

Project Manual for:
City of Negaunee
Waterworks Roofing Replacement
Negaunee, Michigan

Issued:
May 23, 2022
For Bids

Project Number:
2226

Prepared By:



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Negaunee, MI 49866
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Not Used

End of Section

**Section 00 11 16
Invitation to Bid**

Notice is given hereby that

City of Negaunee

will accept bids from qualified contractors for construction of:

Waterworks Roofing Replacement

according to Drawings and Specifications prepared by:

Northern Design Works
420 Rail Street
Negaunee, MI 49866

Including, but not limited to: Removal of existing asphalt shingle roofing and installation of new asphalt shingle roofing.

Sealed bids will be received at the office of City of Negaunee City Clerk, until 2:00 PM local time, June 8, 2022. At that time, bids will be publicly opened. Bids received after the date and time specified may be returned to the bidder, unopened.

Bids will be taken on a lump sum basis as defined on the bid form. Bids shall be accompanied by bid security equal to 5% of the bid amount.

100% surety bonds for performance and payment of labor and materials are required.

Bid documents may be examined at the following locations:

Northern Design Works
420 Rail Street
Negaunee, MI 49866

Marquette Builders Exchange

Iron Mountain Builders Exchange

Delta County Builders Exchange

Builders Exchange of Northwest Michigan

Bid documents are available from the office of the architect, upon payment of \$25. Partial sets will not be issued. Electronic versions of the documents are available via e-mail at no cost.

Contractors are requested to notify the architect of their interest in the project, so they can be placed on the plan holders list.

The owner reserves the right to reject any or all bids and to waive irregularity in the bidding or the bidding process and accept the bid that is most advantageous to the owner.

Dated: 5-23-2022

by: City of Negaunee

End of Section

Section 00 21 00

Instructions to Bidders

PART 1 - General

1.1 Summary

- A. Section includes:
 - 1. Bidder representations.
 - 2. Bid submission.
 - 3. Contract time.
 - 4. Bidding documents.
 - 5. Inquiries and addenda.
 - 6. Product substitutions.
 - 7. Site examination.
 - 8. Bidder qualifications.
 - 9. Subcontractors and suppliers.
 - 10. Submission procedure.
 - 11. Permits and Fees.
 - 12. Rejection of bids.
 - 13. Security deposit.
 - 14. Acceptance of bid.
 - 15. Correction or withdrawal of bids.
 - 16. Form of agreement between owner and contractor.
- B. Related documents:
 - 1. Section 00 11 16 – Invitation to Bid.
 - 2. Section 00 41 00 – Bid Form.
 - 3. Section 00 73 00 – Supplementary Conditions.

1.2 Bidder Representations

- A. By submitting a Bid, the Bidder represents that:
 - 1. The bidder has examined and understands the bidding documents.
 - 2. The Bid is made in compliance with the bidding documents.
 - 3. The bidder has examined the site in accordance with 'Site Examination' below.
 - 4. The bid is based on the materials, equipment, and systems required by the bidding documents without exception.
 - 5. The Bid is based solely on the information contained in the bidding documents, including addenda, and the bidder has not relied on any verbal statement from the Owner or Architect in the preparation of the Bid.

1.3 Bid Submission

- A. Refer to Section 00 11 16 – Invitation to Bid for bid date, time, and location.
- B. Bids received after the date and time stated above may be returned to the bidder unopened.
- C. Amendments to submitted bids will be permitted when received in writing prior to bid closing and when endorsed by the same party or parties who signed and sealed the bid.

1.4 Contract Time

- A. The Work is to be substantially complete by November 15, 2022.

- 1.5 Bidding Documents
- A. Refer to Section 00 11 16 – Invitation to Bid for information on document availability.
 - B. Bidding Documents are made available only for the purpose of obtaining bids on this Project. Their use does not grant a license for other purposes.
 - C. Bidders shall use complete sets of bidding documents in the preparation of their Bid. Neither the Owner nor the Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents.
- 1.6 Inquiries and Addenda
- A. Direct questions in writing to the office of the Architect.
 - B. Verbal answers are not binding on any party and bidders shall not rely on them.
 - C. Submit questions not less than four (4) days before bid date. Replies will be made by Addenda when required.
 - D. Addenda will be issued at least two (2) days before bid date, unless addenda include a revision in bid date. Addenda will be issued to all plan holders who have notified the Architect of their interest in bidding the project and to all plan rooms known to the Architect to have sets on file.
 - E. Costs for all addenda shall be included in the Bid.
 - F. Each bidder shall verify their receipt of all addenda before submitting a Bid and shall note receipt of addenda where indicated on bid form.
- 1.7 Product Substitutions
- A. The materials, products, and equipment described in the bid documents establish a standard or required function, dimension, appearance, and quality to be met by any proposed substitution.
 - B. Where bidding documents stipulate particular Products and substitutions are allowed, Bidders may submit requests for substitutions in writing no later than seven (7) days prior to bid date. With each substitution request provide enough information for Architect to determine acceptability of proposed products. Requests without sufficient information will be rejected without review.
 - C. Approved substitutions will be identified by addenda.
 - D. Claims by the bidder after the bid date for an addition to the Contract Time or Contract Sum because of changes in the Work necessitated by substitutions will not be considered.
- 1.8 Site Examination
- A. All contractors will be responsible for reviewing the existing site conditions prior to bidding. Each bidder shall fully inform himself prior to bidding as to existing conditions and limitations under which the work is to be performed and shall include in his bid a sum to cover the cost of items necessary to perform the work as set forth in the contract documents. No allowance will be made to a bidder because of lack of such examination. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.
 - B. The site is open for examination.
- 1.9 Bidder Qualifications
- A. To demonstrate qualifications to perform the Work of this Project, Bidders may be requested to submit written evidence of financial position, previous experience, current commitments, licensure, and current and past legal disputes related to project

performance. All such information will be treated as confidential by the Architect and Owner and used for purposes of evaluating contractor qualifications only.

- 1.10 Subcontractors and Suppliers
 - A. Bidder shall state proposed sub-contractors where requested on the bid form. Failure to do so may be cause for rejection of a bid.
 - B. The Owner reserves the right to reject proposed sub-contractors or suppliers for reasonable cause.
 - C. Refer to AIA document A201-2017, article 5 of General Conditions.
- 1.11 Submission Procedure
 - A. Bidders are solely responsible for delivery of Bids in manner and time described.
 - B. Submit two copies of executed offer on Bid Form provided, signed by an authorized individual, with bid security as noted in Section 00 11 16 – Invitation to Bid, in a sealed envelope. Label the envelope with the bidder's name, project name, and 'sealed bid'.
 - C. Bids will not be accepted in facsimile, phone, electronically transmitted, or verbal format.
 - D. A bid summary will be available to bidders after bids are received and reviewed.
- 1.12 Permits and Fees
 - A. The Bid shall include all applicable fees and permit costs required by authorities having jurisdiction over the project unless noted otherwise in these specifications.
- 1.13 Rejection of Bids
 - A. Bids that do not meet the requirements stated above, are un-signed, or illegible may be rejected by the Owner.
- 1.14 Security Deposit
 - A. Refer to Section 00 11 16 – Invitation to Bid, for amount of bid security required.
 - B. Security may be in one of the following forms:
 - 1. Certified check in the name of the Owner.
 - 2. Bid bond on AIA document A310 – Bid Bond or surety standard form. Bond shall be endorsed in the name of the Owner as obligee, signed and sealed by principal (Contractor) and surety.
 - C. Security deposit of accepted bidder will be returned after execution of contract and submittal of any required bonds.
 - D. After a bid has been accepted, security deposit will be returned to other bidders.
- 1.15 Acceptance of Bid
 - A. The Owner reserves the right to accept or reject any offer, with or without cause and to waive any informalities or irregularities in the bidding process.
 - B. If the lowest bid exceeds the project budget, the Owner reserves the right to negotiate scope changes, and contract sum adjustments, with the lowest bidder.
 - C. After acceptance of the bidder by the Owner, the Architect will issue, on behalf of the Owner, a letter of award. The bidder shall then cooperate with the Owner, with technical and practical advice from the Architect, to prepare and execute a contract within the time stated on the bid form.
- 1.16 Correction or Withdrawal of Bid
 - A. Bidders may withdraw their bids by written request at any time before bid closing. The written request shall not reveal the amount of the bid.

- B. After the bid closing, corrections may be made to bids where the error resulted from mathematical or clerical errors and the correct information is readily apparent from the information on the bid form.
 - C. Bidders may be allowed to withdraw their bid after bid closing, without penalty, for serious mistakes of fact given that:
 - 1. The mistake is objectively provable.
 - 2. The mistake is large enough to present a material detriment to the bidder.
 - D. Bidders will not be allowed to withdraw their bid after bid closing for mistakes of judgment. Bidders which do not execute a contract in such a situation will forfeit their bid security as damages to the Owner as stated on the bid form.
- 1.17 Form of agreement between Owner and Contractor
- A. The form of agreement shall be AIA document A101 – Standard Form of Agreement between Owner and Contractor where the basis of payment is a Stipulated Sum, 2017 edition.
 - B. AIA document A201 – General Conditions of the Contract for Construction, 2017 edition, is included by reference herein.
 - 1. Refer to Section 00 73 00 – Supplementary Conditions for modifications to the General Conditions.
 - C. Copies of these documents may be obtained from the office of the Architect.

End of Section

Section 00 41 00
Bid Form

PART 1 - General

1.1 Project Information

- A. To: City of Negaunee, hereinafter called 'Owner'.
- B. Project: Waterworks Roofing Replacement
- C. Date: June 8, 2022

1.2 Contractor Information

- A. Submitted by:

(Hereinafter called 'Bidder')

(Address)

(Address)

(Phone number and e-mail)

1.3 Bid

- A. Base Bid

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Northern Design Works for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

(Dollars)

(\$ _____) in lawful money of the United State of America

- B. Contract Time

If this bid is accepted, we will achieve Substantial Completion by November 15, 2022.

- C. Bid Acceptance

This offer shall be open to acceptance and irrevocable for thirty (30) days from the Bid Date.

If the Owner accepts the Bid within the time stated above, we will:

- 1. Execute the Agreement within seven (7) days of receipt of Notice of Award.
- 2. Commence work within seven (7) days of Notice to Proceed.

If this bid is accepted within the time stated, and we fail to commence the Work, the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit will be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

D. Addenda

The following addenda have been received. The modifications to the Bid Documents have been noted and all costs are included in the Bid Sum.

1. Addenda numbers _____

E. Sub-Contractors

The following work will be performed by Sub-Contractors and coordinated by the Contractor. Failure to list sub-contractors at bid time may be a cause for rejection of the bid. (indicate portion of work and sub-contractor name, attach additional sheet if needed):

F. Voluntary Alternates

The Contract Sum proposed by the undersigned on the Bid Form is for the work as shown on the Drawings, described in the Specifications and otherwise defined in the Contract Documents. However, the undersigned proposes the following Voluntary Alternates for the Owner's consideration. Should the Owner accept any or all of the proposed substitutions, the bidders proposed Contract sum would be reduced by the amount shown (indicate specified product or material, proposed substitute, and reduction in Sum):

G. Bid Form Signatures

(Authorized Signature(s))

(Printed name(s) and title(s))

(Type of organization – Corporation, partnership, etc.)

Affix corporate seal, additional signatures required to give authority to bind corporation, or additional signatures for a joint venture or partnership as appropriate.

End of Section

Section 00 73 00 Supplementary Conditions

PART 1 - General

- 1.1 Summary
 - A. This document includes Supplementary Conditions to the General Conditions of the Contract for Construction.
- 1.2 Related Documents
 - A. Section 00 21 00 – Instructions to Bidders: Reference to Agreement and General Conditions.
- 1.3 Supplementary Conditions:
 - A. These Supplementary Conditions modify the General Conditions of the Contract for Construction, AIA Document A201-2017, and other provisions of the Contract Documents as indicated below. All provisions that are not so modified remain in full force and effect.
 - B. The terms used in these Supplementary Conditions that are defined in the General Conditions of the Contract for Construction, AIA Document A201-2017, have the meanings assigned to them in the General Conditions.

Article 1.1 Basic Definitions

Add the following:

1.1.9 Miscellaneous Definitions

- A. The term 'product' includes materials, systems, and equipment.
- B. The term "provide" includes furnishing and installing a product, complete in place, tested and approved.
- C. The term "building code," and the term "code," refer to regulations of governmental agencies having jurisdiction.
- D. The terms "approved," "required," and "as directed" refer to and indicate the work or materials that may be approved, required, or directed by the Architect acting as the agent of the Owner.
- E. The term "similar" means in its general sense and not necessarily identical.
- F. The terms "shown," "indicated," "detailed," "noted," "scheduled," and terms of similar import, refer to requirements contained in the Contract Documents.

Article 3.10 Contractor's Construction Schedules

Add the following to 3.10.3:

In planning his construction schedule within the agreed contract time, it shall be assumed that the Contractor has anticipated the amount of adverse weather conditions normal to the site of the Work for the season or seasons of the year involved. The Architect will consider those weather delays attributable to other than normal weather conditions only.

Add the following to 3.10.3:

When the contract time has been extended, as provided under this Paragraph, such extension of time shall not be considered as justifying extra compensation to the Contractor for administrative or similar costs.

Article 3.14 Cutting and Patching

Add the following:

3.14.3 Each Subcontractor shall do all fitting of his own work as required to make its several components fit together or to receive the work of other Contractors. Holes cut in exterior walls or roofs for installation of mechanical or electrical equipment shall be waterproofed by the Contractor responsible for such installation.

Article 9 Payments and Completion

Add the following to 9.3.1:

The form of application for payment shall be AIA Documents G702, "Application and Certificate for Payment," supported by continuation sheet or sheets G703 as approved by the Owner.

Add the following:

9.6.8 Retainage: Progress payments shall include that portion of the Contract Sum properly allocable to completed Work and stored materials, less Retainage of ten percent (10%).

Article 11 Insurance and Bonds

Add the following to 11.1.2:

Insurance coverage shall not be less than the following:

- A. Worker's Compensation: Statutory

- B. Contractor's Public Liability:
 - 1. Personal injury: \$500,000/\$1,000,000
 - 2. Property damage: \$500,000/\$1,000,000

- C. Contractor's Contingent Liability:
 - 1. Personal injury: \$500,000/\$1,000,000
 - 2. Property damage: \$500,000/\$1,000,000

- D. Automobile Public Liability:
 - 1. Personal injury: \$500,000/\$1,000,000
 - 2. Property damage: \$500,000 each occurrence

End of Section

Section 01 11 00 Summary of the Work

PART 1 - General

1.1 The Work

- A. The project includes all material, labor, tools, equipment, field engineering, and transportation necessary to complete all work as identified in the Drawings and further defined in these Specifications. This includes all items not specifically mentioned, but incidental to the work to provide a complete and operational product.
- B. The Work includes:
 - 1. Base Bid: Removal of existing asphalt shingle roofing and installation of new asphalt shingle roofing.
- C. The Owner may contract for other work concurrent with this contract.

1.2 Owner Occupancy

- A. The site will be open for normal recreational use during the work.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.

End of Section

Section 01 20 00

Price and Payment Procedures

PART 1 - General

- 1.1 Section Includes
 - A. Schedule of Values
 - B. Applications for Payment
 - C. Requests for Information
 - D. Contract Modification Procedures
 - E. Defect Assessment
- 1.2 Schedule of Values
 - A. Submit printed schedule on AIA form G703 – Continuation Sheet for G702. Contractor’s standard form will be considered if similar to above.
 - B. Submit two copies of schedule of values to Architect within 15 days after date of Owner-Contractor Agreement.
 - C. Format: Identify each line item with title. Include mobilization and bonds and insurance as line items.
 - D. Include in each line item allowances specified in this section.
 - E. Revise schedule to include approved Change Orders with each Application for Payment.
- 1.3 Applications for Payment
 - A. Submit each application on AIA form G702 – Application and Certificate for Payment and G703 – Continuation Sheet for G702. Contractor forms in the same format are acceptable.
 - B. Content and Format: Utilize schedule of values for listing items in application for payment.
 - C. Payment Period: Submit at intervals as specified in the Agreement.
- 1.4 Requests for Information
 - A. Requests for Information (RFI) shall be used to:
 - 1. Request information and/or clarification related to the plans, specifications, or contract requirements.
 - 2. Request approval for minor deviations from contract requirements that do not involve any time or cost adjustment.
 - 3. Obtain directions on how to proceed when there are conflicting contract requirements.
 - B. RFI shall be submitted by the Contractor to the Architect on the Contractor’s standard RFI form. RFI’s shall be numbered sequentially and shall include:
 - 1. RFI number.
 - 2. Date.
 - 3. Identification of the construction deficiency or Contract document clarification requested.
 - 4. Reference to Specification and paragraph numbers, drawing numbers and drawing reference.
 - 5. Impact this clarification will have on schedule (number of days) and project costs (if any).

- C. If a change in the Contract Time and/or Contract Sum are required, a Change Order will be issued by the Architect for signatures of parties as provided for in the Conditions of the Contract.
- 1.5 Contract Modification Procedures
- A. The Architect will advise of minor changes in the Work, not involving adjustment to Contract Sum or Contract Time by issuing supplemental instructions.
 - B. The Architect may issue a Bulletin, including a detailed description of proposed change. The Contractor shall promptly prepare and submit a fixed price quotation for the proposed change, including any adjustment in the Contract Time. Provide full documentation to support price quotation.
 - C. Contractor may propose changes by submitting a request for change to the Architect, describing proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum and Contract Time with full documentation.
 - D. Stipulated Sum Change Order: Based on a Bulletin and the Contractor's price quotation, or Contractor's request for change.
 - 1. Change Orders will be prepared on the Architect's standard form.
 - 2. Architect will issue Change Orders for signatures of parties as provided for in the Conditions of the Contract.
 - E. Construction Change Directive: Architect may issue directive, on AIA form G713 – Construction Change Directive, signed by Owner, instructing Contractor to proceed with change in the Work. The change will subsequently be included in a Change Order. The document will describe changes in the Work, and designate a method for determining any change in Contract Sum or Contract Time. Promptly execute change.
 - F. Correlation of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum.
 - 2. Promptly revise project schedules to reflect change in Contract Time and resubmit.
 - 3. Promptly enter change in project record documents.
- 1.6 Defect Assessment
- A. Replace the Work, or portion of the Work, not conforming to specified requirements.
 - B. If, in the opinion of the Architect, it is not practical to remove and replace the non-conforming work, the Architect will direct appropriate remedy or adjust payment.
 - C. At the Owner's discretion, defective work may remain and an appropriate adjustment be made in payment.
 - D. Authority of Architect to assess defects and identify payment adjustments is final.
 - E. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as un-acceptable before or after placement.
 - 3. Products placed beyond lines and levels of required Work.
 - 4. Products remaining on hand after completion of Work.
 - 5. Loading, hauling, and disposing of rejected products.

PART 2 - Products – Not Used

End of Section

Section 01 33 00 Submittal Procedures

PART 1 - General

1.1 Summary

- A. Section includes samples, test reports, certificates, shop drawings and manufacturers' literature and data.
- B. Submit for approval, all of the items specifically mentioned under the separate sections of the specification, with information sufficient to evidence full compliance with contract requirements. Materials, fabricated articles and the like to be installed in permanent work shall equal those of approved submittals. After an item has been approved, no change in brand or make will be permitted unless:
 - 1. Satisfactory written evidence is presented to, and approved by the Architect, that manufacturer cannot make scheduled delivery of approved item or;
 - 2. Item delivered has been rejected and substitution of a suitable item is an urgent necessity or;
 - 3. Other conditions become apparent which indicates approval of such substitute item to be in best interest of the Owner.
- C. The Architect may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections.
- D. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.
- E. Forward submittals in sufficient time to permit proper consideration and approval action. Time submission to assure adequate lead time for procurement of contract required items. Delays attributable to untimely and rejected submittals will not serve as a basis for extending contract time for completion.

1.2 Submittals

- A. Provide transmittal form with each submittal including:
 - 1. Contractor name
 - 2. Date of submittal
 - 3. Project title
 - 4. Section number of the specification section by which submittal is required.
 - 5. Description of submittal
 - 6. Submittal number
 - 7. When submittal is a re-submission, add alphabetic suffix on submittal number. For example, submittal 1 would become 1A to indicate re-submission.
- B. Provide submittals other than physical samples in electronic format submitted via e-mail to the Architect. Electronic submittals should include transmittal form as part of the submittal. Electronic files must be of sufficient quality that all information is legible. Electronic format shall be in PDF, unless otherwise specified or coordinated with the Architect.
- C. When submittals cannot be submitted in electronic format provide four copies.
- D. Samples should be submitted in the quantity specified in each specification requesting the samples.
- E. Submit two copies of Operations and Maintenance Data at completion of work for review and approval.

- 1.3 Quality Assurance
 - A. The contractor shall review all submittals before submission for compliance with the contract documents.
 - B. Submittals which have not been reviewed and certified as compliant with the project requirements by the Contractor will be rejected.
- 1.4 Scheduling
 - A. Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Include certifications to be submitted with the pertinent drawings at the same time.
 - B. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential re-submittal.
 - C. Allow 10 business days for review of submittals in the construction schedule.

PART 2 - Products - Not Used

PART 3 - Execution - Not Used

End of Section

Section 01 50 00 Temporary Facilities and Controls

PART 1 - General

- 1.1 Section Includes
 - A. Temporary Utilities
 - 1. Temporary electricity.
 - 2. Temporary sanitary facilities.
 - B. Construction Facilities
 - 1. Fire Extinguishers.
 - 2. Vehicular access and parking.
 - 3. Progress cleaning and waste removal.
 - 4. Project identification.
 - C. Temporary Controls
 - 1. Barriers.
 - 2. Enclosures and fencing.
 - 3. Dust control.
 - 4. Pollution control.
 - 5. Smoking.
 - 6. Removal of temporary utilities, facilities, and controls.
- 1.2 Temporary Electricity
 - A. Owner will pay cost of energy used. Exercise measures to conserve energy. Utilize Owner's existing power service.
 - B. Provide flexible power cords as required for portable tools and equipment.
- 1.3 Temporary Sanitary Facilities
 - A. Existing portable toilets at boat launch may be used during construction operations. Maintain daily in clean and sanitary condition.
 - B. At end of construction, return existing facilities used for construction operations to same or better condition as original condition.
- 1.4 Fire Extinguishers
 - A. Provide at least one 4A:10B-C rated portable fire extinguisher at each floor which is under construction.
 - B. Provide an additional fire extinguisher at each area where flammable or combustible liquids are stored, used, and dispensed.
 - C. Provide fire extinguishers at each temporary office or storage shed on site.
- 1.5 Vehicular Access and Parking
 - A. Provide unimpeded access for emergency vehicles.
 - B. Provide and maintain access to fire hydrants free of obstructions.
 - C. When site space is not adequate, provide additional off-site parking.
 - D. Use of existing on-site streets and driveways for construction vehicles is permitted. Tracked vehicles are not allowed on paved areas.
 - E. Use of existing parking facilities by construction personnel is permitted.
 - F. Do not allow heavy vehicles or construction equipment in parking areas.
- 1.6 Progress Cleaning and Waste Removal

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.
 - B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other enclosed or remote spaces prior to enclosing spaces.
 - C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
 - D. Collect and remove waste materials, debris, and rubbish from site weekly and dispose of off-site.
 - E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- 1.7 Project Identification
- A. No signs are permitted without Owner permission, except those required by law.
- 1.8 Traffic Regulation
- A. Signs, Signals, and Devices
 - 1. Post and wall mounted traffic control and information signs: As approved by authority having jurisdiction.
 - 2. Traffic cones and drums, flares, and lights: As approved by authority having jurisdiction.
 - B. Flag Persons
 - 1. Provide trained persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
 - 2. Provide equipment required by authority having jurisdiction to flag persons.
 - C. Removal
 - 1. Remove traffic regulation devices when no longer required.
 - 2. Repair any damage caused by installation.
- 1.9 Barriers
- A. Provide barriers to prevent un-authorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
 - B. Provide protection for plants designated to remain. Replace damaged plants.
 - C. Protect non-owned vehicles, stored materials, site, and structures from damage.
- 1.10 Dust Control
- A. Execute Work by methods to minimize raising dust from construction operations.
 - B. Provide positive means to prevent dispersion of air-borne dust.
- 1.11 Pollution Control
- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
 - B. Comply with pollution and environmental control requirements of authorities having jurisdiction.
- 1.12 Smoking
- A. Smoking is not permitted in this facility.
- 1.13 Removal of Temporary Utilities, Facilities, and Controls
- A. Remove temporary utilities, equipment, facilities, and materials prior to final inspection.
 - B. Clean and repair damage caused by temporary installations or use of temporary work.

- C. Restore existing and new facilities used during construction to original or specified condition.

PART 2 - Products – Not Used

PART 3 - Execution – Not Used

End of Section

Section 01 70 00 Execution and Closeout Requirements

PART 1 - General

- 1.1 Summary
 - A. Section includes:
 - 1. Closeout procedures.
 - 2. Final cleaning.
 - 3. Protecting installed construction.
 - 4. Operation and maintenance data.
 - 5. Spare parts and maintenance products.
 - 6. Product warranties.
- 1.2 Closeout Procedures
 - A. Submit notification that Work is complete in accordance with Contract Documents and ready for Architect's review.
 - B. Provide submittals to Architect required by authorities having jurisdiction.
 - C. Upon completion of all punch list items, submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
 - D. Include with final Application for Payment the Contractor's lien waiver, conditional on receipt of final payment.
- 1.3 Final Cleaning
 - A. Execute final cleaning prior to final project assessment.
 - B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.
 - C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
 - D. Clean debris from roofs, gutters, downspouts, and drainage systems.
 - E. Clean site; sweep paved areas, rake clean landscaped surfaces.
 - F. Remove waste and surplus materials, rubbish, and construction facilities from site.
- 1.4 Protecting Installed Construction
 - A. Protect installed Work and provide special protection where specified in individual specification sections.
 - B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
 - C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
 - D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
 - E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
 - F. Prohibit traffic from landscaped areas.
- 1.5 Operation and Maintenance Data
 - A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, binders with durable covers.
 - B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

- C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
 - D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
 - E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Certificates.
 - c. Warranties.
- 1.6 Spare Parts and Maintenance Products
- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
 - B. Deliver to Project site and place in location as directed by Owner.
- 1.7 Product Warranties
- A. Obtain warranties executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
 - B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
 - C. Verify documents are in proper form and contain full information.
 - D. Co-execute submittals when required.
 - E. Include Table of Contents and assemble in binder with durable cover.
 - F. Submit with final Application for Payment.

PART 2 - Products

2.1 Not Used

PART 3 - Execution

3.1 Not Used

End of Section

Section 02 41 19

Selective Structure Demolition

PART 1 - General

- 1.1 Summary
 - A. Section includes removal of designated building equipment and fixtures; removal of designated construction; dismantling, cutting, and alterations for completion of the Work; disposal of materials to be removed; storage of materials to be re-installed; capping and identification of utilities; salvaged items; and protection of work to remain.
- 1.2 Scheduling
 - A. Schedule work to coincide with new construction.
- 1.3 Project Conditions
 - A. Conduct demolition to minimize interference with adjacent building areas and prevent dust migration into occupied spaces.
 - B. Maintain building security and protected ingress and egress at all times. Note maintenance of required exits, which may be adjacent to or contained within the construction activity.
 - C. Cease operations immediately when structure appears to be in danger and notify Owner and Architect. Do not resume operations until directed.

PART 2 - Products – Not Used

PART 3 - Execution

- 3.1 Preparation
 - A. Erect and maintain temporary safeguards, including warning signs, barricades, and similar measures for protection of the public, Owner, Contractor's employees, and existing improvements to remain.
 - B. Erect and maintain weatherproof enclosures for exterior openings.
 - C. Protect existing materials and existing improvements not indicated to be altered.
 - D. Prevent movement of structure; provide temporary bracing and shoring required to ensure safety of existing structure.
 - E. Notify affected utility companies before beginning work and comply with their requirements.
 - F. Mark location and termination of utilities.
- 3.2 Demolition
 - A. Demolish in orderly and careful manner. Protect existing foundation, supporting structural members, and adjacent surfaces.
 - B. Remove demolished materials from site unless specifically noted otherwise. Do not burn or bury materials on site.
 - C. All demolished equipment and materials become property of the Contractor unless claimed by the Owner. The Contractor shall contact the Owner and establish components that will be salvaged and turned over to the Owner prior to commencement of demolition. Demolished equipment and materials not claimed by the Owner shall be disposed of by the Contractor. All costs for removal, handling, transportation, and disposal shall be included in the bid.

- D. Relics, antiquities, and similar objects remain the property of the Owner. Notify the Architect prior to removal and obtain acceptance of method of removal.
- E. Remove materials as work progresses. Upon completion of the Work, leave areas in clean condition.
- F. Upon completion of Work, remove all temporary construction.

End of Section

Section 06 10 00 Rough Carpentry

PART 1 - General

- 1.1 Summary
 - A. Section specifies wood blocking, framing, sheathing.
- 1.2 References
 - A. APA E30 - Design/Construction Guide - Residential and Commercial.
 - B. APA PRI-400 – Performance Standard for APA EWS I-Joists.
 - C. APA PS1 – Voluntary Product Standard for Construction and Industrial Plywood.
 - D. APA PS2 – Voluntary Product Standard for Performance Standards for Wood-Based Structural-Use Panels.
 - E. ASTM D1760 - Pressure Treatment of Timber Products.
 - F. ASTM D3498 - Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems.
 - G. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- 1.3 Delivery, Storage, and Handling
 - A. Protect lumber and other products from dampness both during and after delivery at site.
 - B. Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.
 - C. Stack plywood and other board products to prevent warping.

PART 2 - Products

- 2.1 Lumber Materials
 - A. Unless otherwise specified, each piece of lumber shall bear a grade mark, stamp, or other identifying marks indicating grades of material, and rules or standards under which produced.
 - B. Moisture Content: At time of delivery and maintained at the site.
 - 1. Boards and lumber 2 inches and less in thickness: 19 percent or less.
 - 2. Lumber over 2 inches thick: 25 percent or less.
 - C. Species and Grade:
 - 1. Species and grade shall be as indicated on drawings.
 - 2. Where not indicated on drawings, provide the following:
 - a. Studs: SPF(S), stud grade.
 - b. General Framing: SPF(S) #2 or better.
- 2.2 Plywood
 - A. Comply with APA PS 1.
 - B. Plywood shall bear the mark of a recognized association or independent inspection agency that maintains continuing control over quality of plywood which identifies compliance by veneer grade, group number, span rating where applicable, and glue type.
 - C. Sheathing shall be APA rated Exposure 1 or Exterior; panel grade CD or better.
 - D. Subflooring:

1. Under finish wood flooring or underlayment shall be APA Rated sheathing, Exposure 1 panel grade CD.
2. Combination subflooring-underlayment under resilient flooring or carpet shall be APA Rated Stud-I-Floor Exterior or Exposure 1, T and G.
3. Underlayment shall be APA rated Exposure 1 or Exterior, panel grade C-C Plugged.

2.3 Accessories

- A. Fasteners: Hot dipped galvanized steel or stainless steel for high humidity and treated wood locations, unfinished steel elsewhere.

PART 3 - Execution

3.1 Framing

- A. Set structural members level and plumb, in correct position.
- B. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in alignment until completion of erection and installation of permanent bracing.
- C. Place horizontal members, crown side up.
- D. Construct load bearing framing and curb members full length without splices.

3.2 Sheathing

- A. Secure roof sheathing with longer edge (strength axis) perpendicular to framing members and with ends staggered and sheet ends over bearing.
- B. Use sheathing clips between sheets between roof framing members.
- C. Fully engage tongue and groove edges.

End of Section

Section 07 31 13 Asphalt Shingles

PART 1 - General

- 1.1 Summary
 - A. Section includes granular surfaced asphalt shingle roofing, moisture shedding underlayment, eave and valley protection, and associated metal flashings.
 - B. Related Sections:
 - 1. Section 06 10 00 – Rough Carpentry: Roof sheathing and framed openings.
- 1.2 References
 - A. ASTM A653/A653M – Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated by the Hot-Dip Process.
 - B. ASTM B209/B209M – Aluminum and Aluminum-Alloy Sheet and Plate.
 - C. ASTM B370 – Copper Sheet and Strip for Building Construction.
 - D. ASTM D225 – Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules.
 - E. ASTM D226 – Asphalt Saturated Organic Felt Used in Roofing and Waterproofing.
 - F. ASTM D228 – Testing Asphalt Roll Roofing, Cap Sheets and Shingles.
 - G. ASTM D2178 – Asphalt Glass (Felt) Used in Roofing and Waterproofing.
 - H. ASTM D3161 – Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
 - I. ASTM D3462 – Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules.
 - J. ASTM D4586 – Asphalt Roof Cement, Asbestos Free.
 - K. ASTM D7158 - Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force / Uplift Resistance Method).
 - L. ASTM E108 - Test Methods of Fire Tests for Roof Coverings.
 - M. NRCA Roofing and Waterproofing Manual – Volume 2 – Steep Roofing Manual.
 - N. UL790 – Tests for Fire Resistance of Roof Covering Materials.
- 1.3 Performance Requirements
 - A. Conform to applicable code requirements for UL790 or ASTM E108 fire resistance of class A.
 - B. Conform to ASTM D7158 classification G or H for wind resistance.
- 1.4 Submittals
 - A. Product Data: Submit data including material characteristics, performance criteria, and limitations.
 - B. Samples: Submit samples indicating each shingle color range and finish texture / pattern for color and texture selection.
 - C. Warranty: Submit manufacturer's warranty for shingles specified.
- 1.5 Quality Assurance
 - A. Perform work in accordance with NRCA Steep Roofing Manual.
- 1.6 Environmental Requirements
 - A. Do not apply roofing materials during inclement weather without proper weather protection.
 - B. Conform to all additional installation requirements specified by shingle manufacturer for cold weather installation.

- 1.7 Warranty
 - A. Furnish twenty-five year manufacturer's warranty for shingles.
- 1.8 Extra Materials
 - A. Supply four bundles of extra shingles and store in building.

PART 2 - Products

- 2.1 Asphalt Shingles
 - A. Product Description: Shingles conforming to ASTM D3018, Class A; UL rating of A and Wind Resistance Label; glass fiber mat base, mineral granule surface; 220 pounds per 100 square feet weight; self-sealing type; laminated overlay type; color as selected from manufacturer's standard colors.
- 2.2 Components
 - A. Underlayment: ASTM D226, synthetic polymer-based scrim reinforced underlayment designed for use on roof decks as a water-resistant layer beneath asphalt shingles.
 - B. Eave and Valley (Ice Dam) Protection: Sheet barrier of rubberized asphalt bonded to sheet polyethylene, 40 mil film thickness, granular face, self adhesive with strippable treated release paper.
- 2.3 Accessories
 - A. Nails: Standard round wire shingle type, hot dipped zinc coated steel, of sufficient length to penetrate 3/4 inch into roof decking.
 - B. Plastic Cement: ASTM D4586, Asphalt type with mineral fiber components, capable of setting within 24 hours at 75° F and 50 percent RH.
 - C. Flashing Materials:
 - 1. Sheet Flashings: ASTM A653/A653M, G90 (Z275); 26 gauge thick steel pre-coated with fluoropolymer finish in dark gray color.
 - D. Bituminous Paint: Acid and alkali resistant type, black color.
- 2.4 Fabrication
 - A. Form flashings to profiles indicated on drawings and to protect roofing materials from physical damage and shed water.
 - B. Form flashing sections square and accurate to profile, in maximum possible lengths, and free from distortion or defects.
 - C. Hem exposed edges of flashings to minimum 1/4 inch on underside.
 - D. Apply bituminous paint to concealed surfaces of flashings in contact with other metals.

PART 3 - Execution

- 3.1 Examination
 - A. Verify roof penetrations and plumbing stacks are in place and flashed to deck surface.
 - B. Verify roof openings are correctly framed.
 - C. Verify deck surfaces are dry and free of ridges, warps, and voids.
- 3.2 Preparation
 - A. Fill knot holes and voids at bonded eave and valley protection with latex filler or cover with sheet metal.
 - B. Broom clean deck surface.
- 3.3 Installation
 - A. Eave and Valley (Ice Dam) Protection Installation

1. Assure roof deck is clean, dry, and smooth.
 2. Apply eave protection over drip edge at eaves and under drip edge at rake.
 3. Overlap ends and sides per manufacturer's directions.
 4. Stagger end laps by at least two feet from course to course.
 5. Extend eave protection membrane minimum 4 feet up slope beyond interior face of wall.
- B. Underlayment Installation
1. Where eave protection is not installed, apply one layer of underlayment. Lap sides and ends 4" minimum. Install rake drip edge over underlayment.
 2. Offset joints from course to course six feet minimum.
- C. Metal Flashing and Accessories Installation
1. Weather lap joints 2 inch minimum and seal weather tight with butyl or polyisobutylene sealant.
 2. Secure in place with concealed fastenings.
- D. Asphalt Shingles Installation
1. Place shingles in straight coursing pattern, with five inch weather exposure.
 2. Project first course of shingle $\frac{3}{4}$ " past face of fascia.
 3. Extend shingles on both slopes across valley in weave pattern and fasten. Extend shingles minimum of 12 inches beyond valley centerline to achieve woven valley, concealing valley protection.
 4. Cap ridges with individual ridge shingles, matching shingle weather exposure. Place to avoid exposed nails.
 5. Coordinate installation of roof mounted components or work projecting through roof with weather tight placement of counter flashings.
 6. Complete work to provide weather tight installation.
- 3.4 Protection of Installed Construction
- A. Do not permit traffic over finished roof surface.

End of Section

Section 07 92 00

Joint Sealants

PART 1 - General

- 1.1 Summary
 - A. Section includes sealants, joint backing, and accessories.
- 1.2 References
 - A. ASTM C834 – Latex Sealing Compounds.
 - B. ASTM C919 – Practice for Use of Sealants in Acoustical Applications.
 - C. ASTM C920 – Elastomeric Joint Sealants.
 - D. ASTM C1193 – Guide for Use of Joint Sealants.
 - E. ASTM D1056 – Flexible Cellular Materials – Sponge or Expanded Rubber.
 - F. ASTM D1565 – Flexible Cellular Materials – Vinyl Chloride Polymers and Co-Polymers (Open Cell Foam).
 - G. ASTM D1667 – Flexible Cellular Materials – Vinyl Chloride Polymers and Co-Polymers (Closed Cell Foam).
 - H. ASTM D2628 – Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.
- 1.3 Submittals
 - A. Product Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
 - B. Manufacturer’s Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.
 - C. Warranty: Include coverage for installed sealants and accessories failing to achieve airtight seal, watertight seal, exhibiting loss of adhesion or cohesion, and sealants which do not cure.
- 1.4 Environmental Requirements
 - A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.
- 1.5 Coordination
 - A. Coordinate sealant installation with work of sections referencing this section.

PART 2 - Products

- 2.1 Joint Sealers:
 - A. High Performance General Purpose Exterior (Non-traffic) Sealant: Polyurethane, ASTM C920, Grade NS, Class 25, Uses NT, M, A, and O, Type S or M (single or multi-component):
 - 1. Color: Colors as selected from manufacturer’s standard colors to match adjoining surfaces.
 - 2. Applications: Use for:
 - a. Control, expansion, and soft joints in masonry.
 - b. Joints between concrete and other materials.
 - c. Joints between metal frames and other materials.
 - d. Other exterior non-traffic joints for which no other sealant is specified.

- B. Exterior Metal Lap Joint: Butyl or polyisobutylene, non-drying, non-skinning, non-curing.
 - 1. Applications: Use for concealed sealant bead in sheet metal work.
- 2.2 Accessories
- A. Joint Backing: Round foam rod compatible with sealant, oversized 30 to 50 percent larger than joint width.
 - B. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 - Execution

- 3.1 Examination
- A. Verify substrate surfaces and joint openings are ready to receive work.
 - B. Verify joint backing and release tapes are compatible with sealant.
- 3.2 Preparation
- A. Remove loose materials and foreign matter impairing adhesion of sealant.
 - B. Clean and prime joints.
 - C. Perform preparation in accordance with ASTM C1193.
 - D. Protect elements surrounding work of this section from damage or disfiguration. Apply non-staining masking tape to face of surfaces adjacent to joints.
- 3.3 Installation
- A. Perform installation in accordance with ASTM C1193.
 - B. Measure joint dimensions and size joint backers to achieve the following, unless otherwise specified by the manufacturer's installation directions:
 - 1. Width / depth ration of 2:1.
 - 2. Neck dimension no greater than 1/2 of joint width.
 - 3. Surface bond area on each side not less than 75 percent of joint width.
 - C. Install bond breaker at bottom of joint where backing is not used to prevent three-sided adhesion.
 - D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
 - E. Apply sealant within recommended application temperature range. Consult sealant manufacturer when sealant cannot be applied within this range.
 - F. Tool exposed joints to form smooth and uniform beds, with slightly concave surface conforming to joint configuration per Figure 5A in ASTM C1193.
 - G. Remove masking tape immediately after tooling of sealant and before sealant face starts to "skin" over. Remove any excess sealant from adjacent surfaces of joint, leaving the working in a clean finished condition.
 - H. Finish paving or floor joints flush unless joint is otherwise detailed.
- 3.4 Cleaning
- A. Clean adjacent soiled surfaces.
- 3.5 Protection of Installed Construction
- A. Protect sealants until cured.
 - B. Any sealants that become contaminated before they have cured shall be removed and replaced.

End of Section