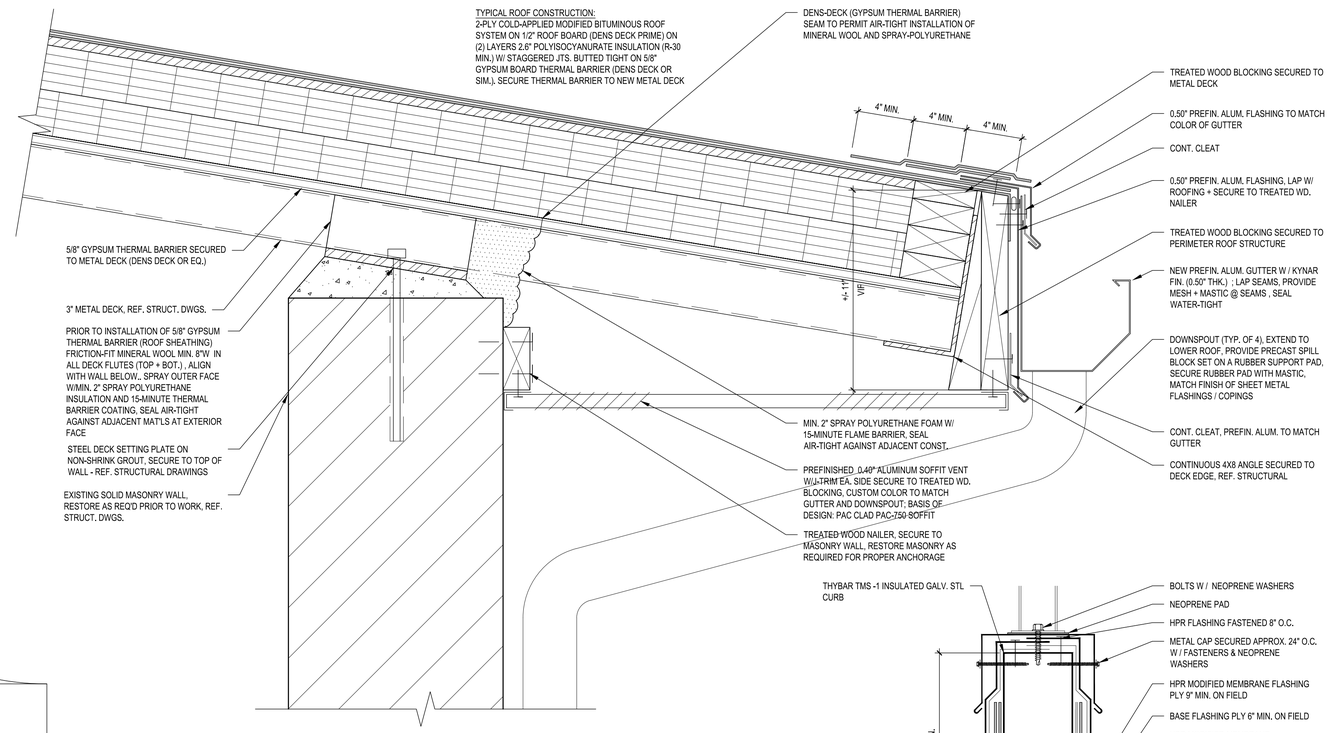

6 A6.0 ROOF COPING & GUTTER DETAIL

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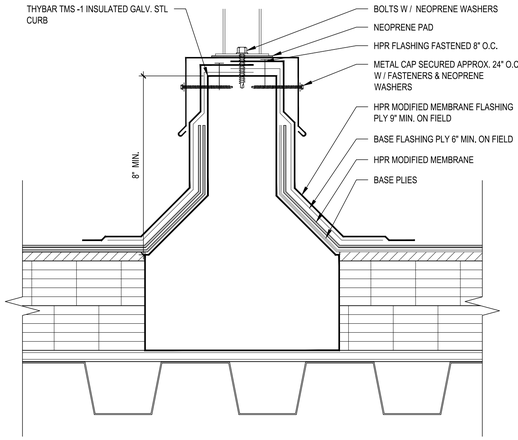

8 A6.0 CURB DETAIL FOR EQUIP. SUPPORT

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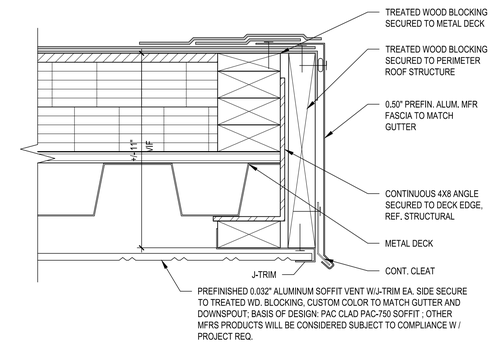

7 A6.0 METAL EDGE DETAIL

SCALE: 3" = 1'-0"

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SMNG-A Project No.: 1422

Title

FLASHING DETAILS

Sheet

A6.0

GENERAL NOTES

DESIGN CRITERIA

1. BUILDING CODE: INTERNATIONAL BUILDING CODE 2006.

2. BUILDING OCCUPANCY CATEGORY II

3. DESIGN ROOF LIVE LOAD: 20 PSF.

4. SNOW LOADS:

GROUND SNOW, Pg	20 PSF
EXPOSURE FACTOR, Ce	1.0 (PARTIALLY EXPOSED)
THERMAL FACTOR, Ct	1.0
SNOW IMPORTANCE FACTOR, Ie	1.0
RAIN-ON-SNOW SURCHARGE	5 PSF
MIN. ROOF SNOW LOAD	25 PSF
SNOW DRIFT	PER ASCE 7-05

5. WIND LOAD DATA:

BASE WIND SPEED, V	90 MPH
WIND IMPORTANCE FACTOR, Iw	1.0
WIND EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	+/- 0.18

6. SEISMIC DESIGN DATA:

SEISMIC IMPORTANCE FACTOR, Is		1.0
SITE CLASS		D
SPECTRAL RESPONSE,	Ss	0.175g
	S1	0.078g
	Sds	0.187
	Sd1	0.125
SEISMIC DESIGN CATEGORY		B
RESPONSE MODIFICATION FACTOR		1.5 FOR PLAIN MASONRY BEARING AND SHEAR WALLS

GENERAL

1. CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL EXISTING BUILDING DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK OR ORDERING MATERIALS. NOTIFY ENGINEER OF ANY AND ALL CONFLICTS OR DISCREPANCIES FROM INFORMATION SHOWN ON THE CONSTRUCTION PLANS PRIOR TO PROCEEDING WITH WORK.

2. SUBMIT SHOP DRAWINGS PREPARED BY CONTRACTORS, SUPPLIERS, ETC. FOR REVIEW BY STRUCTURAL ENGINEER FOR CONFORMANCE TO DESIGN INTENT.

3. CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE FOLLOWING:
   A. COMPLIANCE WITH CONTRACT DOCUMENTS
   B. EXISTING CONDITIONS AND DIMENSIONS ARE TO BE VERIFIED PRIOR TO ORDERING MATERIALS AND BEGINNING WORK.
   C. FABRICATION PROCESSES AND CONSTRUCTION TECHNIQUES, INCLUDING SHORING, BRACING, ERECTION, ETC.
   D. WORK OF THE CONTRACTOR.
   E. SAFE CONDITIONS AT THE JOB SITE.
   F. ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.

4. ALL CONSTRUCTION SHALL CONFORM TO ALL STATE AND LOCAL BUILDING CODES AND REGULATIONS.

5. PROVIDE TEMPORARY SHORING, BRACING AND SUPPORT AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY DURING EXECUTION OF ALL STAGES OF THE WORK.

6. SECTIONS, DETAILS AND NOTES ARE INTENDED TO APPLY TO SIMILAR SITUATIONS/CONDITIONS ELSEWHERE.

DEMOLITION AND SHORING

1. DESIGN, PROVIDE, INSTALL AND MAINTAIN TEMPORARY BRACING OR SHORING AS REQUIRED TO PROTECT ALL STRUCTURAL MEMBERS TO REMAIN PRIOR TO DEMOLITION.

2. CONTRACTOR SHALL PROTECT ALL EXISITNG BUILDING CONSTRUCTION, FINISHES, EQUIPMENT, FURNITURE AND OTHER PROPERTY, LIGHTING, UTILITIES, DUCTWORK, ETC. TO REMAIN DURING EXECUTION OF THE WORK.

3. PROTECT AND STORE ITEMS TO BE REINSTALLED AFTER REMOVAL.

4. REMOVE AND DISPOSE OF WASTE MATERIALS OFF SITE EACH DAY.

STRUCTURAL METAL DECK

1. THE MANUFACTURING, DETAILING, AND ERECTION OF METAL DECKS SHALL BE IN ACCORDANCE WITH THE LATEST STEEL DECK INSTITUTE (SDI) "MANUAL OF CONSTRUCTION WITH STEEL DECK," "CODE OF RECOMMENDED STANDARD PRACTICE," AND "DIAPHRAGM DESIGN MANUAL."

2. ALL METAL DECK SHALL BE GALVANIZED STEEL CONFORMING TO ASTM A653, WITH G60 ZINC COATING, AND SHALL BE FABRICATED FROM STEEL HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI.

3. PROVIDE DETAILED SHOP DRAWINGS INDICATING LOCATION, GAGE, MANUFACTURER LOAD TABLES, SIZE OF EACH PIECE OF DECKING, AND RELATED DECKING ACCESSORIES. DRAWINGS SHALL SHOW WELDING AND CONNECTOR DETAILS TO STRUCTURAL FRAMING MEMBERS, SIDE LAP CONNECTION DETAILS, EDGE CLOSURES, AND OTHER NECESSARY ACCESSORIES.

4. DECKING SHALL BE WELDED TO ALL NEW STRUCTURAL STEEL SUPPORTS BY QUALIFIED WELDERS USING PRE-QUALIFIED PROCEDURES. WELDING OF METAL DECK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.3. WELDS SHALL BE AT LEAST 5/8 INCH DIAMETER OR EQUIVALENT.

5. THE METAL DECK SHALL BE DESIGNED TO BE UNSHORED AND CONTINUOUS OVER A MINIMUM OF FOUR (4) SPANS PLUS THE CANTILEVERED OVERHANG IN THE DIRECTION INDICATED, EXCEPT AT NORTHWEST EXTERIOR WALL.

6. THE DECK SHALL BE DESIGNED FOR A SUITABLE CONSTRUCTION LIVE LOAD. THE ASSUMED CONSTRUCTION LIVE LOAD SHALL FOLLOW ALL APPLICABLE CODE, STEEL DECK INSTITUTE, AND AISI REQUIREMENTS FOR TEMPORARY CONSTRUCTION LOADINGS, AND SHALL NOT BE LESS THAN 20 PSF.

7. METAL DECK SHALL BE WELDED TO NEW STRUCTURAL STEEL SUPPORTS, AND MECHANICALLY CONNECTED TO EXISTING STRUCTURAL STEEL SUPPORTS, AT NOT MORE THAN 8 INCH SPACINGS, AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURERS' INSTRUCTIONS. PROVIDE A MINIMUM OF FIVE (5) SIDELAP FASTENERS PER SPAN. THE ROOF DECK SHALL BE FASTENED TO ALL STRUCTURAL SUPPORTS AND AT THE SIDELAPS PRIOR TO ANY LOAD BEING APPLIED TO THE CANTILEVER.

8. THE CONTRACTOR SHALL SHIM AT STRUCTURAL SUPPORTS AS NECESSARY TO ACHIEVE LEVEL ROOF DECK BEARING.

9. DO NOT HANG LOADS FROM THE METAL DECK. HANG ALL DUCTWORK, PIPING, CEILING FRAMING, ETC. FROM STRUCTURAL STEEL FRAMING OR SUPPLEMENTARY MEMBERS.

10. PROVIDE CONTINUOUS SHEET METAL CLOSURES AT ALL DECK ENDS. PROVIDE AS REQUIRED ALL RIDGE AND VALLEY PLATES, AND ANY SUPPLEMENTAL FRAMING AS REQUIRED FOR SUPPORT OF THE METAL DECK.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AISC SPECIFICATIONS AND CODES.

2. PROVIDE STRUCTURAL STEEL AS FOLLOWS:

WIDE FLANGE SHAPES	ASTM A992, GRADE 50
STEEL CHANNELS AND ANGLES	ASTM A36
STEEL PLATES OTHER MISC. STEEL	ASTM A36

3. CONTRACTOR SHALL PROVDE DETAILED SHOP DRAWINGS FOR ALL STRUCTURAL STEEL FOR REVIEW FOR CONFORMANCE WITH DESIGN INTENT PRIOR TO FABRICATION.

4. ALL STRUCTURAL STEEL BOLTS SHALL BE ¾ INCH DIAMETER HIGH STRENGTH BOLTS CONFORMING TO ASTM A325, UNLESS NOTED OTHERWISE.

5. ALL STRUCTURAL WELDING SHALL CONFORM TO THE LATEST EDITION OF AWS D1.1 OF THE AMERICAN WELDING SOCIETY, AND SHALL BE PERFORMED BY AWS CERITIFIED WELDERS. E70 SERIES ELECTRODES SHALL BE USED FOR ALL WELDING.

6. STRUCTURAL STEEL MEMBERS LOCATED IN THE ROOF OVERHANG, ON EXTERIOR WALLS AND ABOVE THE ROOF DECK SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. FIELD WELDING OF GALVANIZED STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CODE REQUIREMENTS.

7. NON-METALLIC SHRINKAGE RESISTANT GROUT SHALL CONFORM TO ASTM C1107, AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI.

8. PROVIDE BOLT HOLES, ANCHORS AND CLIP ANGLES AS REQUIRED TO ATTACH OTHER MATERIALS AS SHOWN ON THE DRAWINGS.

POST-INSTALLED MASONRY ANCHORS

1. THE MASONRY ADHESIVE ANCHORING SYSTEM SHALL BE HILTI HIT-HY-70, AS MANUFACTURED BY HILTI, INC., OR APPROVED EQUAL. ALL CONSTRUCTION WORK ASSOCIATED WITH THE INSTALLATION OF EXPOXY GROUTED ANCHORS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE TEMPERATURE OF THE MASONRY WALL SHALL BE BETWEEN 40 AND 70 DEGREES FAHRENHEIT FOR THE INSTALLATION OF THE EPOXY GROUTED ANCHORS.

2. THE ADHESIVE ANCHORING SYSTEM SHALL USE COMPATIBLE STAINLESS STEEL CONTINUOUSLY THREADED RODS, NUTS AND WASHERS, CONFORMING TO AISI TYPE 304 STAINLESS STEEL.

3. THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER THE ADHESIVE MANUFACTURER'S RECOMMENDATIONS.

KYLE M. FIELDS
062-005714
STATE OF ILLINOIS
STRUCTURAL
DATE SIGNED : 5-4-16
LIC. EXP. DATE : 11/30/2016

TREWYN PARK PAVILION ROOF REPLACEMENT

2219 SOUTH IDAHO ST
PEORIA, IL 61605

Architect of Record:
SMNG A LTD.

ADDRESS: 936 W. HURON STREET
CHICAGO, ILLINOIS 60642
PHONE: 312.829.3355
FAX: 312.829.8187
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TERRA ENGINEERING, LTD.
Peoria, IL
Structural Engineer of Record

TERRA ENGINEERING LTD.

Issuance

Mark	Description	Date
	BID/PERMIT	05/04/16

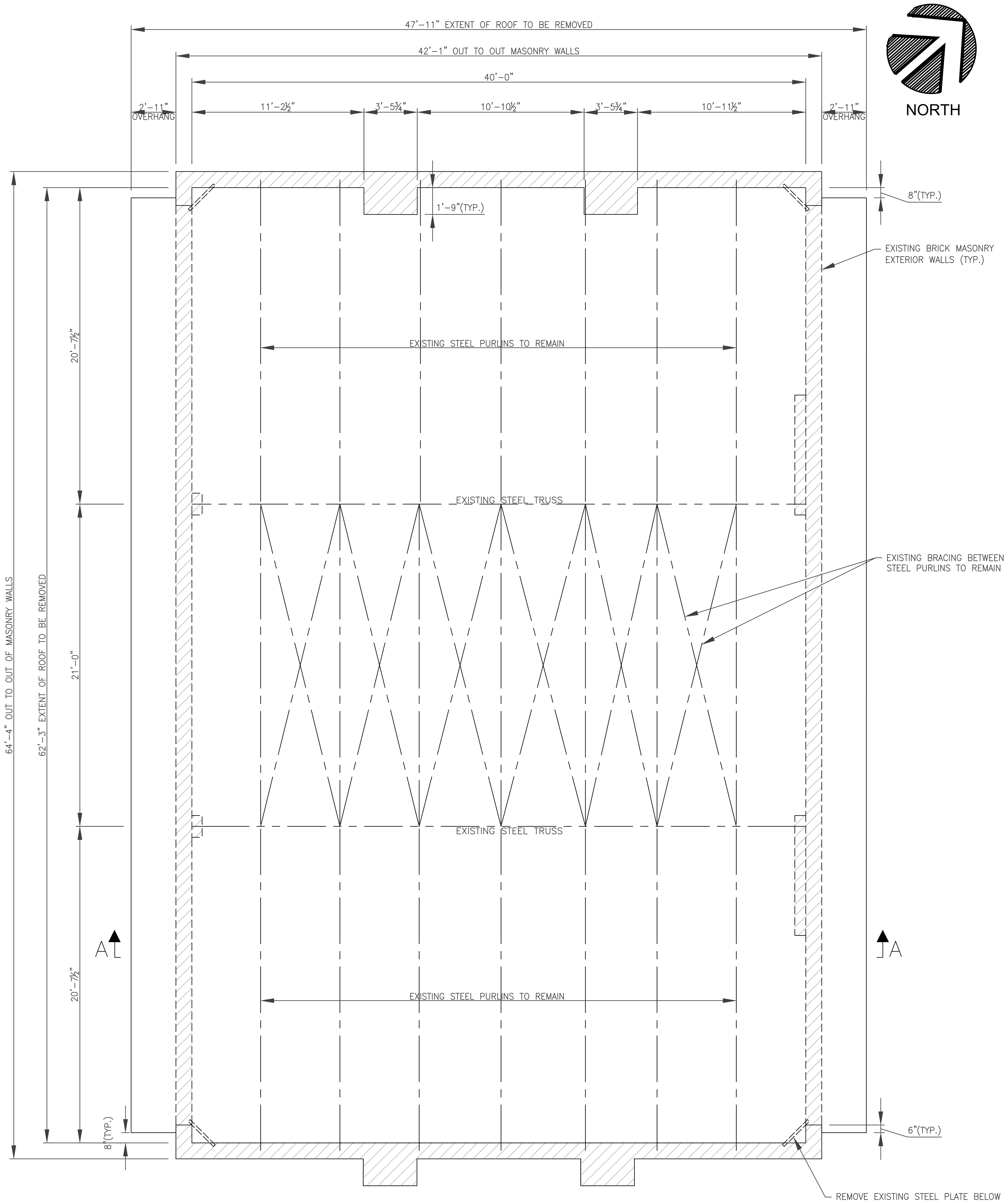
Project Name: Trewyn Park Pavilion Roof Replacement

TERRA Project No.: 14-262

Title
GENERAL NOTES

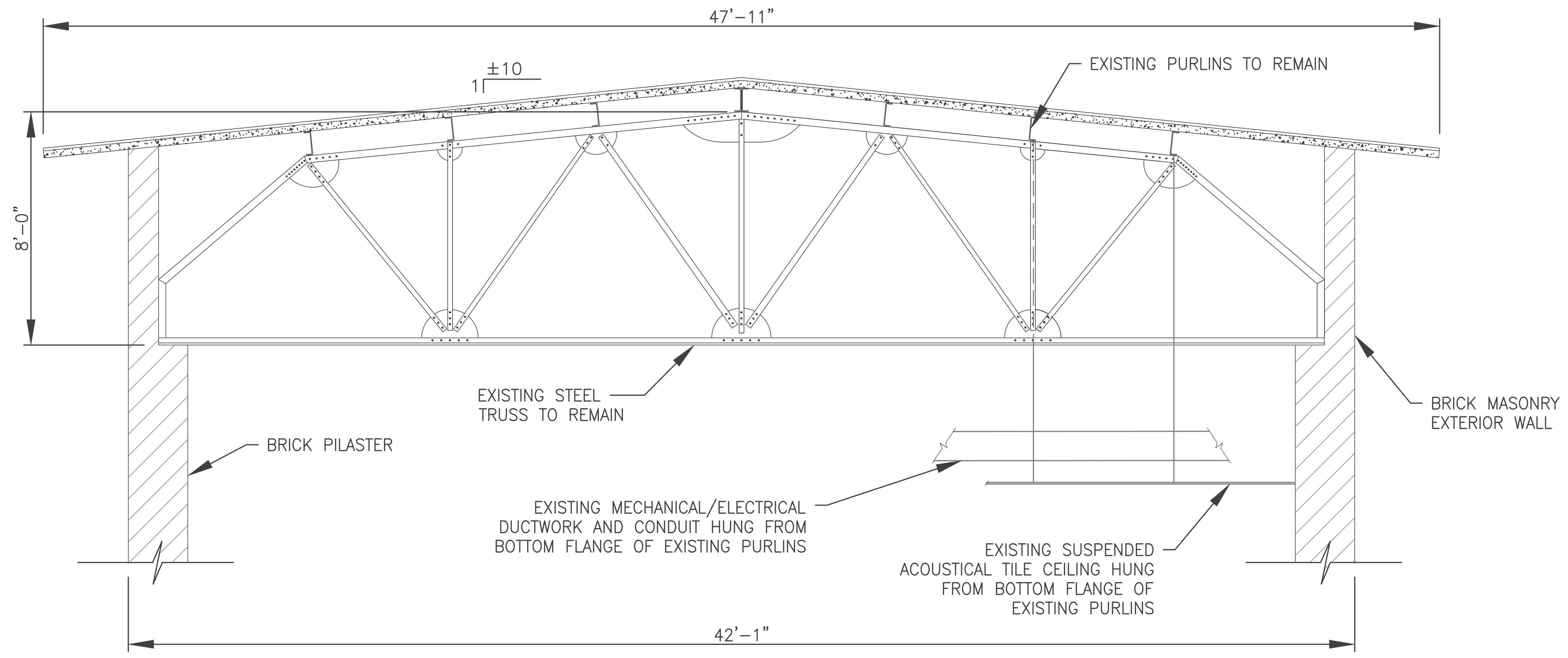
Sheet

S1.0



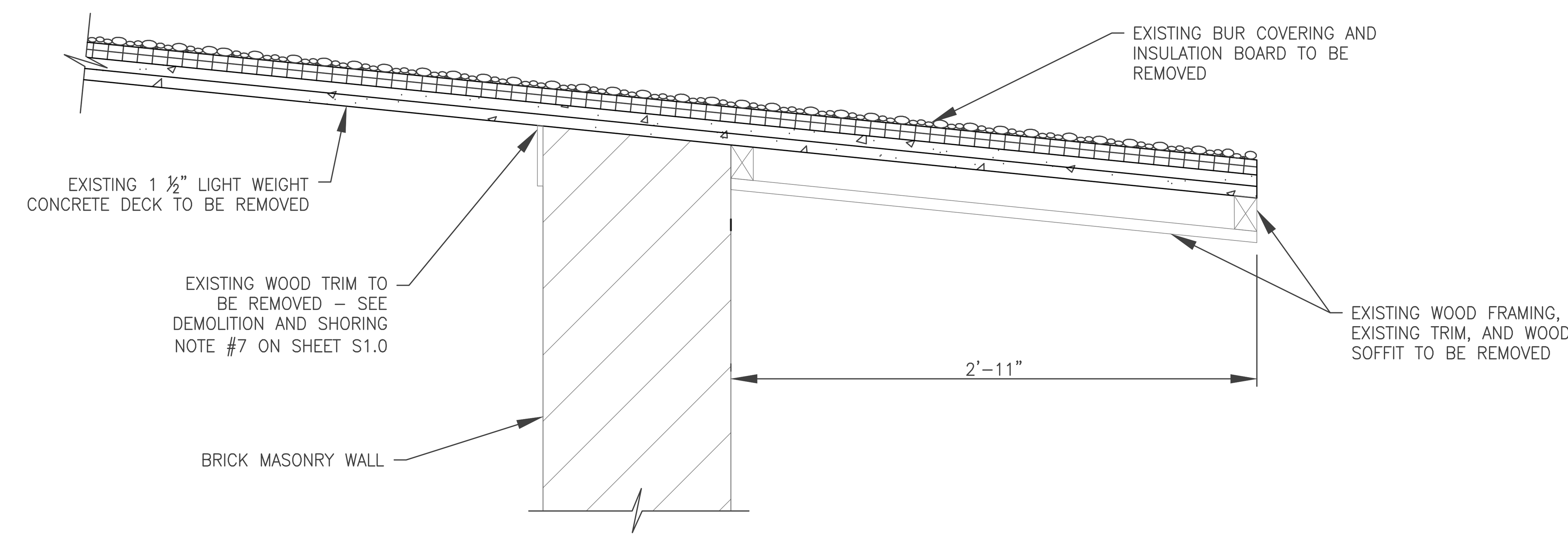
EXISTING UPPER ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"



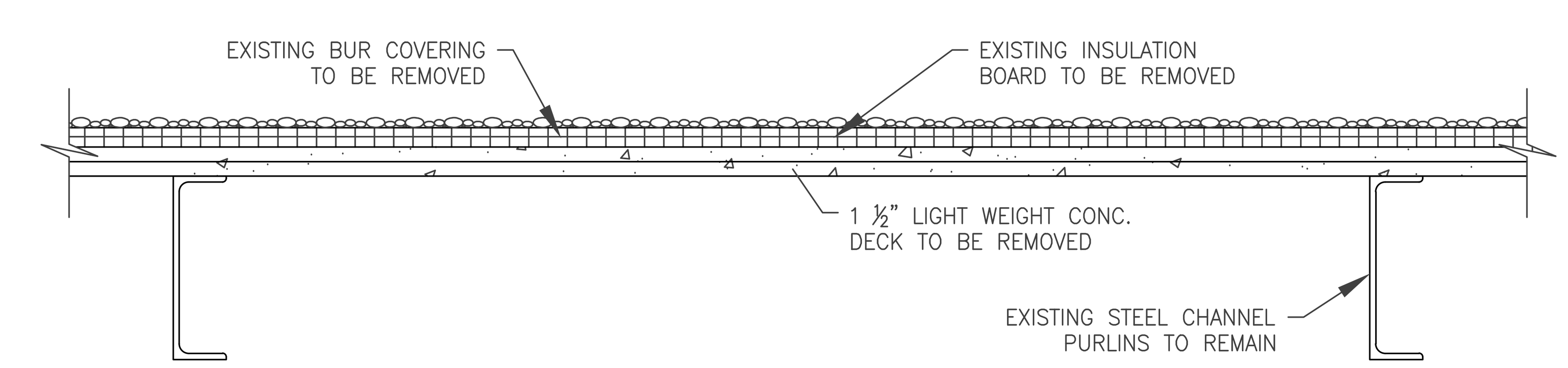
EXISTING SECTION A-A THRU UPPER ROOF

SCALE: ¼" = 1'-0"



SECTION THRU EXISTING UPPER ROOF OVERHANG

SCALE: 1 ½" = 1'-0"



SECTION THRU EXISTING UPPER ROOF

SCALE: 1 ½" = 1'-0"

NOTES

1. SEE SHEET S1.0 FOR DEMOLITION NOTES AND GENERAL STRUCTURAL NOTES.
2. REMOVE EXISTING SUSPENDED ACOUSTICAL CEILING TILES AND LIGHT FIXTURES. SEE DEMOLITION AND SHORING NOTE #8 ON SHEET S1.0.
3. REMOVE EXISTING ITEMS ABOVE ROOF THAT ARE SUPPORTED BY EXISTING CONCRETE ROOF DECK AT CORNERS PRIOR TO REMOVAL OF EXISTING ROOF DECK. SEE DEMOLITION AND SHORING NOTE #9 ON SHEET S1.0.

DATE SIGNED: 5-4-16
LIC. EXP. DATE: 11/30/2016

TREWYN PARK PAVILION ROOF REPLACEMENT

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TERRA ENGINEERING, LTD.
Peoria, IL
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TERRA ENGINEERING LTD.

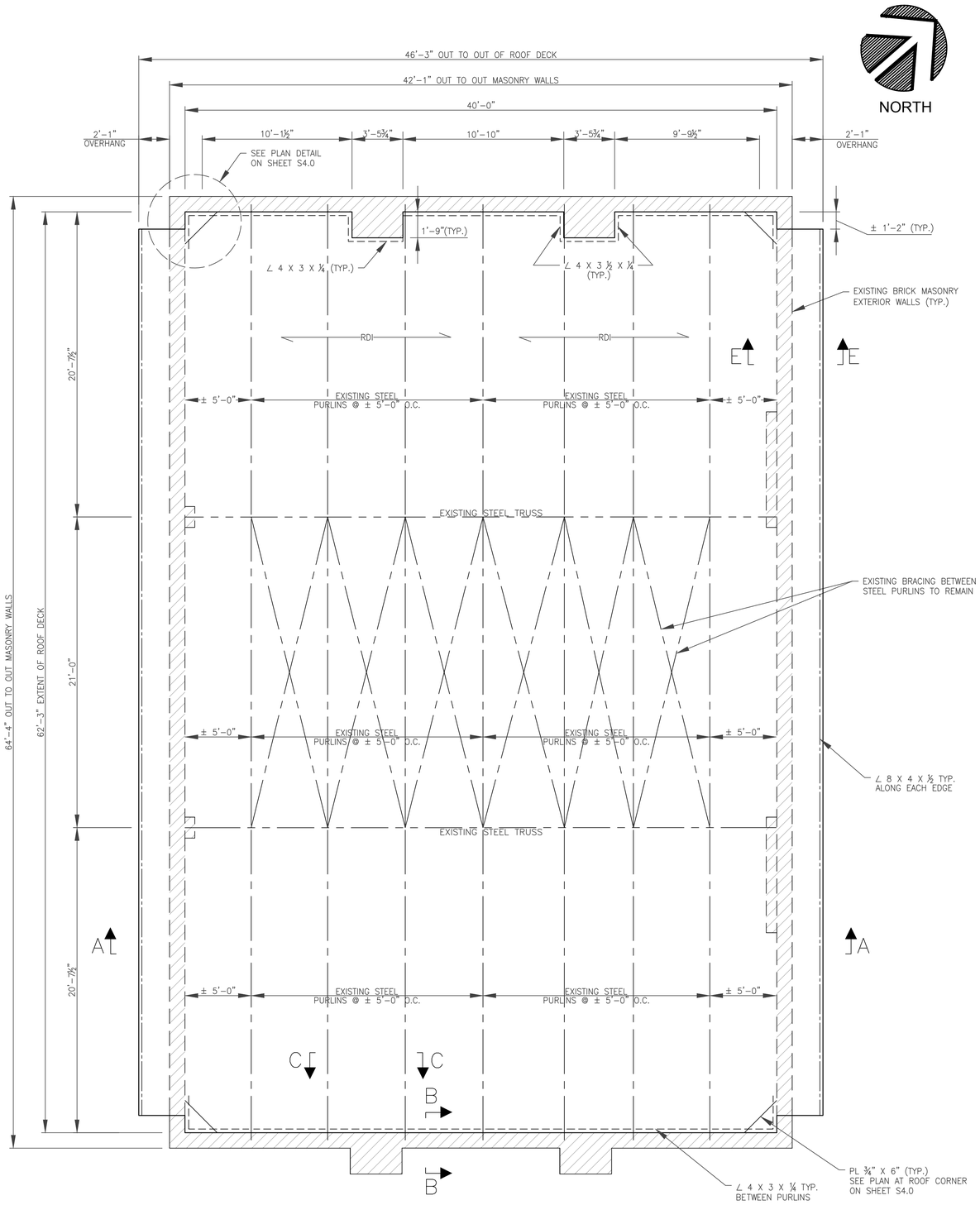
Issuance

Mark	Description	Date
	BID/PERMIT	05/04/16

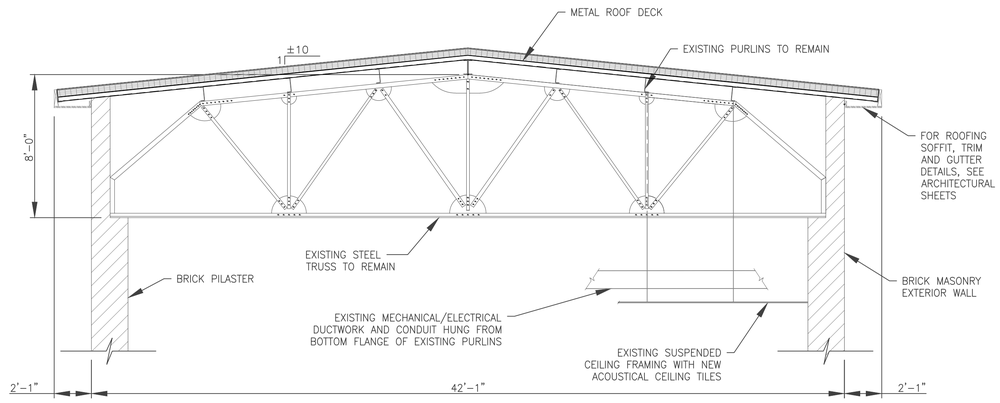
Project Name: Trewyn Park Pavilion Roof Replacement
TERRA Project No.: 14-262
Title
DEMOLITION / EXISTING UPPER ROOF DETAILS

Sheet

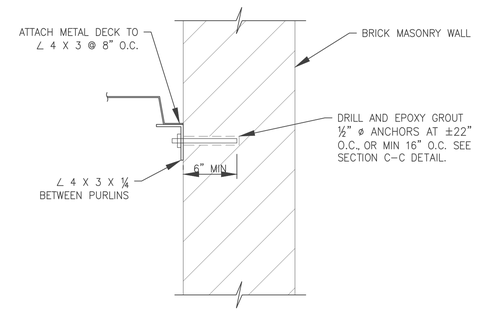
S2.0



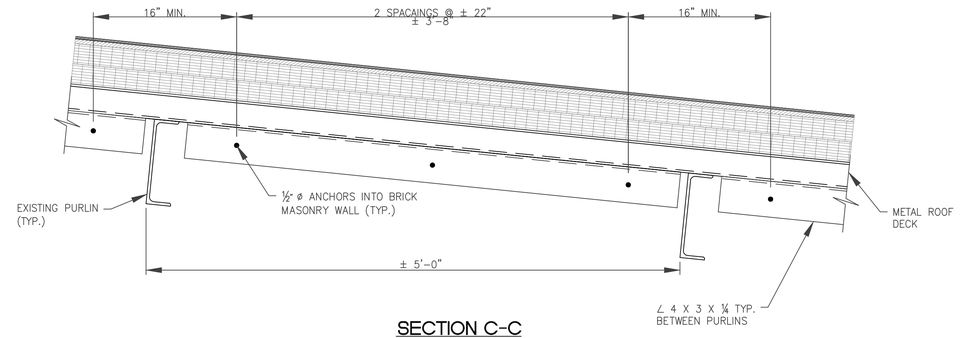
PROPOSED UPPER ROOF FRAMING PLAN
SCALE: ¼" = 1'-0"



PROPOSED SECTION A-A THRU UPPER ROOF
SCALE: ¼" = 1'-0"



SECTION B-B
SCALE: 1 ½" = 1'-0"



SECTION C-C
SCALE: 1 ½" = 1'-0"

NOTES

1. "RDI" INDICATES 3" DEEP, 20 GAGE GALVANIZED WIDE RIB METAL ROOF DECK CONTINUOUS OVER 4 SPANS MINIMUM PLUS CANTILEVERED OVERHANG, EXCEPT AT NORTHWEST EXTERIOR WALL. ATTACH METAL ROOF DECK TO ALL NEW SUPPORTING MEMBERS WITH ⅝" ø PUDDLE WELDS AT 8" O.C., 8" O.C. AT PERIMETER, AND TO EXISTING PURLINS USING MECHANICAL CONNECTORS AT 8" O.C.

2. PROVIDE A MINIMUM OF 5 SIDELAP FASTENERS PER SPAN FOR METAL DECK.

KRISTOPHER J. FIELDS
062-057081
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF ILLINOIS
DATE SIGNED : 5-4-16
LIC. EXP. DATE : 11/30/2016

TREWYN PARK PAVILION ROOF REPLACEMENT

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TERRA ENGINEERING LTD.

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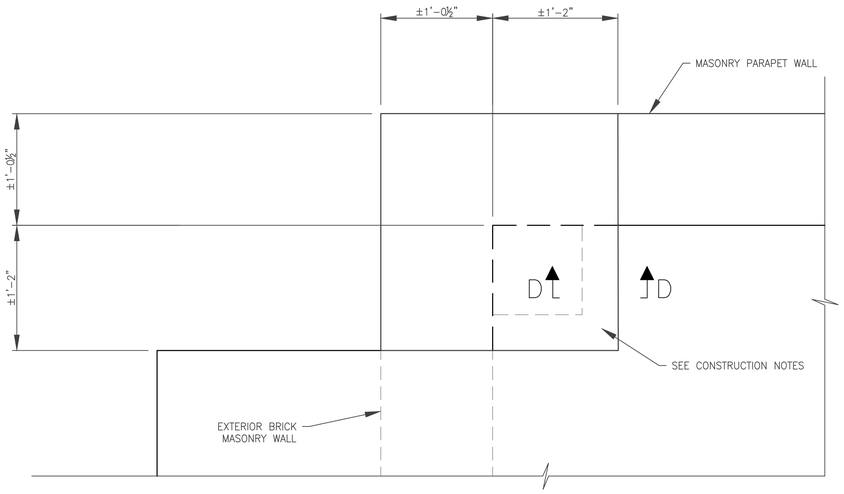
Project Name: Trewyn Park Pavilion Roof Replacement
TERRA Project No.: 14-262

Title
PROPOSED ROOF FRAMING PLAN AND DETAILS

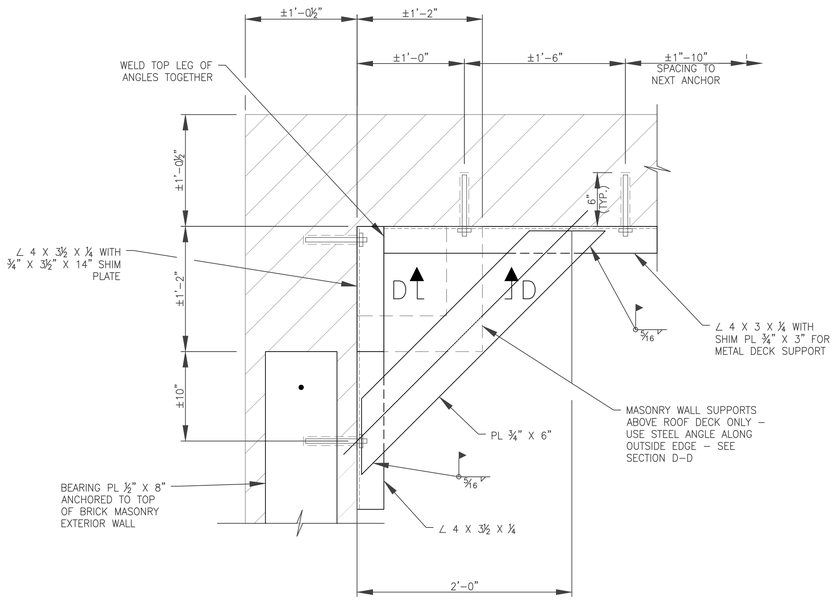
Sheet
S3.0



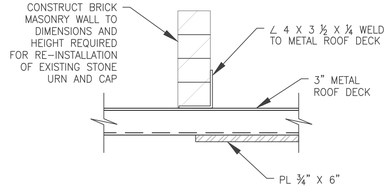
TYP. ROOF PLAN AT CORNER AT ELEV. OF STONE CAP
SCALE: 1 ½" = 1'-0"

CONSTRUCTION NOTES

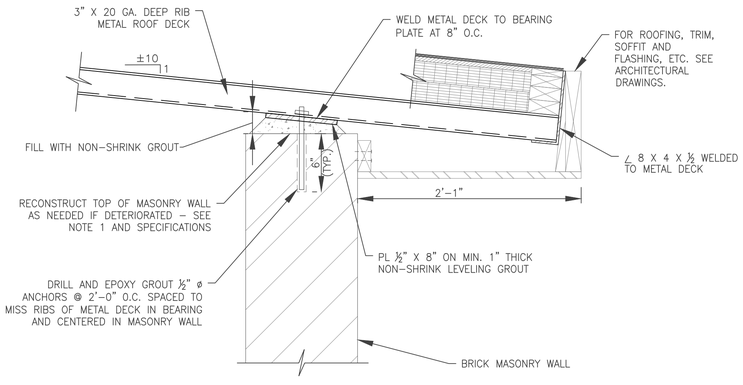
1. REMOVE STONE URN AND CAP, AND ALL CONSTRUCTION THAT BEARS ON EXISTING ROOF DECK PRIOR TO DEMOLITION OF EXISTING ROOF.
2. REMOVE EXISTING ROOF STRUCTURE.
3. INSTALL NEW METAL DECK ROOF AND STEEL ANGLE SUPPORT FOR NEW CONSTRUCTION.
4. CONSTRUCT BRICK MASONRY WALL SUPPORT ABOVE THE NEW ROOF DECK AS NEEDED TO SUPPORT THE EXISTING STONE URN AND CAP IN ITS ORIGINAL/EXISTING LOCATION.
5. CONSTRUCT, ANCHOR AND MAKE CONNECTIONS OF NEW CONSTRUCTION TO BUILDING STRUCTURE AS REQUIRED TO ACHIEVE AN ADEQUATE, STABLE SUPPORT FOR THE STONE URN AND CAP.



PLAN AT TYP. ROOF CORNER
SCALE: 1 ½" = 1'-0"



SECTION D-D
SCALE: 1 ½" = 1'-0"



SECTION E-E THRU EXTERIOR WALL
SCALE: 1 ½" = 1'-0"

NOTE 1

FOR BIDDING PURPOSES, ASSUME THE TOP TWO COURSES OF BRICK WILL NEED TO BE RECONSTRUCTED ON THE EXTERIOR BEARING WALLS.

KRISTOPHER FIELDS
062-081-005714
STATE OF ILLINOIS
DATE SIGNED : 5-4-16
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TREWYN PARK PAVILION ROOF REPLACEMENT

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TERRA ENGINEERING LTD.

Issuance

Mark	Description	Date
	BID/PERMIT	05/04/16

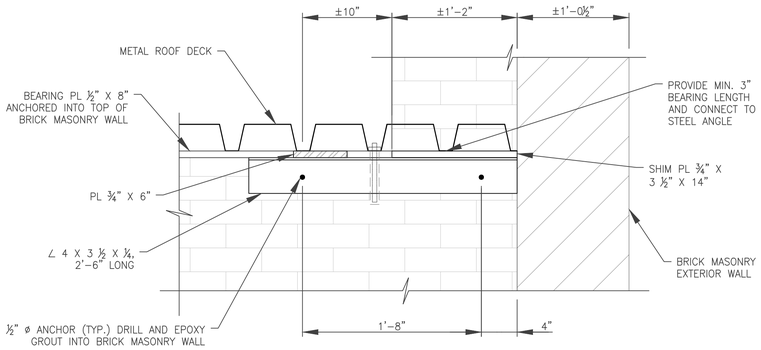
Project Name: Trewyn Park Pavilion Roof Replacement

TERRA Project No.: 14-262

Title
PROPOSED ROOF DETAILS

Sheet

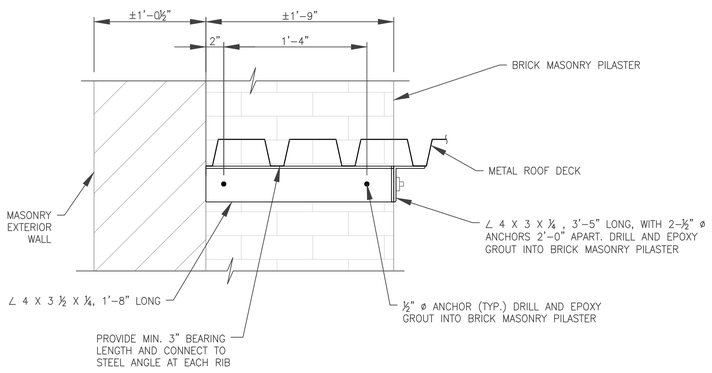
S4.0



ELEVATION OF NEW ROOF DECK AT CORNER

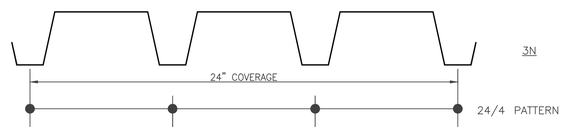
SCALE: 1 ½" = 1'-0"

NOTE: CONSTRUCTION ABOVE ROOF DECK NOT SHOWN FOR CLARITY.



ELEVATION OF NEW ROOF DECK AT PILASTERS ON NORTHWEST WALL

SCALE: 1 ½" = 1'-0"



1. 3", 20 GA. TYPE N ROOF DECK.
2. CONNECT METAL DECK TO STRUCTURAL SUPPORTS IN THE PATTERN SHOWN ABOVE. METAL DECK SHALL BE WELDED TO NEW STRUCTURAL STEEL SUPPORTS, AND MECHANICALLY CONNECTED TO EXISTING STRUCTURAL STEEL SUPPORTS.
3. CONNECTIONS SHALL BE CAPABLE OF RESISTING THE FOLLOWING NET UPLIFT PRESSURES:
   FIELD NET UPLIFT PRESSURE 25 PSF
   PERIMETER NET UPLIFT PRESSURE 30 PSF
   OVERHANG NET UPLIFT PRESSURE 40 PSF
   PERIMETER PRESSURE APPLIES BETWEEN ALL EXTERIOR WALLS AND 4.2 FEET IN FROM THE EXTERIOR WALLS.
4. PROVIDE A MINIMUM OF FIVE SIDELAP FASTENERS PER SPAN.

TYPICAL ROOF DECK CONNECTOR PATTERN

SCALE: 3" = 1'-0"

KRISTOPHER FIELDS
062-081-005714
STATE OF ILLINOIS
DATE SIGNED : 5-4-16
LIC. EXP. DATE : 11/30/2016

TREWYN PARK PAVILION ROOF REPLACEMENT

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TERRA ENGINEERING, LTD.
Peoria, IL
Structural Engineer of Record

TERRA ENGINEERING LTD.

Issuance

Mark	Description	Date
	BID/PERMIT	05/04/16

Project Name: Trewyn Park Pavilion Roof Replacement

TERRA Project No.: 14-262

Title
PROPOSED ROOF DETAILS

Sheet

S5.0

ATTACHMENT A.5
INSURANCE REQUIREMENTS
CONSTRUCTION PROJECTS - LARGE IN SCOPE AND USING GENERAL CONTRACTOR

Contractor shall obtain insurance of the types and in the amounts listed below.

A. COMMERCIAL GENERAL AND UMBRELLA LIABILITY INSURANCE

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

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

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

There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.

B. CONTINUING COMPLETED OPERATIONS LIABILITY INSURANCE

Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella liability insurance with a limit of not less than $5,000,000 each occurrence for at least three years following substantial completion of the work.

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

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

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

C. BUSINESS AUTO AND UMBRELLA LIABILITY INSURANCE

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

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

D. WORKERS COMPENSATION INSURANCE

Contractor shall maintain workers compensation as required by statute and employers liability insurance. The commercial umbrella and/or employers liability limits shall not be less than $1,000,000 each accident for bodily injury by accident or $1,000,000 each employee for bodily injury by disease.

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

E. GENERAL INSURANCE PROVISIONS

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

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

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

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

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

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

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

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

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

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

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

F. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect and their officers, officials, employees, volunteers and agents from and against all claims, damages, losses and expenses, including but not limited to legal fees (attorney's and paralegal's fees and court costs), arising

out of or resulting from the performance of the Contractor's work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property, other than the work itself, including the loss of use resulting therefrom and (2) is caused in whole or in part by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except to the extent it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph. Contractor shall similarly protect, indemnify and hold and save harmless the Owner, its officers, officials, employees, volunteers and agents, against and from any and all claims, costs, causes, actions and expenses including but not limited to legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of, any provision of the Contract.

SAMPLE LIABILITY INSURANCE ENDORSEMENT

The following spaces preceded by an asterisk (*) need not be completed if this endorsement and policy have the same inception date.

ATTACHED TO AND FORMING PART OF POLICY NUMBER	*EFFECTIVE DATE OF ENDORSEMENT	*ISSUED TO

This endorsement changes the policy. Please read it carefully.

AUTOMATIC ADDITIONAL INSUREDS

The following provision is added to (SECTION II), Who Is An Insured.

5. Any entity you are required in a written contract (hereinafter called Additional Insured) to name as an insured is an insured but only with respect to liability arising out of your premises, "your work" for the Additional Insured, or acts or omissions of the Additional Insured in connection with the general supervision of "your work" to the extent set forth below.

a. The Limits of Insurance provided on behalf of the Additional Insured are not greater than those required by such contract.

b. The coverage provided to the Additional Insured(s) is not greater than that customarily provided by the policy forms specified in and required by the contract.

c. All insuring agreements, exclusions and conditions of this policy apply.

d. In no event shall the coverages or Limits of Insurance in this Coverage Form be increased by such contract.

Except when required otherwise by contract, this insurance does not apply to:

1) "Bodily injury" or "property damage" occurring after

a) All work on the project (other than service, maintenance or repairs) to be performed by or on behalf of the Additional Insured(s) at the site of the covered operations has been completed; or

b) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

2) "Bodily injury" or "property damage" arising out of any act or omission of the Additional Insured(s) or any of their employees, other than the general supervision of work performed for the Additional Insured(s) by you.

3) "Property damage" to

a) Property owned, used or occupied by or rented to the Additional Insured(s);

b) Property in the care, custody or control of the Additional Insured(s) or over which the Additional Insured(s) is for any purpose exercising physical control; or

c) “Your work” for the Additional Insured(s).

With respect to Additional Insureds who are architects, engineers or surveyors, this insurance does not apply “bodily injury”, “property damage”, “personal injury” or “advertising injury” arising out of the rendering of or the failure to render any professional services by or for you, including:

a) The preparing, approving, or failing to prepare or approve maps, drawings, opinions, reports, surveys, change orders, designs or specifications; and

b) Supervisory, inspection or engineering services.

Any coverages provided hereunder shall be excess over any other valid and collectible insurance available to the Additional Insured(s) whether primary, excess, contingent or on any other basis unless a contract specifically requires that this insurance be primary or you request that it apply on a primary basis.

No person or organization is an Additional Insured with respect to the conduct of any current or past partnership or joint venture that is not shown as a Named Insured in the Declarations.

END OF ATTACHMENT A.5