

Purchasing Division

Invitation for Bid

IFB-4371-17-DH Senior Recreation Center Remodel

Responses Due:

May 25, 2017 prior to 4:00pm <u>Accepting Electronic Responses Only</u> <u>Responses Only Submitted Through the Rocky Mountain E-Purchasing</u> <u>System (RMEPS)</u>

https://www.rockymountainbidsystem.com/default.asp

(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor <u>MUST</u> contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)

Purchasing Representative: Duane Hoff Jr., Senior Buyer <u>duaneh@gjcity.orgl</u> 970-244-1545

This document has been developed specifically to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction solicitations. All vendors are urged to thoroughly review this solicitation prior to responding. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

Invitation for Bids

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1. Instructions to Bidders

- **1.1. Purpose:** The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to remodel the Senor Recreation Center. All dimensions and scope of work should be verified by Contractors prior to submission of bids.
- 1.2. Mandatory Pre-Bid Meeting: <u>Prospective bidders are required to attend a</u> <u>mandatory pre-bid meeting on May 16, 2017 at 11:00am</u>. <u>Meeting location shall</u> <u>be in the Senior Recreation Center, located at 550 Ouray Avenue, Grand Junction,</u> <u>CO</u>. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).
- **1.3. The Owner:** The Owner is the City of Grand Junction and/or Mesa County, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.
- 1.4. Submission: Each bid shall be submitted in electronic format only, and only the Rockv Mountain E-Purchasing through website (https://www.rockymountainbidsystem.com/default.asp). This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.) Please view our "Electronic Vendor Registration Guide" at http://www.gjcity.org/business-and-economicdevelopment/bids/ for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)
- **1.5. Printed Form for Price Bid:** All Price Bids must be made upon the Contractor's Bid Form attached, and should give the amounts both in words and in figures, and must be signed and acknowledged by the bidder.
- **1.6. Exclusions:** No oral, telephonic, emailed, or facsimile bid will be considered
- **1.7. Contract Documents:** The complete IFB and bidder's response compose the Contract Documents. Copies of these documents can be obtained from the City Purchasing website, <u>http://www.gjcity.org/business-and-economic-development/bids/</u>.
- **1.8. Examination of Specifications:** Bidders shall thoroughly examine and be familiar with the project Statement of Work. The failure or omission of any Offeror to receive or examine any form, addendum, or other document shall in no way relieve any Offeror from any obligation with respect to his bid. The submission of a bid shall be taken as evidence of compliance with this section.

- **1.9.** Questions Regarding Statement of Work: Any information relative to interpretation of Scope of Work or specifications shall be requested of the Purchasing Representative, in writing, in ample time prior to the response time.
- **1.10.** Addenda & Interpretations: If it becomes necessary to revise any part of this solicitation, a written addendum will be posted electronically on the City's website at http://www.gicity.org/business-and-economic-development/bids/. The Owner is not bound by any oral representations, clarifications, or changes made in the written specifications by Owner, unless such clarification or change is provided in written addendum form from the City Purchasing Representative.
- **1.11. Taxes:** The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.
- **1.12. Offers Binding 60 Days:** Unless otherwise specified, all formal offers submitted shall be binding for sixty (60) calendar days following opening date, unless the Bidder, upon request of the Purchasing Representative, agrees to an extension.
- **1.13. Collusion Clause:** Each bidder by submitting a bid certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all bids shall be rejected if there is evidence or reason for believing that collusion exists among bidders. The Owner may, or may not, accept future bids for the same services or commodities from participants in such collusion.
- **1.14. Public Disclosure Record:** If the bidder has knowledge of their employee(s) or subcontractors having an immediate family relationship with a City/County employee or elected official, the bidder must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the City/County.

2. General Contract Conditions for Construction Projects

- 2.1. The Contract: This Invitation for Bid, submitted documents, and any negotiations, when properly accepted by the City/County, shall constitute a contract equally binding between the City/County and Contractor. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The contract may be amended or modified with Change Orders, Field Orders, or Addendums.
- **2.2. The Work:** The term Work includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.
- **2.3. Execution, Correlation, Intent, and Interpretations:** The Contract Documents shall be signed in not less than triplicate by the Owner (City/County) and Contractor. City/County will provide the contract. By executing the contract, the Contractor

represents that he/she has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the City/County are, and shall remain, City/County property. They are not to be used on any other project, and with the exception of one contract set for each party to the contract, are to be returned to the owner on request at the completion of the work.

- 2.4. **The Owner:** The Owner is the City of Grand Junction and/or Mesa County, Colorado and is referred to throughout the Contract Documents. The term Owner means the Owner or his authorized representative. The Owner shall, at all times, have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access. The Owner will make periodic visits to the site to familiarize himself generally with the progress and quality of work and to determine, in general, if the work is proceeding in accordance with the contract documents. Based on such observations and the Contractor's Application for Payment, the Owner will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in the contract. The Owner will have authority to reject work which does not conform to the Contract documents. Whenever, in his reasonable opinion, he considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, he will have authority to require the Contractor to stop the work or any portion, or to require special inspection or testing of the work, whether or not such work can be then be fabricated, installed, or completed. The Owner will not be responsible for the acts or omissions of the Contractor, and sub-Contractor, or any of their agents or employees, or any other persons performing any of the work.
- 2.5. Contractor: The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.
- **2.6. Sub-Contractors:** A sub-contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.
- 2.7. Award of Sub-Contractors & Other Contracts for Portions of the Work: As soon as practicable after bids are received and prior to the award of the contract, the

successful Contractor shall furnish to the Owner, in writing for acceptance, a list of the names of the sub-contractors or other persons or organizations proposed for such portions of the work as may be designated in the proposal requirements, or, if none is so designated, the names of the sub-contractors proposed for the principal portions of the work. Prior to the award of the contract, the Owner shall notify the successful Contractor in writing if, after due investigation, has reasonable objection to any person or organization on such list. If, prior to the award of the contract, the Owner has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the successful Contractor may, prior to the award, withdraw their proposal without forfeiture of proposal security. If the successful Contractor submits an acceptable substitute with an increase in the proposed price to cover the difference in cost occasioned by the substitution, the Owner may, at their discretion, accept the increased proposal or may disgualify the Contractor. If, after the award, the Owner refuses to accept any person or organization on such list, the Contractor shall submit an acceptable substitute and the contract sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued. However, no increase in the contract sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.

- **2.8. Supervision and Construction Procedures:** The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract.
- **2.9. Warranty:** The Contractor warrants to the Owner that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective. If required by Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If within ten (10) days after written notice to the Contractor requesting such repairs or replacement, the Contractor should neglect to make or undertake with due diligence to the same, the City may make such repairs or replacements. All indirect and direct costs of such correction or removal or replacement shall be at the Contractor's expense. The Contractor will also bear the expenses of making good all work of others destroyed or damaged by the correction, removal or replacement of his defective work.
- 2.10. Permits, Fees, & Notices: The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws,

ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.

- **2.11. Responsibility for Those Performing the Work:** The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all sub-contractors, their agents and employees, and all other persons performing any of the work under a contract with the Contractor.
- **2.12. Use of the Site:** The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with any materials or equipment.
- **2.13. Cleanup:** The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of work he shall remove all his waste materials and rubbish from and about the project, as well as all his tools, construction equipment, machinery and surplus materials.
- Insurance Requirements: The selected Bidder agrees to procure and maintain, at 2.14. its own cost, policy(s) of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the Bidder pursuant to this Section. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Bidder shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Section by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types. Bidder shall procure and maintain and, if applicable, shall cause any Subcontractor of the Bidder to procure and maintain insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Owner. All coverage shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the Bidder pursuant to this Section. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Minimum coverage limits shall be as indicated below unless specified otherwise in the Special Conditions.

(a) Worker Compensation: Contractor shall comply with all State of Colorado Regulations concerning Workers' Compensation insurance coverage.

(b) General Liability insurance with minimum combined single limits of:

One Million Dollars (\$1,000,000) each occurrence and One Million Dollars (\$1,000,000) per job aggregate.

The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall include

coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests provision.

(c) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than:

One Million Dollars (\$1,000,000) each occurrence and One Million Dollars (\$1,000,000) aggregate

This policy shall provide coverage to protect the contractor against liability incurred as a result of the professional services performed as a result of responding to this Solicitation.

With respect to each of Bidder's owned, hired, or non-owned vehicles assigned to be used in performance of the Work. The policy shall contain a severability of interests provision. <u>The policies required by paragraph (b) above shall be endorsed to include the City, and the City's officers and employees as additional insureds.</u> Every policy required above shall be primary insurance, and any insurance carried by the Owner, its officers, or its employees, or carried by or provided through any insurance pool of the Owner, shall be excess and not contributory insurance to that provided by Bidder. No additional insured endorsement to any required policy shall contain any exclusion for bodily injury or property damage arising from completed operations. The Bidder shall be solely responsible for any deductible losses under any policy required above.

- **2.15. Indemnification:** The Contractor shall defend, indemnify and save harmless the Owner, and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Contractor, or of any Contractor's agent, employee, sub-contractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Contractor shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.
- **2.16. Miscellaneous Conditions:** Material Availability: Contractors must accept responsibility for verification of material availability, production schedules, and other pertinent data prior to submission of bid. It is the responsibility of the bidder to notify the Owner immediately if materials specified are discontinued, replaced, or not available for an extended period of time. OSHA Standards: All bidders agree and warrant that services performed in response to this invitation shall conform to the standards declared by the US Department of Labor under the Occupational Safety and Health Act of 1970 (OSHA). In the event the services do not conform to OSHA standards, the Owner may require the services to be redone at no additional expense to the Owner.
- **2.17. Time:** The Contract Time is the period of time allotted in the Contract Documents for completion of the work. The date of commencement of the work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the

date of the Contract or such other date as may be established therein, or as established as entered on the Bid Form. The Date of Substantial Completion of the work or designated portions thereof is the date certified by the Owner when construction is sufficiently complete, in accordance with the Contract Documents.

- **2.18. Progress & Completion:** The Contractor shall begin work on the date of commencement as defined in the Contract, and shall carry the work forward expeditiously with adequate forces and shall complete it within the contract time.
- 2.19. Payment & Completion: The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when he finds the work acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents.
- **2.20. Quantities of Work and Unit Price:** Materials or quantities stated as unit price items in the Bid are supplied only to give an indication of the general scope of the Work. The City does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit item of the Work without a change in the unit price. The City also reserves the right to make changes in the Work including the right to delete any bid item in its entirety or add additional bid items.
- 2.21. Bid Bond: Each Bid shall as a guaranty of good faith on the part of the Bidder be accompanied by a Bid Guaranty consisting of: a certified or cashier's check drawn on an approved national bank or trust company in the state of Colorado, and made payable without condition to the City; or a Bid Bond written by an approved corporate surety in favor of the City. The amount of the Bid Guaranty shall not be less than 5% of the total Bid amount. Once a Bid is accepted and a Contact is awarded, the apparent successful bidder has ten calendar days to enter into a contractor in the form prescribed and to furnish the bonds with a legally responsible and approved surety. Failure to do so will result I forfeiture of the Bid Guaranty to the City as Liquidated Damages.
- 2.22. Performance & Payment Bonds: Contractor shall furnish a Performance and a Payment Bond, each in an amount at least equal to that specified for the contract amount as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These bonds shall remain in effect for the duration of the Warranty Period (as specified in the Special Conditions). Contractor shall also furnish other bonds that may be required by the Special Conditions. All bonds shall be in the forms prescribed by the Contract Documents and be executed by such sureties as (1) are licensed to conduct business in the State of Colorado and (2) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Accounts, U.S. Treasury Department. All bonds singed by an agent must be

accompanied by a certified copy of the Authority Act. If the surety on any bond furnished by the Contractor is declared bankrupt, or becomes insolvent, or its rights to do business in Colorado are terminated, or it ceases to meet the requirements of clauses (1) and (2) of this section, Contractor shall within five (5) days thereafter substitute another bond and surety, both of which shall be acceptable to the City.

- **2.23. Retention:** The Owner will deduct money from the partial payments in amounts considered necessary to protect the interest of the Owner and will retain this money until after completion of the entire contract. The amount to be retained from partial payments will be five (5) percent of the value of the completed work, and not greater than five (5) percent of the amount of the Contract. When the retainage has reached five (5) percent of the Contract no further retainage will be made and this amount will be retained until such time as final payment is made.
- 2.24. Liquidated Damages for Failure to Enter Into Contract: CITY ONLY Should the Successful Bidder fail or refuse to enter into the Contract within ten Calendar Days from the issuance of the Notice of Award, the City shall be entitled to collect the amount of such Bidder's Bid Guaranty as Liquidated Damages, not as a penalty but in consideration of the mutual release by the City and the Successful Bidder of all claims arising from the City's issuance of the Notice of Award and the Successful Bidder's failure to enter into the Contract and the costs to award the Contract to any other Bidder, to readvertise, or otherwise dispose of the Work as the City may determine best serves its interest.
- 2.25. Liquidated Damages for Failure to Meet Project Completion Schedule: CITY ONLY If the Contractor does not achieve Final Completion by the required date, whether by neglect, refusal or any other reason, the parties agree and stipulate that the Contractor shall pay liquidated damages to the City for each such day that final completion is late. As provided elsewhere, this provision does not apply for delays caused by the City. The date for Final Completion may be extended in writing by the Owner.

The Contractor agrees that as a part of the consideration for the City's awarding of this Contract liquidated damages in the daily amount of **\$350.00** is reasonable and necessary to pay for the actual damages resulting from such delay. The parties agree that the real costs and injury to the City for such delay include hard to quantify items such as: additional engineering, inspection and oversight by the City and its agents; additional contract administration; inability to apply the efforts of those employees to the other work of the City; perceived inefficiency of the City; citizens having to deal with the construction and the Work, rather than having the benefit of a completed Work, on time; inconvenience to the public; loss of reputation and community standing for the City during times when such things are very important and very difficult to maintain.

The Contractor must complete the Work and achieve final completion included under the Bid Schedule in the number of consecutive calendar days after the City gives is written Notice to Proceed. When the Contractor considers the entire Work ready for its intended use, Contractor shall certify in writing that the Work is substantially complete. In addition to the Work being substantially complete, Final Completion date is the date by which the Contractor shall have fully completed all clean-up, and all items that were identified by the City in the inspection for final completion. Unless otherwise stated in the Special Conditions, for purposes of this liquidated damages clause, the Work shall not be finished and the Contract time shall continue to accrue until the City gives its written Final Acceptance.

If the Contractor shall fail to pay said liquidated damages promptly upon demand thereof after having failed to achieve Final Completion on time, the City shall first look to any retainage or other funds from which to pay said liquidated damages; if retainage or other liquid funds are not available to pay said liquidated damages amounts, the Surety on the Contractor's Performance Bond and Payment Bond shall pay such liquidated damages. In addition, the City may withhold all, or any part of, such liquidated damages from any payment otherwise due the Contractor.

Liquidated damages as provided do not include any sums to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. Should the City incur additional costs because of delays or extensions to other contracts resulting from the Contractor's failure of timely performance, the Contractor agrees to pay these costs that the City incurs because of the Contractor's delay, and these payments are separate from and in addition to any liquidated damages.

The Contractor agrees that the City may use its own forces or hire other parties to obtain Substantial or Final Completion of the work if the time of completion has elapsed and the Contractor is not diligently pursuing completion. In addition to the Liquidated Damages provided for, the Contractor agrees to reimburse the City for all expenses thus incurred.

- 2.26. Contingency/Force Account: Contingency/Force Account work will be authorized by the Owner's Project Manager and is defined as minor expenses to cover miscellaneous or unforeseen expenses related to the project. The expenses are not included in the Drawings, Specifications, or Scope of Work and are necessary to accomplish the scope of this contract. Contingency/Force Account Authorization will be directed by the Owner through an approved form. Contingency/Force Account funds are the property of the Owner and any Contingency/Force Account funds, not required for project completion, shall remain the property of the Owner. Contractor is not entitled to any Contingency/Force Account funds, that are not authorized by Owner or Owner's Project Manager.
- 2.27. Protection of Persons & Property: The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission,

neglect, or misconduct by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.

- **2.28.** Changes in the Work: The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by Change Order and shall be executed under the applicable conditions of the contract documents. A Change Order is a written order to the Contractor signed by the Owner issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. The contract sum and the contract time may be changed only by Change Order.
- **2.29.** Claims for Additional Cost or Time: If the Contractor wishes to make a claim for an increase in the contract sum or an extension in the contract time, he shall give the Owner written notice thereof within a reasonable time after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall precede in accordance with the regulations on safety. No such claim shall be valid unless so made. Any change in the contract sum or contract time resulting from such claim shall be authorized by Change Order.
- **2.30. Minor Changes in the Work:** The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.
- **2.31.** Field Orders: The Owner may issue written Field Orders which interpret the Contract Documents in accordance with the specifications, or which order minor changes in the work in accordance with the agreement, without change in the contract sum or time. The Contractor shall carry out such Field Orders promptly.
- 2.32. Uncovering & Correction of Work: The Contractor shall promptly correct all work rejected by the Owner as defective or as failing to conform to the contract documents whether observed before or after substantial completion and whether or not fabricated installed or competed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. If within one (1) year after the date of completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the contract documents, any of the work found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from

the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner. The Contractor shall bear the cost of making good all work of separate Contractors destroyed or damaged by such removal or correction. If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the payment or contract sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

- **2.30. Amendment:** No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.
- **2.31.** Assignment: The Contractor shall not sell, assign, transfer or convey any contract resulting from this IFB, in whole or in part, without the prior written approval from the Owner.
- **2.32. Compliance with Laws:** Bids must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements.
- **2.33. Confidentiality:** All information disclosed by the Owner to the Contractor for the purpose of the work to be done or information that comes to the attention of the Contractor during the course of performing such work is to be kept strictly confidential.
- **2.34. Conflict of Interest:** No public official and/or City/County employee shall have interest in any contract resulting from this IFB.
- 2.35. Contract Termination: This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation.
- **2.36. Employment Discrimination:** During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:
 - **2.36.1.** The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - **2.36.2.** The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer.

- **2.36.3.** Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- **2.37.** Immigration Reform and Control Act of 1986 and Immigration Compliance: The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et.seq.* (House Bill 06-1343).
- **2.38. Ethics:** The Contractor shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.
- **2.39.** Failure to Deliver: In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.
- **2.40.** Failure to Enforce: Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.
- **2.41.** Force Majeure: The Contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Contractor, unless otherwise specified in the contract.
- **2.42. Independent Contractor:** The Contractor shall be legally considered an Independent Contractor and neither the Contractor nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Contractor, its servants, or agents. The Owner shall not withhold from the contract payments to the Contractor any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Contractor. Further, the Owner shall not provide to the Contractor any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.
- **2.43. Nonconforming Terms and Conditions:** A bid that includes terms and conditions that do not conform to the terms and conditions of this Invitation for Bid is subject to rejection as non-responsive. The Owner reserves the right to permit the Contractor to withdraw nonconforming terms and conditions from its bid prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.

- **2.44. Ownership:** All plans, prints, designs, concepts, etc., shall become the property of the Owner.
- **2.45. Oral Statements:** No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.
- **2.46. Patents/Copyrights:** The Contractor agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Contractor for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this IFB.
- **2.47. Remedies**: The Contractor and Owner agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.
- **2.48. Venue**: Any agreement as a result of responding to this IFB shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.
- **2.49. Expenses:** Expenses incurred in preparation, submission and presentation of this IFB are the responsibility of the company and cannot be charged to the Owner.
- **2.50. Sovereign Immunity:** The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.
- 2.51. Non-Appropriation of Funds: The contractual obligation of the Owner under this contract is contingent upon the availability of appropriated funds from this fiscal year budget as approved by the City Council or Board of County Commissioners from this fiscal year only. State of Colorado Statutes prohibit obligation of public funds beyond the fiscal year for which the budget was approved. Anticipated expenditures/obligations beyond the end of the current Owner's fiscal year budget shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.
- **2.52. Cooperative Purchasing:** Purchases as a result of this solicitation are primarily for the City/County. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Bid. The quantities furnished in this bid document are for only the City/County. It does not include quantities for any other jurisdiction. The City or County will be responsible only for the award for its jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The City/County accepts no liability for payment of

orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

2.53. Keep Jobs in Colorado Act: Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a). If Contractor claims it is entitled to a waiver pursuant to C.R.S. §8-17-101(1), Contractor shall state that there is insufficient Colorado labor to perform the work such that compliance with Article 17 would create an undue burden that would substantially prevent a project from proceeding to completion, and shall include evidence demonstrating the insufficiency and undue burden in its response.

Unless expressly granted a waiver by the Owner pursuant to C.R.S. §8-17-101(1), Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a).

2.53.1. "Public project" is defined as:

- (a) any construction, alteration, repair, demolition, or improvement of any land, building, structure, facility, road, highway, bridge, or other public improvement suitable for and intended for use in the promotion of the public health, welfare, or safety and any maintenance programs for the upkeep of such projects
- (b) for which appropriate or expenditure of moneys may be reasonably expected to be \$500,000.00 or more in the aggregate for any fiscal year
- (c) except any project that receives federal moneys.

3. Statement of Work

3.1. General: The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to remodel the Senor Recreation Center. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

3.2. Special Conditions & Provisions:

- 3.2.1 Mandatory Pre-Bid Meeting: <u>Prospective bidders are required to attend a</u> <u>mandatory pre-bid meeting on May 16, 2017 at 11:00am</u>. <u>Meeting location shall</u> <u>be in the Senior Recreation Center, located at 550 Ouray Avenue, Grand Junction,</u> <u>CO</u>. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).
- **3.3.2 Grant Funding:** This project is funded in whole or in part with Community

Development Block Grant (CDBG) funds. As such there are Federal Requirements that have to be met by the contractor. It is the contractor's responsibility to review these requirements in relation to their bid.

- **3.3.3 Award:** It is the intent of the City to award to a single contractor for this project. However, the City reserves the right to split awards if it deems it in it's best interest.
- **3.3.4 Pricing:** Pricing shall be all inclusive to include but not be limited to: all labor, equipment, supplies, materials, freight (F.O.B. Destination Freight Pre-paid and Allowed to each site), travel, mobilization costs, fuel, set-up and take down costs, and full-time inspection costs, and all other costs related to the successful completion of the project.

The Owner shall not pay nor be liable for any other additional costs including but not limited to: taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc.

3.3.4 Freight/Shipping: All freight/shipping shall be F.O.B. Destination – Freight Pre-Paid and Allowed to the project site(s), Grand Junction, CO.

Contractor must meet all federal, state, and local rules, regulations, and requirements for providing such services.

3.3.5 Contract: A binding contract shall consist of: (1) the IFB and any amendments thereto, (2) the bidder's response (bid) to the IFB, (3) clarification of the bid, if any, and (4) the City's Purchasing Department's acceptance of the bid by "Notice of Award" or by "Purchase Order". All Exhibits and Attachments included In the IFB shall be incorporated into the contract by reference.

A. The contract expresses the complete agreement of the parties and, performance shall be governed solely by the specifications and requirements contained therein.

B. Any change to the contract, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the bidder and the City Purchasing Division or by a modified Purchase Order prior to the effective date of such modification. The bidder expressly and explicitly understands and agrees that no other method and/or no other document, including acts and oral communications by or from any person, shall be used or construed as an amendment or modification to the contract.

3.3.6 Time of Completion: The scheduled time of Completion for the Project is 60 Calendar Days from the starting date specified in the Notice to Proceed.

Completion is achieved when site cleanup and all punch list items (resulting from the final inspection) have been completed. Completion shall have the meaning set

forth in Article I, Section 3 (Definitions and Terms) of the General Contract Conditions.

- **3.3.7 Working Days and Hours:** The working days and hours shall be Monday Friday form 7am 7pm. Weekends are optional and available, with authorization from City's Project Manager.
- **3.3.8 Licenses and Permits:** Contractor is responsible for obtaining all necessary licenses and permits required for Construction, at Contractors expense. See Section 2.10. Contractor shall supply to Owner all copies of finalized permits.
- **3.3.9 Incidental Items:** Any item of work not specifically identified or paid for directly, but which is necessary for the satisfactory completion of any paid items of work, will be considered as incidental to those items, and will be included in the cost of those items.

3.3. Scope of Work:

3.3.1 Siding Replacement

- 1. Contractor is to provide all labor, materials and equipment to complete the project.
- 2. Contractor is responsible for verifying all measurements and information prior to beginning work.
- 3. Contractor is responsible for obtaining all necessary permits. Provide the owner with a copy of the final signed off building permit once project is complete.
- 4. All work is to meet local and state building codes.
- 5. All metal siding and trim is to meet the attached specifications document and the specifications data sheets for the Metal Sales Manufacturing Corporation, or an approved equal.
- 6. Color choice(s) will be determined by the City of Grand Junction.
- 7. Remove and properly dispose of the existing siding and soffit materials.
- 8. Provide protection for surrounding surfaces.
- 9. Provide safe entrance and egress for public access for the duration pf the project.
- 10. All areas to receive metal siding are to first be covered with a Polyethylene Vapor Retarder.
- 11. All existing light fixtures are to remain.
- 12. Installation of panels, trim, and accessories are to meet the manufacturer's specifications.
- 13. Provide the City a copy of the written manufacturer's product warranty.
- 14. Provide City a written contractor's workmanship guaranty for no less than one year after final acceptance.

3.3.2 Flooring Replacement

Statement of Work:

1. Contractor shall verify all measurements before starting work.

- 2. Contractor shall be responsible for moving all furniture as required to complete the work. Furniture is to be placed back in its original position after work is complete.
- 3. Remove and dispose of existing carpeting and cove base in the designated rooms.
- 4. Refer to the attached "SRC Floor Plan Marked.pdf" for the rooms scheduled to receive the new Luxury Vinyl Tile (LVT) flooring.
- 5. New vinyl flooring shall be the Mohawk Group Hot and Heavy Collection Grown Up Luxury Vinyl Tile. Refer to the "Grown Up_Tear Sheet.pdf" document for the specifications.
- 6. Color shall be number 138 Kingsley.
- 7. Approximate square feet of each room:
 - a. Game Room #101 820 sq. ft.
 - b. Office #110 140 sq. ft.
 - c. Storage #111 22 sq. ft.
 - d. Meeting #105 378 sq. ft.
 - e. Meeting #106 192 sq. ft.
- 8. Prepare the concrete sub floor according to the manufacturer's requirements. Refer to the attached "Installation_GlueDown_LuxuryVinyITile.pdf" sheet.
- 9. Install the new LVT according to the manufacturer's instructions.
- 10. Supply and install new cove base in rooms scheduled to receive the new LVT flooring.

Cove base shall be a Johnsonite Brand 4" rubber cove base in Beige color (DC-49), or equivalent.

3.3.3 <u>Door and Window Replacement</u>

Background: The exterior entry doors and sliders are the original doors from construction of the Senior Center in 1973. All of these doors are in deteriorated condition with some that are completely in-operable. The replacement of these doors will improve operation of the doors as well as update the appearance of the building.

Statement of Work:

- 1. Contractor shall verify all measurements and dimensions prior to ordering materials and beginning the work.
- 2. Contractor is responsible for securing any necessary permits for this work.
- 3. Contractor shall provide protection for the surrounding surfaces and the public occupants of the building during performance of this work.
- 4. The building must be securable at the end of each work day.
- 5. The man door and sliding door shown on the east elevation of sheet A-5 are **NOT** to be included. These are now interior doors since the pool room addition.
- 6. Refer to sheet "SRC Floor Plan with Doors Marked" sheet for location of the doors to be replaced.

Entry Doors:

1. Remove and dispose of the three existing 3'-0" x 93.5" wood entry doors and frames.

- 2. Replace the removed entry doors and frames with new 3'-0" x 6'-8" steel doors and hollow metal frames; with attached transom windows and frames to make up the difference in height.
- 3. The transom windows and frames are to be an extension of the door frames.
- 4. Refer to "Hollow Metal Doors and Frames Specification.pdf" for the specifications.
- 5. Contractor shall provide cut sheets/submittals for approval on proposed doors to be used.

Sliding Doors:

- 1. Remove and dispose of the existing wooden slider doors.
- 2. Install new direct replacement vinyl sliders according to the manufacturer's instructions.
- 3. See the "CSI Format Specification Vinyl Windows" sheet for the minimum specifications of the new vinyl sliders.
- 4. Contractor shall provide cut sheets/submittals for approval on proposed doors to be used.
- 5. There are 5 sliding doors total, two have sidelights. These are the door rooms and sizes:
 - a. Multipurpose Room #102:
 - i. North Slider: 8'-0" x 6'-8"
 - ii. S.E. Slider: 8'-0" x 6'-8"
 - iii. S.W. Slider: 8'-0" x 6'-8"
 - b. Meeting Room #105: 8'0" x 6'-8" with 3'-0 x 6'-8" side light
 - c. Meeting Room #106: 8'0" x 6'-8" with 3'-0 x 6'-8" side light

Perform all necessary repairs to interior and exterior walls to return them to their previously finished state. The City will provide the paint for the finish coats.

3.3.4 <u>Electrical Work (Emergency Lighting and Emergency Exit Sign</u> <u>Replacement)</u>

Pool Room:

- 1. Remove and dispose of the existing ceiling emergency light; replace with a new LED dual lamp emergency light.
- 2. Remove and dispose of the existing emergency exit sign. Remove the wiring back to the nearest junction box. Modify the electrical panel circuit label as needed.
- 3. Install one new emergency exit sign that shall be the LumAware brand UL Listed Lucite Clear Exit Sign, Model EG-EXIT-CLR, ceiling mounted. To have one directional arrow pointing to the right.

Large Activities Room:

At the S.E. entry door:

- 1. Remove and dispose of the existing emergency exit sign. Remove the wiring back to the nearest junction box. Modify the electrical panel circuit label as needed.
- 2. Install one new emergency exit sign that shall be the LumAware brand UL Listed Lucite Clear Exit Sign, Model EG-EXIT-CLR, ceiling mounted. No directional arrows.

At the S.W. entry door:

- 1. Remove and dispose of the existing ceiling emergency light pack; replace with a new LED dual lamp emergency light.
- 2. Remove and dispose of the existing emergency exit sign. Remove the wiring back to the nearest junction box. Modify the electrical panel circuit label as needed.
- 3. Install one new emergency exit sign that shall be the LumAware brand UL Listed Lucite Clear Exit Sign, Model EG-EXIT-CLR, ceiling mounted. No directional arrows.

At the North entry door:

- 1. Remove and dispose of the emergency exit light and sign combination.
- 2. Install a new LED dual lamp emergency light pack using the existing wiring. Install a new LumAware UL Listed Metal Exit Sign (Without Frame) Model EG-EXIT-UL924-GN, with no directional arrows. No electricity required.

3.3.5 <u>Roofing:</u>

- 1. Contractor is to provide all labor, materials and equipment to complete the project.
- 2. Contractors are responsible for verifying all measurements and information prior to beginning work.
- 3. Contractor is responsible for obtaining any necessary permits. Provide the owner with a copy of the final signed building permit.
- 4. New roof material shall be a white 60 mil TPO membrane, with an Energy Star rating.
- 5. Contractor will supply the manufacturer's documentation verifying the Energy Star rating of the roofing materials supplied.
- 6. Warranty Contractor shall supply an executed 20 year "full system" warranty from the Manufacturer.
- 7. The existing roof consists of the following: (refer to the Arial picture for roof sections)
- a. Roof Section A: one layer of granulated torch down roofing overt 1-layer tar and gravel on a ³/₄" plywood deck.
- b. Roof Section B: one layer of granulated torch down roofing over a 2" wood fiberboard on a ³/₄" plywood deck.
- c. Roof Section C: one layer granulated torch down roofing over 1" wood fiberboard on a ³/₄" plywood deck.
- d. Roof Section D: one layer granulated torch down roofing over a tar and gravel roof on a ³/₄" plywood deck.
- 8. The total roof area is approximately 5,770 square feet.
- 9. Remove existing roof to the deck in roof sections A & D; Remove existing roof to the fiber board in roof sections B & C, and dispose of all debris.
- 10. Apply $\frac{1}{2}$ " cover board to all areas.
- 11. The new roof shall be mechanically attached.
- 12. Contractor is to make sure that the locations where the water collects at the roof edge has a good slope to the roof drains.
- 13. All terminations, penetrations, trim, cap material and the installation are to be new and meet the installation and warranty requirements of the roofing manufacturer. Prior to ordering the materials, the contractor shall supply the owner with submittals on all products proposed to be used for approval.

3.4. Attachments:

Exhibit A: Federal Requirements Packet, including Davis-Bacon Wage Determinations Document

Siding:

- Exhibit B: Metal Siding Specifications Document
- Exhibit C: SRC Elevations Sheet A-5
- Exhibit D: SRC Addition Elevations Sheet A2
- Exhibit E: Metal Wall Panels Specification Data (Metal Sales Man. Corp.)
- Exhibit F: Standing Seam Sheet Metal Roof Panels Specification Data (Metal Sales Man. Corp.)

Windows & Doors:

Exhibit G: Sheet A-5 building elevations

- Exhibit: H: SRC Floor Plan with Doors Marked
- Exhibit I: Hollow Metal Doors and Frames Specifications
- Exhibit J: CSI Format Specification Vinyl Windows
- Exhibit K: CDBG Federal Requirements

Flooring:

Exhibit L: Floor Product Specs Exhibit M: Floor Drawings

Roofing:

Exhibit N: Roof Site Map Exhibit O: TPO Roofing Specifications

- **3.5.** Contractor Bid Documents: For Contractor's convenience, the following is a list of forms/items to be submitted with the Contractor's bid response. However, should a form/item not be listed in this section, but required in the solicitation documents, it is the Contractor's responsibility to ensure all forms/items are submitted.
 - Contractor's Bid Form
 - Price Bid Schedule
 - Federal Requirements Packet

3.6. IFB Tentative Time Schedule:

Invitation For Bids available	May 8, 2017
Mandatory Site Visit/Briefing	May 16, 2017
Inquiry deadline, no questions after this date	May 19, 2017
Addendum Posted	May 22, 2017
Submittal deadline for proposals	May 25, 2017
Contract execution (unless Council approval required)	May 30, 2017
Bonding & Insurance Cert due	June 6, 2017
Work begins no later than	June 12, 2017/Upon
	Receipt of Notice to
	Proceed
Final Completion	60 Calendar Days from
	Notice to Proceed Start

Date

3.7. Questions Regarding Scope of Services:

Duane Hoff Jr., Senior Buyer City of Grand Junction <u>duaneh@gjcity.org</u>

4. <u>Contractor's Bid Form</u>

Bid Date:			
Project: IFB-4371-17-D	H "Senior Recreation	Center Remodel"	
Bidding Company:			
Name of Authorized Ag	gent:		
Email			
Telephone	Address		
City	State	Zip	

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: ______.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: _____

Authorized Signature: _____

Title: _____

PRICE BID SCHEDULE: IFB-4371-17-DH Senior Recreation Center Remodel

Siding – Base Bid

ltem No.	Description	Total Price
1	Total price for all labor, materials, parts, freight, etc. to replace all siding, facia, and soffits for the entire building, as per the solicitation documents.	

Item 1 Bid Price Written:

Flooring – Base Bid

Flooring – Base Bid				
ltem No.	Description	Total Price		
2	Total price for all labor, materials, parts, freight, etc. to flooring, as per the solicitation documents.			
	solicitation documents.			

Item 2 Bid Price Written:

Doors and Windows – Base Bid

ltem No.	Description	Total Price
3	Total price for all labor, materials, parts, freight, etc. to replace doors and windows, as per the solicitation documents.	

Item 3 Bid Price Written:

Electrical Work (Emergency Lighting and Emergency Exit Sign Replacement) – Base Bid

ltem No.	Description	Total Price
	-	
4	Total price for all labor, materials, parts, freight, etc. for electrical work, as per the solicitation documents.	

Item 4 Bid Price Written:

Roofing – Base Bid

ltem No.	Description	Total Price
5	Total price for all labor, materials, parts, freight, etc. to replace roofing, as per the solicitation documents.	

Item 5 Bid Price Written:

GRAND TOTAL PROJECT BID PRICE

Description	Grand Total Price
Total price for all labor, materials, parts, freight, etc. to provide complete remodel for entire scope of project, as per the solicitation documents.	

GRAND TOTAL PROJECT BID PRICE WRITTEN:

Siding - Alternate 1

ltem No.	Description	Total Price
6	Total price for all labor, materials, parts, freight, etc. to replace the 4 smaller sections of siding on the roof area only, as per the solicitation documents.	

Item 6 – Alternate 1 Bid Price Written:

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: _____

Authorized
Signature: _____

Title: _____

ATTACHMENT: FEDERAL REQUIREMENTS

FOR PROJECTS FUNDED IN WHOLE OR PART BY COMMUNITY DEVELOPMENT BLOCK GRANTS

INSTRUCTIONS:

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

If the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after the bid opening. No contract will be awarded unless such a report is submitted.

CERTIFICATE OF BIDDER

Name and address of bidder (including zip code):

1.	Bidder has participated in a previous contract or subcontract subject to Equal Opportunity
	Clause.

____Yes ____No

2. Compliance reports were required to be filed in connection with such a contract or subcontract.

Yes No Not applicable

3. Bidder has filed all compliance reports due under applicable instructions, including SF-100.

_____Yes _____No ____Not applicable

4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended? _____Yes ____No

Submitted E	By:		
Title:			
Signature:			
Date:			

NONCOLLUSION AFFIDAVIT OF PRIME CONTRACTOR

State	ate of)						
Cour	ounty of)	SS.					
	Ł	eing first duly sworn, deposes and says that:					
1.	He is the	of					
	, the bidder that has sub	, the bidder that has submitted the attached bid;					
2.	He is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;						
3.	Such bid is genuine and is not a collusive or sh	am bid;					
4.	Neither the said bidder nor any of its officers, employees or parties of interest, including this connived or agreed, directly of indirectly with collusive or sham bid in connection with the C submitted or to refrain from bidding in connec directly or indirectly, sought by agreement or of any other bidder, firm or person to fix the price other bidder, or to secure through any collusion agreement any advantage against the City of C proposed Contract; and	affiant, has in any way colluded, conspired, another bidder, firm or person to submit a ontract for which the attached bid has been tion with such Contract, or has in any manner, collusion or communication or conference with e or prices in the attached bid or the bid of any n, conspiracy, connivance or unlawful					
5.	The price or prices quoted in the attached bid a collusion, conspiracy, connivance or unlawful its agents, representatives, owners, employees,	agreement on the part of the bidder or any of					
	Signed:						
	Title:						
Subs	ubscribed and sworn to me this day of	,					
By: _	y:						
	Notary Public						
My o	y commission expires:						

REQUIRED FORMS FOR PROJECTS FUNDED IN WHOLE OR IN PART BY COMMUNITY DEVELOPMENT BLOCK GRANT MONIES

The work to be performed in this project is being funded, in whole or part, using Federal Community Development Block Grant (CDBG) monies. Federal procurement regulations require that the following items must be completed and submitted with your bid for consideration for contract award:

- Forms for Section 3 of the Housing and Urban Development Act of 1968: Preliminary Statement of Work Force Needs Affirmative Action Plan for Use of Project Area Businesses Statement of Actual Work Force Needs
- B. Solicitation of Minority and Women Owned Business
- C. Contractor Ownership Information
- D. Subcontractor Ownership Information

Your completed forms shall be evaluated in assisting the City in determining responsiveness to federal regulatory compliance and may be used to determine whether or not the Contractor is responsible for the purposes of awarding the bid.

PRELIMINARY STATEMENT OF WORK FORCE NEEDS AND GOALS FOR USING LOWER INCOME RESIDENTS

Project: _____

NOTE: Contractors shall, to the greatest extent possible, give lower income residents (individuals residing in the City having an annual family income not exceeding\$30,320) opportunities for employment and training on CDBG projects.

Please fill out the following employee information.

	CURRENT EMPLOYEES	CURRENT MINORITY EMPLOYEES	CURRENT FEMALE EMPLOYEES	ESTIMATED EMPLOYEES NEEDED FOR PROJECT	GOALS FOR RECRUITING LOWER- INCOME RESIDENTS
SKILLED					
SEMI-SKILLED					
UNSKILLED					
TRAINEE					

Methods to be used to achieve these goals:

(ATTACH ADDITIONAL PAGES IF NECESSARY)

SUBMITTED BY:		
TITLE:		
SIGNATURE:		
COMPANY NAME:		
DATE:		

AFFIRMATIVE ACTION PLAN FOR USE OF PROJECT AREA BUSINESSES

PROJECT:	
COMPANY:	
NUMBER OF ALL SUBCONTRACTORS PROPOSED:	
DOLLAR VALUE OF ALL SUBCONTRACTS PROPOSE	D: \$
To the greatest extent feasible contracts will be awarded thro project area businesses (businesses located within the Grand	
Goal of these contracts for project area businesses:	
Proposed type of subcontract	Approximate cost
Outline the affirmative action plan to achieve these goals:	

STATEMENT OF ACTUAL WORK FORCE NEEDS AND GOALS FOR USING LOWER INCOME RESIDENTS

Project: _____

NOTE: Contractors shall, to the greatest extent possible, give lower income residents (individuals residing in the City having an annual family income not exceeding\$30,320) opportunities for employment and training on CDBG projects.

Please fill out the following employee information.

					GOALS FOR
				ESTIMATED	RECRUITING
		CURRENT	CURRENT	EMPLOYEES	LOWER-
	CURRENT	MINORITY	FEMALE	NEEDED FOR	INCOME
	EMPLOYEES	EMPLOYEES	EMPLOYEES	PROJECT	RESIDENTS
SKILLED					
SEMI-SKILLED					
UNSKILLED					
TRAINEE					

Methods to be used to achieve these goals:

(ATTACH ADDITIONAL PAGES IF NECESSARY)

SUBMITTED BY:		_
TITLE:		_
SIGNATURE:		_
COMPANY NAME:		_
DATE:		

NOTE: This form is to be submitted to the City's Engineer fifteen (15) days after start of construction.

SOLICITATION OF MINORITY AND WOMEN OWNED BUSINESSES

Indicate below actions taken to solicit minority and women-owned businesses where subcontractors are used in completing the project.

Solicited the following Minority/Female Businesses:

Contractor Name	Phone
Individual Contacted	Date
Contractor Name	Phone
Individual Contacted	Date
Contractor Name	Phone
Individual Contacted	Date
Contractor Name	Phone
Individual Contacted	Date
Contractor Name	Phone
Individual Contacted	Date
MITTED BY:	
.E:	
NATURE:	
IPANY NAME:	
`E:	

CONTRACTOR OWNERSHIP INFORMATION

Pro	oject Name:							
1.	1. Legal Business Name:							
2.	. Legal Business Address, including Zip Code							
3.	9 + digit Federal ID # of E	Business (or SS No. o	f Principle Owr	ner)				
4.	Business DUNS Number	(required with bid):						
	Attach proof of SAM Regi Business owner, partners a		h bid). To regi	ster visit w	ww.sam.gov/portal			
	ume							
	Indicate the Ethnicity or R WhiteBlack	ace of the Principle C	Ownership of the	e Contracto	pr:			
7.	Is the Contractor a Woman							
Th	e undersigned certify that t	he above information	is true to the be	est of their	knowledge.			
Na	me of Owner or Authorized	d Representative	Date					

CITY OF GRAND JUNCTION COMMUNITY DEVELOPMENT BLOCK GRANT

SUBCONTRACTOR OWNERSHIP INFORMATION

Pro	oject Name: _					
1.	Legal Busin	ess Name:				
2.	Legal Busir	ness Address,	including Zip (Code		
3.	9 + digit Fe		Business (or SS		ple Owner)	
4.	Business D	UNS Number	(required with	bid):		
	-	_			To register visit www	v.sam.gov/portal
6.	Business ov	vner, partners	and/or officers			
					<u>Address</u>	
6.	Indicate the	Ethnicity or I	Race of the Prin	ciple Ownersh	nip of the Contractor:	
	White	Black	Hispanic	Asian	Native American	
7.	Is the Contra	actor a Woma	n-Owned Busin	ness Enterprise	e?Yes	No
Th	e undersigne	d certify that	the above infor	mation is true	to the best of their ki	nowledge.
Na	me of Owne	r or Authoriz	ed Representati	ve	Date	_

ITEM F, PART I - FEDERAL REQUIREMENTS

The Contractor shall at all times during the execution of the project strictly adhere to, and comply with, all applicable federal, state and local laws, and their implementing regulations, as they currently exist and may hereafter be amended, which are incorporated herein by this reference as terms and conditions of the project and/or contract. The Contractor shall also comply with and require compliance with these statutes and regulations in sub-agreements permitted with sub-contractors. A listing of some of the federal laws that may be applicable to the Work include:

- A. Executive Order 11246 of September 24, 1965 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967 and as supplemented in Department of Labor regulations (41 CFR Chapter 60).
- B. The Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).
- C. The Davis-Bacon Act (40 U.S.C. 276a to a-7) as supplemented by Department of Labor regulations (29 CFR Part 5).
- D. Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5)
- E. Standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857(h), Section 508 of the Clean Water Act (33 U.S.C. 1368). Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).
- F. Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163).
- G. Office of Management and Budget Circulars A-87, A-21 or A-122, and A-102 or A-110, whichever is applicable, in accordance with U.S.C. and/or CFR.
- H. The Hatch Act (5 U.S.C. 1501-1508) and Public Law 95-454 Section 4728. These statutes state that federal funds cannot be used for partian political purposes of any kind by any person or organization involved in the administration of federally assisted programs.
- 42 USC 6101 <u>et.seq.</u> 42 USC 2000d, 29 USC 794, and implementing regulation, 45 CFR Part 80 <u>et.seq.</u> These acts require that no person shall, on the grounds of race, color, national origin, age, or handicap, be excluded from participation in or be subjected to discrimination in any program or activity funded, in whole or part, by federal funds.
- J. The Americans with Disabilities Act (Public Law 101-336; 42 USC 12101, 12102, 12111-12117, 12131-12134, 12141-12150, 12161-12165, 12181-12189, 12201-12213 47 USC 225 and 47 USC 611
- K. Drug-Free Workplace Act (Public Law 100-690 Title V, subtitle D, 41 USC 701 et. seq.).

- L. The Age Discrimination Act of 1975 and its implementing regulation, 24 CFR Part 146.
- M. Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794 as amended, and implementing regulation 45 CFR Part 84.
- N. Architectural Barriers Act, 42 U.S.C. 4151-4157; 24 CFR Parts 40 and 41.
- O. 24 CFR Part 85, concerning "Records retention, access to records, breach of contract and termination and bonding and insurance, Debarred contractors, and minority owned businesses".
- P. Title VI of the Civil Rights Act of 1964 and implementing regulations.
- Q. 24 CFR Part 570; specifically including but not limited to 570.502, 503, 506 and 570.600 <u>et.</u> <u>seq.</u>, sub-part K as applicable.
- R. 24 CFR Part 87 concerning "Lobbying."

The Contractor shall include the foregoing provisions in any and all subcontract(s) and shall furthermore furnish certification/evidence of compliance to the City of its and any subcontractor's compliance when requested by the City. Sanctions for non-compliance include but are not limited to withholding of payment and/or cancellation, termination, or suspension of the contract in whole or in part.

ITEM F, PART II -FEDERAL STATUTORY AND REGULATORY PROVISIONS

<u>PURPOSE</u>: The work to be performed under this Agreement is one an activity funded all or in part with federal Community Development Block Grant (CDBG) funds and is subject to applicable federal laws and regulations. This part contains the federal laws and regulations with which the CONTRACTOR/ SUBCONTRACTOR(S) is/are required to comply in the performance of the work. The contractual provisions of Special Provisions Item F Part II are made a part of the contract, and are hereby incorporated into this Agreement by this reference. In the event of any conflict in the provisions of this Part II and any other provisions not found in Part II, without specific statement of supersedure, the provisions of this Part II shall apply.

1. ACTIVITY RECORDS.

- a. <u>Records to be Kept and Retention Period</u>. Activity records shall be created and maintained by the CONTRACTOR, with respect to all matters covered by this Contract. Said records shall include, but are not limited to, accounting, purchasing, property, personnel, employment and fiscal matters relating to the project. Said records shall also include, but not be limited to, applicant, beneficiary, and employee information on race, age, sex, disability and familial status, if any. Such records concerning applicant and beneficiaries shall, in addition, include verifiable information on family address, family income (housing activities shall retain household income data which shall include income from all family members and other nonrelated members living in the household), and household size. All project records shall be retained by the CONTRACTOR for a period of three years after its receipt of the final payment of after all pending matters are closed, whichever date is later.
- b. <u>Source Documentation</u>. ALL CONTRACTOR costs, expenditures and obligations hereunder must be supported by such source documentation as cancelled checks, paid bills, payrolls, time and attendance records, contract and subcontract award documents or other documents showing in detail the nature of such costs and obligations.
- c. <u>Record Accessibility</u>. Any pertinent books, documents, papers, or other records pertaining in whole or in part to this contract on the project shall be clearly identified and be made readily accessible to the CITY, HUD, and Comptroller General of the U.S., or any of their duly authorized representatives, upon request therefore, for the purpose of making audits, reviews, evaluations, excerpts and transcriptions. At such times and in such

Form as may be required, the CONTRACTOR shall furnish to the CITY, HUD, or the Comptroller General of the U.S. any of the records, reports, data, information or other documents enumerated in this paragraph. The CONTRACTOR shall furnish such information at no cost.

2. ACCOUNTING AND FINANCIAL MANAGEMENT.

a. <u>Bonding Requirements</u>. For all agreements involving construction work exceeding \$100,000, in addition to CITY requirements, the following items shall be required as a minimum to be submitted by the CONTRACTOR/SUBGRANTEE to the CITY as a condition of the

execution of this Agreement, a bid guarantee equivalent to five percent of the bid price, a performance bond for 100 percent of the agreement price, and a payment bond for 100 percent of the agreement price.

- b. <u>Indirect Costs Prohibition</u>. All costs to be reimbursed by the CITY to the CONTRACTOR shall be direct costs. Such direct costs shall be identified in an Activity Budget spelling out in detail the specific sources and uses of any funds to be expended under this Agreement. No indirect costs (activities that are incurred for a common or joint purpose benefiting more than one cost objective and not readily assignable to the cost objectives specifically benefited, without effort disproportionate to the results achieved shall be eligible for reimbursement, unless the CONTRACTOR/SUBGRANTEE already has a cost allocation plan meeting the Office of Management and Budget Circular, A-87 requirements, incorporated herein by reference and written documentation that the plan has been approved by HUD which shall also be incorporated herein by reference.
- c. <u>Administrative Requirements and Cost Principles</u>. CONTRACTOR, which is not governmental entities, shall comply with the requirements and standards of OMB Circular No. A-122, "Cost Principles for Non Profit Organizations", OMB Circular No. A-21 "Cost Principles for Educational Institutions," or 48 CFR Part 31 for for-profit organizations, and with the Attachment to OMB Circular No. A-110, as applicable.

FEDERAL LABOR STANDARDS PROVISIONS

U.S. Department of Housing Office of Labor Relations **Federal Labor Standards Provisions and Urban Development** Form HUD-4010 (07/2003) Previous edition is obsolete Ref. Handbook 1344.1

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section I(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wade rate and fringe benefits on the wade determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 12150140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination.

The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 12150140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. **Withholding**. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime

contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) **Payrolls and basic records**. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section I(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section I(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate,

either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees. (i) Apprentices. Apprentices will be permitted to work at less

than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentice's shall be

paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. **Compliance with Copeland Act requirements**. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. **Subcontracts**. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 of this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.
 (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part

24. (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: Whoever, for the purpose of ... influencing in any way the action of such Administration... makes, utters or publishes any statement knowing the same to be false... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees.

No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable only where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.
(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a

territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph. (3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraph.

C. Health and Safety. The provisions of this paragraph C are applicable only where the amount of the prime contract exceeds \$100,000. (1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.
 (3) The Contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

DAVIS BACON WAGE RATE DETERMINATION

General Decision Number: CO170035 04/07/2017 CO35 Superseded General Decision Number: CO20160035 State: Colorado Construction Type: Building County: Mesa County

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0	01/06/2017
1	04/07/2017

ENGI0009-017 10/23/2013

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(Crane)		
141 tons and over	\$ 25.97	9.15
50 tons and under	\$ 24.88	9.15
51 to 90 tons	\$ 25.04	9.15
91 to 140 tons	\$ 25.19	9.15
* IRON0024-009 01/01/2017		
	Rates	Fringes
	Ф Э С О Г	12.00
IRONWORKER, ORNAMENTAL	\$ 26.05	12.00
* IRON0024-010 01/01/2017		
	Rates	Fringes
	Tutos	1111905
IRONWORKER, STRUCTURAL	\$ 26.05	12.00
PAIN0079-009 08/01/2016		
	Rates	Fringes
PAINTER (Spray)	\$ 20.00	7.91

PLUM0003-009 06/01/2016

PLUM0003-009 06/01/2016	Rates	Fri	nges	
PLUMBER (Excludes HVAC Duct, Pipe and Unit Installation)	\$ 38.4.	3	15.19	
PLUM0208-009 06/01/2016 PIPEFITTER, Excludes HVAC	Rates	Fri	nges	
Duct, Pipe and Unit Installation		3	13.39	
SHEE0009-006 07/01/2016 SHEET METAL WORKER (Includes	Rates	Fri	nges	
HVAC Duct and Unit Installation; Excludes HVAC Pipe Installation)		6	15.96	
SUCO2013-011 07/31/2015		Rates	Fr	inges
BRICKLAYER		\$ 21.96		0.00
CARPENTER		\$ 20.53	1	0.00
CEMENT MASON/CONCRETE FINISHE	R	\$ 21.44		10.23
ELECTRICIAN		\$ 25.63	1	9.51
INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation	n)	\$20.49		3.85
LABORER: Common or General		\$ 13.25		0.00
LABORER: Mason Tender - Brick	\$ 15.9	9	0.00	
LABORER: Mason Tender - Cement/Concrete	\$ 16.0	0	0.00	
LABORER: Pipelayer	\$ 16.9	6	3.68	
OPERATOR: Backhoe/Excavator/Trackhoe	\$ 20.7	8	5.78	

OPERATOR: Bobcat/Skid Steer/Skid Loader	\$ 18.58	2.42
OPERATOR: Grader/Blade	\$ 21.50	0.00
PAINTER (Brush and Roller)	\$ 19.56	2.05
PIPEFITTER (HVAC Pipe Install Only)	\$ 24.26	10.66
ROOFER	\$ 16.18	0.00
TRUCK DRIVER: Dump Truck	\$ 17.34	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers: A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination.

07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers: Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers: Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

Specifications

Metal Siding and Soffit Specifications

- A. Standing seam sheet metal roof panels product "Image II" made by Metal Sales Manufacturing Corporation or equal.
 - 1. Thickness Requirement: 26 gauge (0.018-inch or 0.46-mm)
- B. Soffit Panels by Metal Sales Manufacturing Corporation or equal:
 - 1. Space Configuration: Flat pan.
 - 2. Panel Fasteners: Concealed, Direct Fastened.
 - 3. Panel coverage: 12 inches (304.8 mm).
 - 4. 26 Gauge Aluminum material.
 - 5. Panel Depth: 1 inch (25.4 mm).
- C. Color selection of Roof panels and Soffit panels to be Owners choice.

SECTION 07 41 13 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Architectural metal roof panels, including trim accessories.

1.2 REFERENCES

A. General: Standards listed by reference form a part of this specification section. Standards listed are identified by issuing authority, abbreviation, designation number, title or other designation. Standards subsequently referenced in this Section are referred to by issuing authority abbreviation and standard designation.

B. ASTM International:

1. ASTM A 792 - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

2. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

 ASTM D 2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
 ASTM D 4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.

C. Underwriters Laboratories (UL):

- 1. UL 263 Fire Tests of Building Construction and Materials.
- 2. UL 580 Tests For Uplift Resistance of Roof Assemblies.
- 3. UL 790 Standard Test Methods for Fire Tests of Roof Coverings.
- 4. UL 2218 Impact Resistance of Prepared Roof Covering Materials.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Meetings: Conduct pre-installation meeting to clarify Project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements.

1.4 ACTION SUBMITTALS

A. Product Technical Data: For each type of product required, including manufacturer's preparation recommendations, storage and handling requirements, and recommended installation methods.

C. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of roof and wall panels, specified loads, flashings, roof curbs, vents, sealants, interfaces with all materials not supplied by the metal panel system manufacturer, and identification of proposed component parts and their finishes. Do not proceed with fabrication prior to approval of shop drawings.

D. Samples: Selection and verification samples for finishes, colors and textures. Submit two complete sample sets of each type of panel, trim, clip and fastener required.

E. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For installed products including maintenance methods and precautions against cleaning materials and methods detrimental to finishes and performance.

1.6 MAINTENANCE MATERIAL

A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 01 Closeout Submittals Section.

1.8 DELIVERY, STORAGE AND HANDLING

A. General: Comply with manufacturer's current printed product storage recommendations.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage: Store materials above ground, under waterproof covering, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Provide proper ventilation of metal panel system to prevent condensation build-up between each panel and trim or flashing component. Tilt stack to drain in wet conditions. Remove strippable plastic film before storage under high-heat conditions. Store products in manufacturer's unopened packaging until just prior to installation.

D. Handling: Exercise caution in unloading and handling metal panel system to prevent bending, warping, twisting and surface damage.

1.9 WARRANTY

A. Special Exposed Panel Finish Warranty: Manufacturer's standard form PVDF (Fluorocarbon) System Warranty for film integrity, chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period.

1. Deterioration shall include but is not limited to:

a. Color fading of more than 5 Hunter units when tested according to ASTM D 2244.

b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.

c. Cracking, checking, peeling or failure of paint to adhere to bare metal.

2. Warranty Period: Film integrity for 45 years and chalk and fade rating for 35 years from date of Substantial Completion.

3. Manufacturer's warranty may exclude surface deterioration due to physical damage and exposure to salt air environments.

C. Special Warranty: Installer's standard form in which installer agrees to repair or replace standing seam panels that fail due to poor workmanship or faulty installation within the specified warranty period.

1. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ARCHITECTURAL METAL ROOF PANELS

A. Basis of Design Product: Subject to compliance with requirements provide Metal Sales Manufacturing Corporation; Image II.

B. Substitution Limitations: Approved Equal

C. Product Options:

- 1. Panel Coverage: [12 inches (304.8 mm)] [16 inches (406.4 mm)].
- 2. Rib Height: 1 inch (25.4 mm).

3. Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, [AZ50] [AZ55] coating designation, structural quality, Grade 50, [0.018-inch (0.46-mm)] [0.0236-inch (0.60-mm)] minimum thickness.

- 4. Material: Aluminum sheet, ASTM B 209, 0.032 inch (0.813 mm) thick.
- 5. Minimum Roof Slope Capability: 3:12 over solid substrate.
- 6. Side Lap: Snap seamed.
- 7. Attachment: Concealed direct fastened panel.
- 8. Application: Designed for application over solid substrate.

9. Panel Surface Configuration: [Striations] [Minor Ribs].

10. Surface Finish: [PVDF (Kynar 500 or Hylar 5000)] [MS Colorfast45] [Acrylic Coated Galvalume].

11. Color: [As selected by Architect from manufacturer's standard colors] <Insert color>.

12. Fire Resistance Rating: Comply with UL 263 and UL 790 Class A Fire Resistance Ratings.

13. Impact Resistance: Comply with UL 2218, Class 4.

14. Water Infiltration: No leakage when tested according to Florida Building Code TAS 100.

15. Wind Uplift Resistance: Comply with UL 580, Class 90 Wind Uplift, Construction #529.

2.2 FIELD-INSTALLED THERMAL INSULATION

A. General: Refer to and coordinate with requirements in Division 07 - Thermal Insulation.

B. Products: Polyethylene Vapor Retarder

2.3 UNDERLAYMENT MATERIALS

2.6 SOURCE QUALITY CONTROL

A. Source: Obtain architectural metal roof panels, trim and other accessories from a single manufacturer.

B. Quality Control: Obtain architectural metal roof panels, trim and other accessories from a manufacturer capable of providing on-site technical support and installation assistance.

PART 3 - EXECUTION

3.5 ARCHITECTURAL METAL ROOF PANEL INSTALLATION

A. General: Comply with panel manufacturer's installation instructions including but not limited to special techniques, interface with other work, and integration of systems.

B. Fasten metal roof panels to supports with concealed clips at each standingseam joint at location, spacing, and using proper fasteners as recommended by panel manufacturer.

3.6 ACCESSORY INSTALLATION

A. General: Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

3.8 CLEANING

A. Remove temporary coverings and protection of adjacent work areas.

B. Repair or replace any installed products that have been damaged.

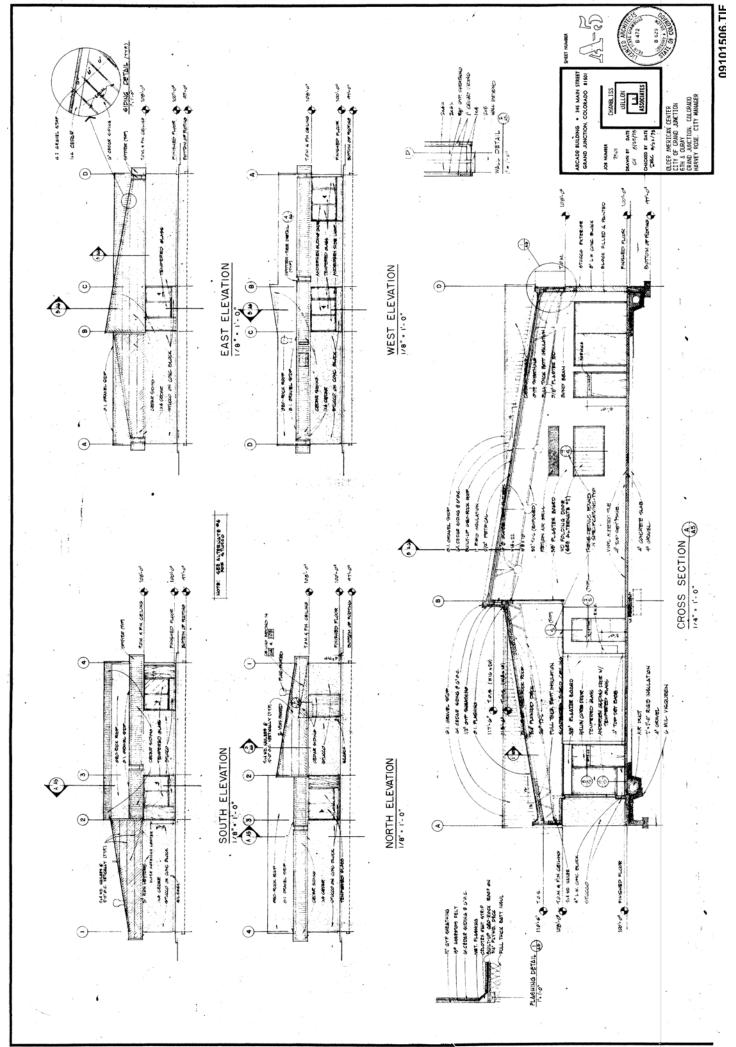
C. Clean installed panels in accordance with manufacturer's instructions prior to Owner's acceptance.

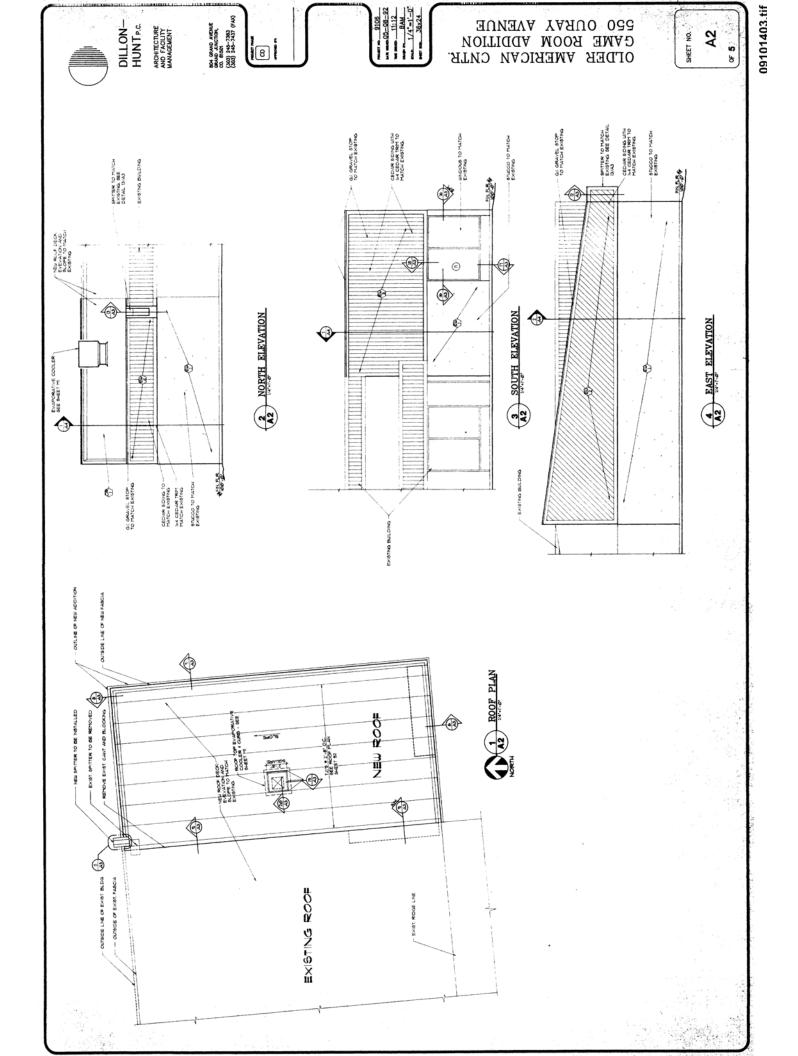
D. Remove and lawfully dispose of construction debris from Project site.

3.9 PROTECTION

A. Protect installed product and finish surfaces from damage during construction.

END OF SECTION 07 41 13 - METAL ROOF PANELS





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Metal Sales Manufacturing Corporation

This specification data sheet is provided by Metal Sales Manufacturing Corporation as a technical support tool incident to the sale of its Verti-Line Series, Flush Face Series, Soffit Panel, and Interior Liner Series metal panels. Contact Metal Sales for more information on these and other products. Telephone: 800.406.7387 www.metalsales.us.com

Section 07 42 13 - METAL WALL PANELS

1. PRODUCT NAMES

Verti-Line Series: T10-A, T10-B, T10-C, T10-D, Flush Face Series: TLC-1, TLC-2, TLC-3, TLC-4, TLC-9, TLC-10, TL-17C, TL-1D, TL-1222, Interior Liner Series: TL-19A, TL-20, TL-21 and Soffit Panel metal wall panels.

2. MANUFACTURER

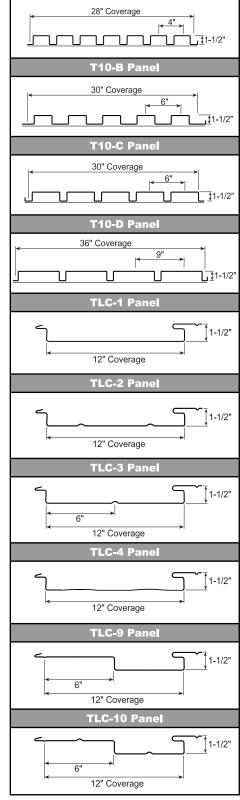
Metal Sales Manufacturing Corporation 545 South 3rd Street, Suite 200 Louisville, KY 40202 Toll Free: 800.406.7387 Phone: 502.855.4300 Fax: 502.855.4200 Web: www.metalsales.us.com E-Mail: info@metalsales.us.com

3. PRODUCT DESCRIPTION Basic Use

For more than 50 years, Metal Sales has earned a reputation as the premier provider of metal building components and accessories. Metal Sales maintains the industry's largest professional sales and service team, supported by 21 branches located throughout the United States, and offers a full line of high quality metal roof and wall panels for agricultural, commercial, architectural, industrial, and residential projects of every shape and size for both new construction and retrofit applications. Metal Sales is dedicated to leading the metal building component industry, by setting new standards for operating efficiency, product design, active service management and lasting value.

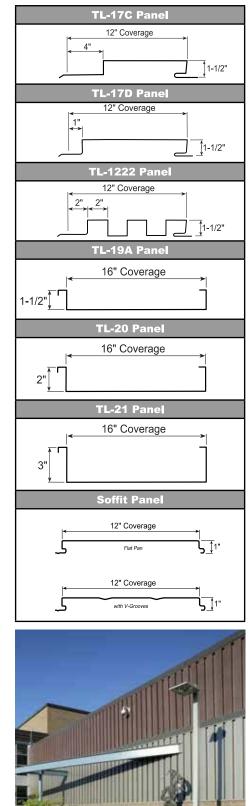
Manufacturer Memberships and Affiliations

CRRC - Cool Roof Rating Council MCA - Metal Construction Association CSI - Construction Specifications Institute MRA - Metal Roofing Alliance NRCA - National Roofing Contractors Association USGBC - United States Green Building Council ENERGY STAR® Partner



T10-A Panel

SPECIFICATION DATA



Metal Sales Manufacturing Corporation

metal sales

SPECIFICATION DATA

4. TECHNICAL DATA

Applicable Standards

•ASTM A 653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

•ASTM A 792 – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

•ASTM A 1011 – Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.

•ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

•ASTM D 2244 – Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.

•ASTM D 4214 – Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.

•ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

•ASTM E 283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

•ASTM E 330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

•ASTM E 331 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

Underwriters Laboratories (UL):

•UL 263 - Fire Tests of Building Construction and Materials.

Approvals

State of Florida: Florida Building Code 2010 Test Protocols for High-Velocity Hurricane Zones

Physical Properties:

Test reports are available to design professionals upon request.

Note: Industry designation for material thickness is moving away from "gauge" to decimal thickness in inches. Metal Sales Manufacturing Corporation recommends use of a minimum thickness requirement of 0.018-inch (0.46-mm) instead of 26 gauge, 0.0236-inch (0.60-mm) instead of 24 gauge, 0.0296inch (0.75-mm) instead of 22 gauge, 0.0356 inch (0.904 mm) instead of 20 gauge, and 0.0466 inch (1.184 mm) instead of 18 gauge.

Technical Properties for Verti-Line Series T10-A,



Grand Canyon University, Phoenix, AZ

T10-B, T10-C and T10-D Products:

► Panel Coverage: 28 inches (711.2 mm), 30 inches (762 mm) and 36 inches (914.4 mm).

► Rib Height: 1-1/2 inches (38.1 mm).

 Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, AZ50 or AZ55 coating designation, structural quality, Grade 50, 0.0236 inch (0.60 mm), 0.0296 inch (0.75 mm), 0.0356 inch (0.904 mm) and 0.0466 inch (1.184 mm) minimum thickness.
 ▶ Finish: PVDF (Kynar 500), Multi-pass Kynar 500,

Marblique, Plastisol or Polyester.

- Configuration: 90-degree vertical box ribs.
 Panel Fasteners: Exposed, direct fastened.
- Perforation: Available option.

 Color: Contact Metal Sales Manufacturing Corporation for information on color availability.

Technical Properties for Flush Face Series TLC-1, TLC-2, TLC-3, TLC-4, TLC-9, TLC-10, TL-17C, TL-17D, TL-1222 Products:

- ► Panel Coverage: 12 inches (304.8 mm)
- ► Panel Depth: 1-1/2 inches (38.1 mm).

► Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, AZ50 or AZ55 coating designation, structural quality, Grade 50, 0.0236 inch (0.60 mm), 0.0296 inch (0.75 mm), 0.0356 inch (0.904 mm) or 0.0466 inch (1.184 mm) minimum thickness.

► Material: Aluminum sheet, ASTM B 209, 0.032 inch (0.813 mm) minimum thickness.

► Finish: PVDF (Kynar 500), Multi-pass Kynar 500, Marblique, Plastisol or Polyester.

- ▶ Panel Fasteners: Concealed, direct fastened.
- Perforation: Available option.

► Color: Contact Metal Sales Manufacturing Corporation for information on color availability.

Technical Properties for Metal Interior Liner Series TL-19A, TL-20 and TL-21 Products:

► Panel Coverage: 16 inches (406.4 mm) or 24 inches (609.6 mm).

► Rib Height: 1-1/2 inches (38.1 mm), 2 inches (50.8 mm) or 3 inches (76.2 mm).

► Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, AZ50 or AZ55 coating designation, structural quality, Grade 50, 0.0236 inch (0.60 mm), 0.0296 inch (0.75 mm), 0.0356 inch (0.904 mm) or 0.0466 inch (1.184 mm) minimum thickness.

► Finish: PVDF (Kynar 500), Multi-pass Kynar 500, Marblique, Plastisol, Polyester.

► Panel Fasteners: Exposed, direct fastened.

Panel Tapering: Available option.

Perforation: Available option.

► Color: Contact Metal Sales Manufacturing Corporation for information on color availability.

Technical Properties for Soffit Panel Product:

► Panel Coverage: 12 inches (304.8 mm).

► Panel Depth: 1 inch (25.4 mm).

► Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, AZ50 or AZ55 coating designation, structural quality, Grade 50, 0.018 inch (0.46 mm), 0.0236 inch (0.60 mm) or 0.0296 inch (0.75 mm)] minimum thickness.

► Material: Aluminum sheet, ASTM B 209,

► Finish: PVDF (Kynar 500), MS Colorfast45, Acrylic Coated Galvalume.

▶ Panel Fasteners: Concealed, direct fastened.

► Surface Configuration: Flat pan or V-Groove.

► Color: Contact Metal Sales Manufacturing Corporation for information on color availability.

► Testing and Approvals: Air Infiltration: 0.25 cfm/

metal sales manufacturing corporation

sq.ft. at 6.24 psf when tested according to ASTM E 283.

Water Penetration: No penetration at 12 psf when tested according to ASTM E 331.

Uniform Static Air Pressure Difference: Tested according to ASTM E 330.

Code Approval: Complies with requirements of Florida Building Code construction 9482.5.

Environmental Considerations

Construction metals generally are readily recyclable at the end of their service life. The raw materials used in manufacture of standing seam panels also come from recycled sources. Pre-consumer and post-consumer recycled content varies. Consult with manufacturer for more information.

Fire Performance

Flame-Spread Index: 25 or less (Class A) or 200 (Class C).

5. INSTALLATION

Handling and Storage

Handle and store product according to Metal Sales recommendations. Deliver materials in original, unopened, undamaged containers with identification labels intact. Store materials above ground, under waterproof covering, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Provide proper ventilation of metal panel system to prevent condensation build-up between each panel and trim or flashing component. Store metal panel products in manufacturer's unopened packaging until ready for installation. Exercise caution in unloading and handling metal panel system to prevent bending, warping, twisting and surface damage.

Preparation

Install furring, angles, sub-purlins, and other miscellaneous wall panel support members and anchor according to metal wall panel manufacturer's recommendations.

Thermal Insulation Installation

Install polyethylene vapor retarder if required. Install board insulation if required, in compliance with installation requirements in Division 07 Section "Thermal Insulation" requirements. Install blanket insulation if required, in compliance with installation requirements in Division 07 Section "Thermal Insulation."

Metal Wall Panel Installation

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected. Comply with panel manufacturer's installation instructions including but not limited to special techniques, interface with other work, and integration of systems. Fasten metal wall panels to supports with concealed clips at each standing-seam joint at location, spacing, and using proper fasteners as recommended by panel manufacturer. Comply with installation tolerances as required.

Accessory Installation

Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components. For Flashing and Trim, comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

Field Quality Control

If requested by Owner, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

Precautions, Cleaning and Protection

Touch-up paint is used to cover and protect unexpected scratches on the paint finish that may occur during installation of panel. Touch-up paint will not weather as well or at the same rate as the original system. Test in an area that will not be noticeable. Metallic paint colors are available at an additional charge. Minor differences in color and appearance are normal and to be expected.

To minimize possible differences in appearance, an entire project should be painted at one time, from one batch of paint, using the same application equipment. Additionally, fabricated panels, flat sheet, and flashings should be oriented in the same direction. After installation remove temporary coverings and protection of adjacent work areas. Repair or replace any installed products that have been damaged. Clean installed panels in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and lawfully dispose of construction debris from Project site. Protect installed product and finish surfaces from damage during construction.

Building Codes

Current data on building code requirements and product compliance may be obtained from Metal Sales Manufacturing Corporation technical support specialists. Installation must comply with the requirements of authority having jurisdiction.

6. AVAILABILITY AND COST

Availability

SPECIFICATION DATA

Metal Sales Manufacturing Corporation products are nationally distributed and supported from 21 convenient locations nationwide, including Alaska. Manufacturer has the ability to ship worldwide. Contact manufacturer for information on local availability.

Cost

Budget installed cost information may be obtained from a local Metal Sales Manufacturing Corporation distributor or directly from the manufacturer.

7. WARRANTY

Special Exposed Panel Finish Warranty: Manufacturer's standard form PVDF (Fluorocarbon System) Warranty for film integrity, chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period. Deterioration shall include but is not limited to color fading of more than 5 Hunter units when tested according to ASTM D 2244, chalking in excess of a No. 8 rating when tested according to ASTM D 4214 or cracking, checking, peeling or failure of paint to adhere to bare metal. Warranty Period for film integrity is 45 years and for chalk and fade rating is 35 years. Metal Sales Manufacturing Corporation warranty excludes surface deterioration due to physical damage and exposure to salt air environments.

8. MAINTENANCE

No specific maintenance is required for properly installed Metal Sales Manufacturing Corporation wall panel products. Periodic panel inspection to verify system integrity, drainage functionality and repair of storm damage is advised.

9. TECHNICAL SERVICES

Technical assistance, including more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting Metal Sales Manufacturing Corporation.

10. FILING SYSTEMS

Additional product information is available from the manufacturer upon request.

- 1. McGraw-Hill Sweets
- 2. ARCAT

manufacturing corporation

SPECIFICATION DATA

Metal Sales Manufacturing Corporation

This specification data sheet is provided by Metal Sales Manufacturing Corporation as a technical support tool incident to the sale of its Image II, 1" Mini-Batten, 1.5" Mini-Batten, Curved 1" Mini-Batten, and Stile products. Contact Metal Sales for more information on these and other products. Telephone: 800.406.7387 www.metalsales.us.com

Section 07 41 13 - METAL ROOF PANELS

1. PRODUCT NAMES

Image II, 1" Mini-Batten, 1.5" Mini-Batten, Curved 1" Mini-Batten, and Stile architectural metal roof panels.

2. MANUFACTURER

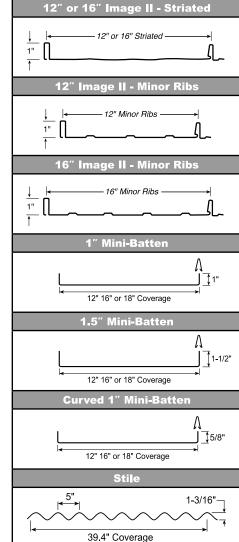
Metal Sales Manufacturing Corporation 545 South 3rd Street, Suite 200 Louisville, KY 40202 Toll Free: 800.406.7387 Phone: 502.855.4300 Fax: 502.855.4200 Web: www.metalsales.us.com E-Mail: info@metalsales.us.com

3. PRODUCT DESCRIPTION Basic Use

For more than 50 years, Metal Sales has earned a reputation as the premier provider of metal building components and accessories. Metal Sales maintains the industry's largest professional sales and service team, supported by 21 branches located throughout the United States, and offers a full line of high quality metal roof and wall panels for agricultural, commercial, architectural, industrial, and residential projects of every shape and size for both new construction and retrofit applications. Metal Sales is dedicated to leading the metal building component industry, by setting new standards for operating efficiency, product design, active service management and lasting value.

Manufacturer Memberships and Affiliations

CRRC - Cool Roof Rating Council MCA - Metal Construction Association CSI - Construction Specifications Institute MRA - Metal Roofing Alliance NRCA - National Roofing Contractors Association USGBC - United States Green Building Council ENERGY STAR® Partner



4. TECHNICAL DATA

Applicable Standards

ASTM International (ASTM):

•ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

•ASTM A 792 - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

•ASTM A 1011 - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.

•ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.



Denzinger Dentist Office, New Albany, IN

•ASTM D 2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.

•ASTM D 4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.

•ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

•ASTM E 1514 - Standard Specification for Structural Standing Seam Steel Roof Panel Systems.

•ASTM E 1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.

•ASTM E 1637 - Standard Specification for Structural Standing Seam Aluminum Roof Panel Systems.

•ASTM E 1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.

•ASTM E 1680 - Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems

•ASTM E 2140 - Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head.

Underwriters Laboratories (UL):

•UL 263 - Fire Tests of Building Construction and Materials.

•UL 580 - Tests For Uplift Resistance of Roof Assemblies.

metal sales manufacturing corporation

SPECIFICATION DATA

•UL 790 - Standard Test Methods for Fire Tests of Roof Coverings.

•UL 2218 - Impact Resistance of Prepared Roof Covering Materials.

Approvals

Miami-Dade County: Code Approvals, Notice of Acceptance (NOA).

State of Florida: Florida Building Code 2010 Test Protocols for High-Velocity Hurricane Zones Texas Windstorm Evaluation.

Physical Properties:

Test reports are available to design professionals upon request.

Note: Industry designation for material thickness is moving away from "gauge" to decimal thickness in inches. Metal Sales Manufacturing Corporation recommends use of a minimum thickness requirement of 0.018-inch (0.46-mm) instead of 26 gauge, 0.0236-inch (0.60-mm) instead of 24 gauge, and 0.0296-inch (0.75-mm) instead of 22 gauge.

Technical Properties for Image II Products:

► Panel Coverage: 12 inches (304.8 mm) or 16 inches (406.4 mm).

► Rib Height: 1 inch (25.4 mm).

► Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, Class AZ50 or AZ55 coating designation, structural quality, Grade 50, 0.0236inch (0.60-mm) minimum thickness. Select AZ50 for painted material or AZ55 for unpainted material. ► Material: Aluminum sheet, ASTM B 209, 0.032

inch (0.813 mm) or 0.040 inch (1.016 mm) thick.

► Minimum Roof Slope Capability: 3:12 over solid substrate.

► Side Lap: Snap seamed.

► Attachment: Concealed direct fastened panel.

► Application: Designed for application over solid substrate.

► Panel Surface Configuration: Striations or minor ribs.

► Surface Finish: PVDF (Kynar 500 or Hylar 5000), MS Colorfast45 or Acrylic Coated Galvalume.

► Color: Contact Metal Sales Manufacturing Corporation for information on color availability.

► Testing: Fire Resistance Rating: Designed for compliance with UL 263 and UL 790 Class A Fire Resistance Ratings.

Impact Resistance: Complies with UL 2218, Class 4. Water Infiltration: No leakage when tested according to Florida Building Code TAS 100.15.

Wind Uplift Resistance: Complies with UL 580, Class 90 Wind Uplift, Construction 529.

Code and Testing Agency Approvals:

Complies with Miami-Dade County Approval NOA 08-0229.12.



Residence, Louisville, KY

Complies with 2010 State of Florida Building Code Approval: 11560.2, 11560.3, 11560.4 and 14645.10. Complies with Texas Windstorm Evaluation RC-162.

Technical Properties for 1" Mini-Batten, 1.5" Mini-Batten or Curved 1" Mini-Batten Products: ▶ Panel Coverage: 12 inches (304.8 mm), 16 inch-

es (406.4 mm) or 18 inches (457.2 mm).

► Rib Height: 1 inch (25.4 mm) or 1-1/2 inches (38.1 mm).

► Material: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, [AZ50] [AZ55] coating designation, structural quality, Grade 50, [minimum thickness.

► Minimum Roof Slope Capability: 3:12.

► Minimum Convex Radius Capability (barrel shape): 4'-0".

► Minimum Concave Radius Capability (u-shape): 4'-0".

► Side Lap: Snap-on batten cap.

► Attachment: Concealed clip designed for thermal movement.

► Application: Designed for application over solid substrate.

► Surface Finish: PVDF (Kynar 500 or Hylar 5000), MS Colorfast45, Acrylic Coated Galvalume.

► Color: Contact Metal Sales Manufacturing Corporation for information on color availability.

► Testing: Fire Resistance Rating: Complies with UL 263 and UL 790 Class A Fire Resistance Ratings.

Impact Resistance: Complies with UL 2218 Class 4. Wind Uplift Resistance: Comply with UL 580, Class 90 Wind Uplift, Construction 397, 397A, and 430. (Applies to 1" Mini-Batten panels.)

Wind Uplift Resistance: Comply with UL 580, Class 90 Wind Uplift, Construction 352. (Applies to 1.5" Mini-Batten panels.)

Technical Properties for Stile Products:

► Panel Coverage: 39.4 inches (1000 mm).

► Rib Height: 1-3/16 inches (30.2 mm).

► Material: Galvanized steel sheet, ASTM A 653, G90 coating designation, structural quality, Grade 40, minimum thickness.

► Minimum Roof Slope Capability: 3:12 over solid substrate.

► Side Lap: Mechanically fastened.

► Attachment: Exposed direct fastened panel.

► Application: Designed for application over solid substrate.

 Surface Finish: PVDF (Kynar 500 or Hylar 5000).
 Color: Spanish Clay, Slate Grey, Ocean Blue, Classic Green, Regal Red, Tudor Brown, White.

► Testing: Fire Resistance Rating: Complies with UL 790 Class A Fire Resistance Ratings.

Impact Resistance: Complies with UL 2218 Class 4. Water Penetration: No leakage when tested according to Florida Building Code TAS 100.

Wind Uplift Resistance: Complies with UL 580, Class 90 Wind Uplift, Construction 533.

Code and Testing Agency Approvals:

Complies with Miami-Dade County Approval NOA 08-0229.11.

Complies with 2010 State of Florida Building Code Approval: 11560.7, 11560.8.

Complies with Texas Windstorm Evaluation RC-163.

Environmental Considerations

Construction metals generally are readily recyclable at the end of their service life. The raw materials used in manufacture of standing seam panels also come from recycled sources. Post industrial and post consumer recycled content varies.

Fire Performance

Flame-Spread Index: 25 or less (Class A). Smoke-Developed Index: 450 or less.

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SPECIFICATION DATA

5. INSTALLATION

Handling and Storage

Handle and store product according to Metal Sales recommendations. Deliver materials in original, unopened, undamaged containers with identification labels intact. Store materials above ground, under waterproof covering, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Provide proper ventilation of metal panel system to prevent condensation build-up between each panel and trim or flashing component. Store metal panel products in manufacturer's unopened packaging until ready for installation. Exercise caution in unloading and handling metal panel system to prevent bending, warping, twisting and surface damage.

Preparation

Install substrate boards over roof deck and sheathing over entire roof surface using recommended fasteners. Install furring, eave angles, sub-purlins, and other miscellaneous roof panel support members and anchor according to metal roof panel manufacturer's recommendations.

Underlayment Installation

Install self-adhering sheet underlayment and felt underlayment as required. Apply slip sheet over underlayment prior to installing metal roof panels. Install flashing in compliance with requirements in Division 07 Section "Sheet Metal Flashing and Trim."

Thermal Insulation Installation

Install polyethylene vapor retarder if required. Install board insulation if required, in compliance with installation requirements in Division 07 Section "Thermal Insulation."

Install blanket insulation if required, in compliance with installation requirements in Division 07 Section "Thermal Insulation."

Metal Roof Panel Installation

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected. Comply with panel manufacturer's installation instructions including but not limited to special techniques, interface with other work, and integration of systems. Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and using proper fasteners as recommended by panel manufacturer. Comply with installation tolerances as required.

Accessory Installation

Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components. For Flashing and Trim, comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

Field Quality Control

If requested by Owner, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

Precautions, Cleaning and Protection

Touch-up paint is used to cover and protect unexpected scratches on the paint finish that may occur during installation of panel. Touch-up paint will not weather as well or at the same rate as the original system. Test in an area that will not be noticeable. Metallic paint colors are available at an additional charge. Minor differences in color and appearance are normal and to be expected.

To minimize possible differences in appearance, an entire project should be painted at one time, from one batch of paint, using the same application equipment. Additionally, fabricated panels, flat sheet, and flashings should be oriented in the same direction.

After installation remove temporary coverings and protection of adjacent work areas. Repair or replace any installed products that have been damaged. Clean installed panels in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and lawfully dispose of construction debris from Project site. Protect installed product and finish surfaces from damage during construction.

Building Codes

Current data on building code requirements and product compliance may be obtained from Metal Sales technical support specialists. Installation must comply with the requirements of authority having jurisdiction.

6. AVAILABILITY AND COST Availability

Metal Sales products are nationally distributed and supported from 21 convenient locations nationwide, including Alaska. Metal Sales has the ability to ship worldwide. Contact Metal Sales for information on local availability.

Cost

Budget installed cost information may be obtained from a local Metal Sales distributor or through the manufacturer.

7. WARRANTIES

Paint Finish Warranty

Metal Sales' standard PVDF (Kynar 500[®]) Fluorocarbon System Warranty for film integrity, chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period. Deterioration shall include but is not limited to color fading of more than 5 Hunter units when tested according to ASTM D 2244, chalking in excess of a No. 8 rating when tested according to ASTM D 4214 or cracking, checking, peeling or failure of paint to adhere to bare metal. Warranty Period for film integrity is 45 years and for chalk and fade rating is 35 years.

8. MAINTENANCE

No specific maintenance is required for properly installed Metal Sales standing seam panel products. Periodic roof inspection to verify system integrity, drainage functionality and repair of storm damage is advised.

9. TECHNICAL SERVICES

Technical assistance, including more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting Metal Sales.

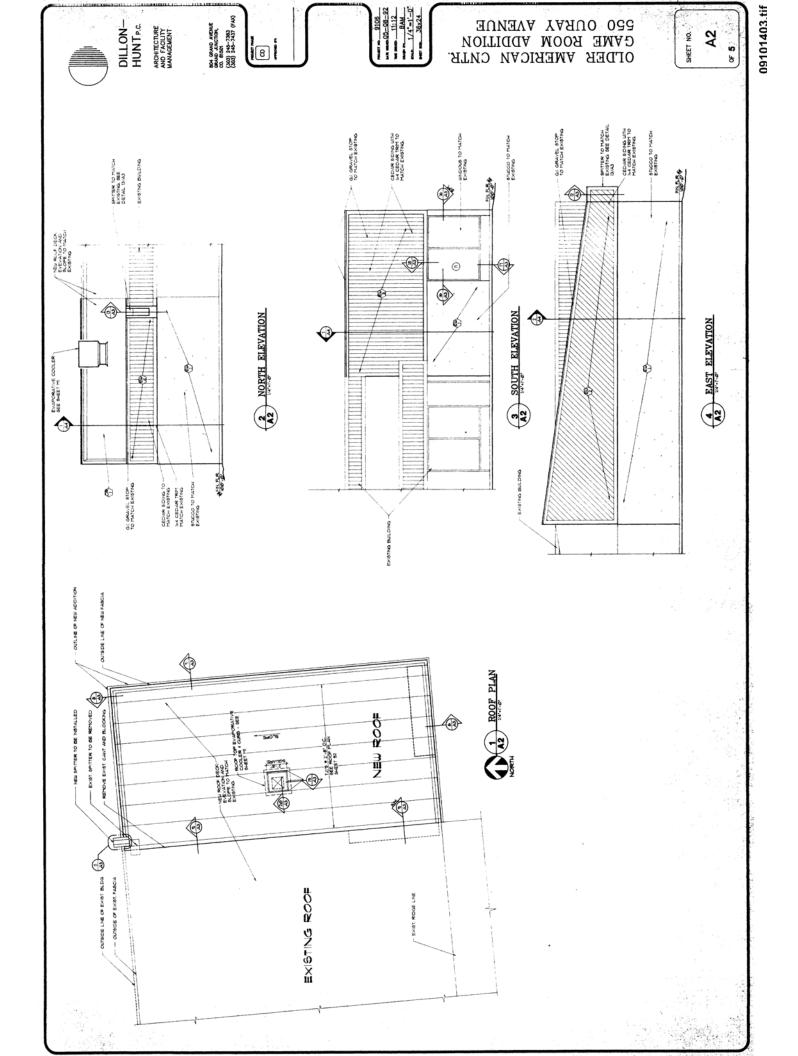
10. FILING SYSTEMS

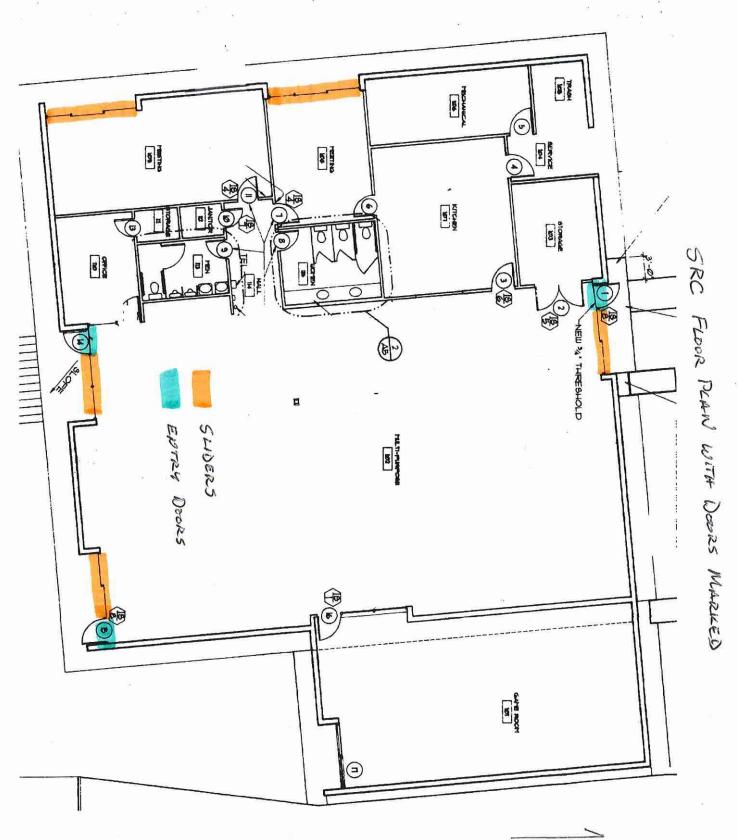
Additional product information is available from the manufacturer upon request.

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SECTION 081113 – HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Hollow metal doors.
 - 2. Hollow metal door frames.

1.2 SUBMITTALS

A. Shop Drawings showing fabrication and installation of steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of door and frame hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.

1.3 QUALITY ASSURANCE

- A. Provide doors and frames complying with the Steel Door Institute Standard ANSI A250.8-1998 (SDI 100) "Recommended Specifications for Standard Steel Doors and Frames" and as specified.
- B. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies tested for fire-test-response characteristics per ASTM E 152, and are labeled and listed by UL, Warnock Hersey, or another testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Smoke-Control Door Assemblies: Comply with NFPA 105 or UL 1784.
- D. Pre-installation Conference: Conduct conference at Project site.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
 - 1. Provide additional protection to prevent damage to finish of factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch- (102-mm-) high wood blocking. Do not store in a manner that traps excess humidity.
 - 1. Provide minimum 1/4-inch (6-mm) space between each stacked door to permit air circulation.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.6 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Steel Doors and Frames:
 - a. Ceco Corp.
 - b. Curries Company
 - c. Deansteel Manufacturing Co., Inc.
 - d. Republic Builders Products
 - e. Steelcraft

2.2 MATERIALS

- A. Cold-Rolled Steel Sheets: Carbon steel complying with ASTM A 366 (ASTM A 366M), commercial quality, or ASTM A 620 (ASTM A 620M), drawing quality, special killed.
- B. Galvanized Steel Sheets: Zinc-coated carbon steel complying with ASTM A 526 (ASTM A 526M), commercial quality, or ASTM A 642 (ASTM A 642M), drawing quality, hot-dip galvanized according to ASTM A 525, with A 60 or G 60 (ASTM A 525M, with Z 180 or ZF 180) coating designation, mill phosphatized.
- C. Supports and Anchors: Fabricated from not less than 0.0478-inch- (1.2-mm-) thick steel sheet; 0.0516-inch- (1.3-mm-) thick galvanized steel where used with galvanized steel frames.
- D. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Where items are to be built into exterior walls, hot-dip galvanize complying with ASTM A 153, Class C or D as applicable.
- E. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. (96- to 192-kg/cu. m) density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

2.3 DOORS

- A. Steel Doors: Provide 1-3/4-inch- (44-mm-) thick doors of materials and ANSI A250.8-1998 (SDI 100) grades and models specified below, or as indicated on Drawings or schedules:
 - 1. Interior Doors: Grade II, Heavy-Duty, Model 2, seamless design, minimum 18 gauge thick cold-rolled steel sheet faces.
 - 2. Exterior Doors: Exterior Doors: Grade III, Extra Heavy-Duty, Model 2, seamless design, minimum 16 gauge thick galvanized steel sheet faces.

2.4 FRAMES

- A. Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, according to ANSI/SDI 100, and of types and styles as shown on drawings and schedules. Conceal fastenings, unless otherwise indicated. Fabricate frames of minimum 0.0598-inch-(1.5-mm-) thick cold-rolled steel sheet.
 - 1. Fabricate frames with mitered and caulked welded corners.
 - 2. Interior frames: 16 gauge steel sheet.
 - 3. Exterior frames: 14 gauge galvanized steel sheet.
- B. Grout: Solid grout all frames in contact with masonry construction, as specified in Division 04 Section "Unit Masonry."

2.5 FABRICATION

- A. Fabricate steel door and frame units to be rigid, neat in appearance, and free from defects, warp, or buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project site. Comply with ANSI A250.8-1998 (SDI 100) requirements.
 - 1. Internal Construction: One of the following manufacturer's standard core materials according to SDI standards:
 - a. Resin-impregnated paper honeycomb.
 - b. Rigid polyurethane conforming to ASTM C 591.
 - c. Rigid polystyrene conforming to ASTM C 578.
 - d. Vertical steel stiffeners.
 - e. Rigid mineral fiber with internal sound deadener on inside of face sheets.
 - 2. Clearances: Not more than 1/8 inch (3.2 mm) at jambs and heads, except not more than 1/4 inch (6.4 mm) between non-fire-rated pairs of doors. Not more than 3/4 inch (19 mm) at bottom.
 - 3. Fire Doors: Provide clearances according to NFPA 80.
- B. Fabricate exposed faces of doors and panels, including stiles and rails of nonflush units, from only cold-rolled steel sheet.
- C. Tolerances: Comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- D. Fabricate concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold- or hot-rolled steel sheet.

- E. Galvanized Steel Doors, Panels, and Frames: For the following locations, fabricate doors, panels, and frames from galvanized steel sheet according to SDI 112. Close top and bottom edges of doors flush as an integral part of door construction or by addition of minimum 0.0635-inch- (1.6-mm-) thick galvanized steel channels, with channel webs placed even with top and bottom edges. Seal joints in top edges of doors against water penetration.
 - 1. At exterior locations.
- F. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.
- G. Thermal-Rated (Insulating) Assemblies: At exterior locations and elsewhere as shown or scheduled, provide doors fabricated as thermal-insulating door and frame assemblies and tested according to ASTM C 236 or ASTM C 976 on fully operable door assemblies.
 - 1. Unless otherwise indicated, provide thermal-rated assemblies with U-value rating of 0.41 Btu/sq. ft. x h x deg F (2.33 W/sq. m x K) or better.
- H. Sound-Rated (Acoustical) Assemblies: Where shown or scheduled, provide door and frame assemblies fabricated as sound-reducing type, tested according to ASTM E 1408, and classified according to ASTM E 413.
 - 1. Unless otherwise indicated, provide acoustical assemblies with STC sound ratings of 33 or better.
- I. Hardware Preparation: Prepare doors and frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements of SDI 107 and ANSI A115 Series specifications for door and frame preparation for hardware.
 - 1. For concealed overhead door closers, provide space, cutouts, reinforcing, and provisions for fastening in top rail of doors or head of frames, as applicable.
- J. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project site.
- K. Locate hardware as indicated on Shop Drawings or, if not indicated, according to the Door and Hardware Institute's (DHI) "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
- L. Glazing Stops: Minimum 0.0359-inch- (0.9-mm-) thick steel or 0.040-inch- (1-mm-) thick aluminum.
 - 1. Provide non-removable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.
 - 2. Provide screw-applied, removable, glazing beads on inside of glass, louvers, and other panels in doors.
- 2.6 FINISHES, GENERAL
 - A. Comply with NAAMM's "Metal Finishes Manual" for recommendations relative to applying and designating finishes.
 - B. Comply with SSPC-PA 1, "Paint Application Specification No. 1," for steel sheet finishes.

C. Apply primers and organic finishes to doors and frames after fabrication.

2.7 GALVANIZED STEEL SHEET FINISHES

- A. Surface Preparation: Clean surfaces with non-petroleum solvent so that surfaces are free of oil or other contaminants. After cleaning, apply a conversion coating of the type suited to the organic coating applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A 780.
 - 1. Galvanizing Repair Paint: High-zinc-dust-content paint for re-galvanizing welds in galvanized steel, with dry film containing not less than 94 percent zinc dust by weight, and complying with DOD-P-21035 or SSPC-Paint 20.
- B. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply air-dried primer specified below immediately after cleaning and pretreatment.
 - 1. Shop Primer: Zinc-dust, zinc-oxide primer paint complying with performance requirements of FS TT-P-641, Type II.

2.8 STEEL SHEET FINISHES

- A. Surface Preparation: Solvent-clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel to comply with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).
- B. Pretreatment: Immediately after surface preparation, apply a conversion coating of type suited to organic coating applied over it.
- C. Factory Priming for Field-Painted Finish: Apply shop primer that complies with ANSI A224.1 acceptance criteria, is compatible with finish paint systems indicated, and has capability to provide a sound foundation for field-applied topcoats. Apply primer immediately after surface preparation and pretreatment.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install steel doors, frames, and accessories according to Shop Drawings, manufacturer's data, and as specified.
- B. Placing Frames: Comply with provisions of SDI 105, unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
 - 1. Except for frames located in existing concrete, masonry, or gypsum board assembly construction, place frames before constructing enclosing walls and ceilings.
 - 2. In metal-stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels. In steel-stud partitions, attach wall anchors to studs with screws.
 - 3. Install fire-rated frames according to NFPA 80.
- C. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
- D. Door Installation: Fit hollow-metal doors accurately in frames, within clearances specified in ANSI A250.8-1998 (SDI 100).
 - 1. Fire-Rated Doors: Install with clearances specified in NFPA 80.
 - 2. Smoke-Control Doors: Comply with NFPA 105.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

END OF SECTION 081113

CSI Format Specification Vinyl Windows

SECTION 08630

PART 1- GENERAL

- 1.1 SUMMARY
 - A. This section includes vinyl window units as shown on the drawings
- 1.2 PERFORMANCE STANDARDS
 - A. AAMA/NWWDA 101/I.S.2 97
 - B. ASTM E 283 (Air Leakage)
 - C. ASTM E 330 (Structural Performance)
 - D. ASTM E 547 (Water Resistance)

1.3 FIELD VERIFICATION

A. The window supplier shall be responsible for reviewing and field verifying all measurements and conditions for all window openings in this project

1.4 SUBMITTALS

- A. Product data: Submit manufacturer's product specifications, technical support data, installation and maintenance recommendations and standard details for each type of unit required, including finishing methods, hardware and accessories.
- B. Product drawings: For each type of window specified, submit standard assembly and details for lap siding, brick veneer, and stucco
- C. Color samples: Submit samples of each required exterior finish on PVC sample. Submit sample of co extruded PVC material with required interior and exterior finish.
- 1.5 DELIVERY, STORAGE, AND HANDLING
 - A. Comply with manufacturer's instructions for protection of units from damage.

1.6 WARRANTY

A. The manufacturer shall provide the Owner with a "Lifetime Limited Warranty" stating that all windows will be free from manufacturing defects for life; to include screens and glass

PART 2 – PRODUCTS

2.1 APPROVED MANUFACTURERS

A. No specific Manufacturers are listed.

2.2 GENERAL

- A. Sliding operable sashes shall have an easily gripable projecting fin or handle device to assist in easy opening and closing of the window.
- B. Provide internal offset weep holes and channels to migrate moisture to exterior.
- C. Provide integral nail fin to perimeter of unit.

2.3 MATERIALS

- A. Vinyl
 - 1. Comply with requirement of AAMA/NWWDA 101/I.S.2-97, ASTM 4216 specification for rigid (Poly Vinyl Chloride) PVC and related plastic building product compounds.
 - 2. PVC compound containing impact-resistant- solid plasticizer titanium dioxide, surface and color stabilizers.
 - 3. All solid color applications are to be homogeneous.
 - 4. All corners shall be Fusion-Welded from a four and eight point welding system for increased strength and accuracy in frame dimensions.
- B. Glass: Provide the manufacturer's standard ³/₄" or 1" thick clear or Low E or Low E Tinted insulated glazing material that complies with ASTM E 774 Class A.
- C. Factory exterior glazed except where field glazing is required due to large window unit dimensions. Units shall be re-glazeable without dismantling sash framing.
- D. Spacer Bar: PPG Intercept Warm Edge steel spacer or aluminum spacer
- E. Provide PVC snap-on glazing stops (beads) to match exterior window finish.

2.4 HARDWARE

A. Provide the manufacturer's standard StyleLock system hardware formed from an engineered plastic material and of sufficient strength to perform its intended function. Hardware color shall match the vinyl color. All locking hardware must have certified forced entry resistance performance per: Windows- ASTM F588, AAMA 1302.5, or AAMA 2300. Doors tested to ASTM F 842, AAMA 1303.5 or AAMA 2301.

2.5 WEATHER PROTECTION

- A. Operating sash member shall be weather-stripped with either fin seal, or Q-lon weather-stripping.
- B. Compression Weather-stripping: Provide the manufacturer's standard non-ferrous spring metal or vinyl gasket compression weather-stripping, concealed when sash is closed, and as required to meet performance standards under bumper or wiper action.
- C. Sliding Weather-stripping: Provide woven pile weather-stripping of polypropylene, wool, or nylon pile, with resin-impregnated backing fabric complying with AAMA 701.2

2.6 ACCESSORIES AND OPTIONS

- A. Insect Screens: Provide insect screens for each operable exterior sash or ventilator. Locate screens on inside or outside of window sash or ventilator, depending on window type. Design windows and hardware to accommodate screens in a tight-fitting removable arrangement with a minimum of exposed fasteners and latches. Screen fabric shall be 18 x 16 or 18 x 14 mesh of plastic-coated glass fiber threads, woven and fused to form fabric mesh which is resistant to corrosion, shrinkage, stretch, impact damage, and weather deterioration; black or dark gray. Comply with FS L-S-125.
- B. Muntins: Provide optional Muntins from a choice of two different profiles (5/8" flat or Sculptured Grids), sealed between two panes of glass in patterns as shown on the drawings. 5/8" flat or Sculptured Grids in matching colors to the vinyl.
- C. Sealant: Unless otherwise indicated for sealants required within fabricated window units, provide type recommended by window manufacturer for the joint size and movement, to remain permanently elastic, non-shrinking and non-migrating.
- D. Accessories: Accessory materials required to fill large gaps around new window framing and existing openings shall be of similar material, finish, and color as the window frame material. Such materials shall be supplied by the window manufacturer and custom fit for the application.

2.7 FASTENERS

- A. Stainless steel or other metallic or non-metallic material recommended by the manufacturer as non-corrosive and compatible with window member, trim, anchors and other components of the window units.
- B. Anchors, Clips, and Window Accessories: Depending on strength and corrosion-inhibiting requirements, fabricate units of stainless steel, or hot-dip zinc-coated steel or iron complying with ASTM A 386.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify wall opening and adjoining air and vapor seal materials are ready to receive work of this section.

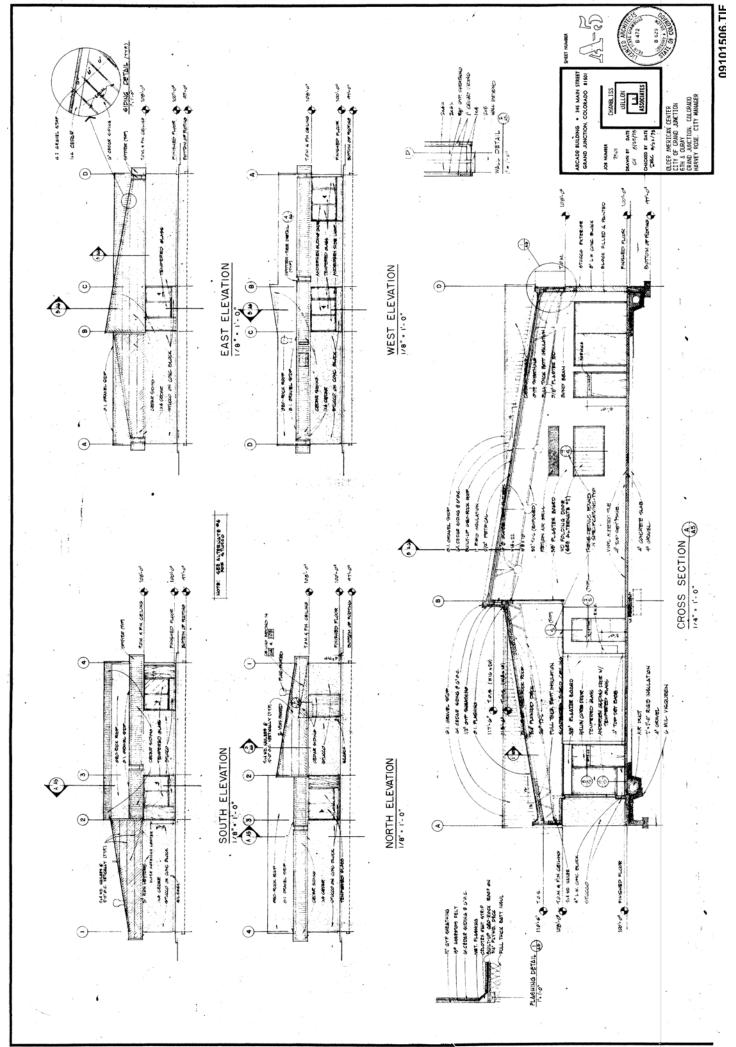
3.2 INSTALLATION

- A. Comply with "Installation Masters" standard, manufacturer' specifications and recommendations for installation of window units, hardware, operators, accessories and other window components.
- B. Opening panels must be closed and locked during installation. Windows must be installed level, plumb and square with ¹/₄" clearance on all sides and with weep holes at bottom. Anchor securely in place. Shim as required.
- C. Headers must not be nailed. Nail through fin into framing along sides and base while staying 4" from corners. At the head, finishing nails may be placed ½' above fin and bent down over fin to allow for header deflection. Full support is required along entire length of sill.
- D. Operating sash and hardware should fit tight at contact points and weather-stripping.
- E. Use bituminous paper or gasket material on sill for patio doors installed on concrete.
- F. Set sill members and other members in a bed of compound or with joint fillers or gaskets to provide weather tight construction. Fillers and gaskets to be installed concurrently with window units.

3.3 CLEANING

- A. Remove protective material from pre-finished surfaces.
- B. Wash down surfaces with solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Do not use petroleum distillants to clean windows.
- D. Clean vinyl surfaces promptly after installation of windows, exercising care to avoid damage of the finishes. Remove excess glazing and sealant compounds, dirt and other substances.

END OF SECTION 08630





Selling Features

- Oversized 9" x 59" planks install over large areas quickly
- 5mm overall thickness and 20 mil commercial wear layer for superior durability
- M-Force[™] Enhanced Urethane finish for stain and wear resistance
- Inherent acoustic properties, IIC rating of 57 with drop ceiling, without underlayment
- Twice as thick as traditional LVT for seamless transition with Mohawk Group carpet tiles
- Non-skid backing keeps plank in place
- Minimum of 8% bio-based rapidly renewable resource content by total product weight helps avoid harmful phthalates

Hot & Heavy Collection

Grown Up loose lay LVT employs a registered emboss over high-definition wood visuals to create one of the most realistic wood textures in the industry today.

Collection Style Name / Number Brand Product Type

DESIGN

Overall Gauge Wear Layer Finish Texture Colors Available / Size Packaging Installation Recommended Adhesive Hot & Heavy Collection Grown Up COO75 Mohawk Group Hard Surface Loose Lay Luxury Vinyl Tile

.20" (5mm) 20 mil (0.5mm) M-Force™ Enhanced Urethane Registered Emboss 10 colors - 9" x 59" (nominal) (235mm x 1505mm) 22.84 sf/ctn (2.12 m2/ctn); 6 pcs/ctn; 40.78 lbs/ctn (18.49 kg/ctn) Perimeter Glue Perimeter glue only with MS160 Spray. May also use M95.0 Resilient Flooring Adhesive

PERFORMANCE

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Construction Classification Squareness Size and Tolerance Thickness Flexibility Dimensional Stability Static Load Limit Residual Indentation Slip Resistance Resistance to Chemicals Resistance to Light Resistance to Heat Critical Radiant Flux IIC Rating

Commercial Grade Floating Luxury Vinyl Tile ASTM F1700 - Class III, Type A - Smooth, Type B - Embossed ASTM F2055 - Passes - 0.010 in. max ASTM F2055 - Passes - ± 0.016 in. per linear foot ASTM F306 - Passes - ± 0.016 in. per linear foot ASTM F307 - Passes - ≤ 1.0 in., no cracks or breaks ASTM F137 - Passes - ≤ 0.024 in. per linear foot ASTM F970 - Passes, modified - 1000 psi ASTM F970 - Passes, average less than 8% ASTM F1914 - Passes - ≥ 0.6 Wet, 0.6 Dry ASTM F925 - Passes - ≥ 0.6 Wet, 0.6 Dry ASTM F1515 - Passes - $\Delta E \leq 8$ ASTM F1514 - Passes - $\Delta E \leq 8$ ASTM F1514 - Passes - $\Delta E \leq 8$ ASTM E648 - Passes - ≥ 0.45 watts/cm2, Class 1 57 (over 6" concrete and drop ceiling)



SUSTAINABILITY

Certification Renewable Resource Content

FloorScore[®] Certified Minimum of 8% bio-based rapid renewable resource content by total product weight helps avoid harmful phthalates



Warranty

Limited 10 Year Commercial

Hot & Heavy Collection

Colorways

Grown Up



132 Vera



241 Knox



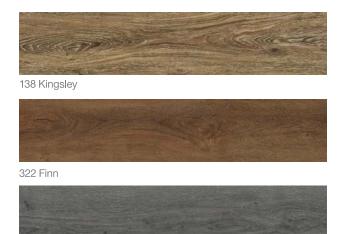
358 Jackson



758 Hermes



853 Emerson



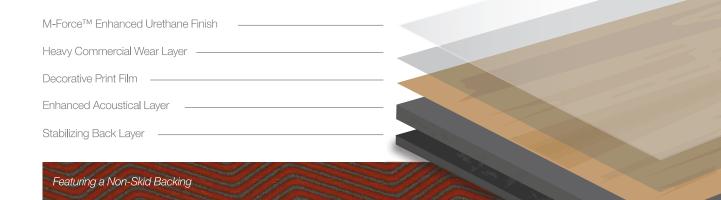
628 Lenox



851 Butler



958 Cole



Mohawk Group Glue Down Luxury Vinyl Tile Installation Instructions

Mohawk Premium Commercial Luxury Vinyl Tile is recommended for a variety of commercial applications, including educational, institutional, healthcare, retail, office and hospitality environments. Mohawk's Commercial LVT can be installed over most properly prepared substrates, making it suitable for installation on all grade levels where moisture conditions do not exist. We continuously make technological advancements that improve product performance or installation techniques and methods. To confirm you have the most recent installation instructions, please visit our website www.mohawkflooring.com or contact Technical Services at 888-387-9881, Option 3.

Asbestos Warning

WARNING! DO NOT MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVES OR OTHER ADHESIVES.

Previously installed resilient floor covering products and the asphaltic or cutback adhesives used to install them may contain either asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of asbestos or crystalline dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the previously installed product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication "Recommended Work Practices for Removal of Resilient Floor Coverings" for detailed information and instructions on removing all resilient covering structures.

Job Site Conditions

It is the responsibility of the Installer and Owner to ensure that job site environmental, substrate and subsurface conditions involved meet or exceeds all requirements as outlined in installation instructions prior to installation. Manufacturer declines all responsibility for product performance or installation failure due to structural, substrate or environmental deficiencies or jobsite conditions.

- Resilient flooring installation should be scheduled after all other trades have completed their work.
- The HVAC systems must be in operation for at least 10 days prior to flooring installation and thereafter to maintain a constant temperature. Portable heaters may not provide adequate heat. Never use kerosene heaters.
- Proper acclimation of the room, substrate, flooring material, adhesive and all installation accessory products is critical to the success of the adhesive and flooring performance. Installation over cold substrates will delay adhesive flash time and dry time, affect the size of the floor and increase the potential for indentation and or adhesive displacement. The substrate temperature must be between 65F and 85°F (18°C and 29°C) at the time of installation.

- Un-opened cartons of flooring should be neatly stacked in the room where they will be installed during the acclimation period. Open cartons just prior to installation.
- When using flooring from two or more cartons, make sure pattern and run (lot) numbers found on the carton are the same. This information is on the outside label of each carton. It's recommended to blend products from multiple cartons during installation.
- Excess flooring should be stored in a protected climate controlled environment on a flat surface for future repairs if necessary.

General Information

It is important that flooring products maintain proper temperature before, during, and after installation in order to minimize dimensional changes. The substrate, all flooring material, and the adhesive must be conditioned on a flat surface at a constant temperature between 65°F (18°C) and 85°F (29°C) for 48 hours prior to, during, and 48 hours after installation. Thereafter, maintain a room temperature between 55°F (13°C) and 90°F (32°C).

Tools and materials

- Mohawk's M700 Commercial LVT Adhesive, M950 Adhesive or MS160 Spray Adhesive
- Trowel Sizes: 1/16" x 1/32" x 1/32" U-Notch for M700 (220–260 sq. ft./gallon) and M950 (spread rate: 175 225 sq. ft./gallon). Trowel not required with MS160 (spread rate: 145-160 sq. ft/can).

NOTE: This adhesive spread rate is appropriate over most smooth substrates to achieve adequate transfer; however, a larger trowel (up to 1/16" square notch) could be required over rough or porous substrates.

- Mohawk HydroSeal 95 Moisture Inhibitor
- Mohawk SurfaceSeal Adhesive Encapsulator
- Mohawk PrimeCoat Primer
- 75 pound, 3 section roller
- Chalk Line
- Carpenter square
- Utility Knife
- Cutting board
- Tape measure

- In Situ RH Moisture Meter or Calcium Chloride Test Kit
- pH strips
- Distilled Water (do not substitute)

Suitable Substrates and Surface Materials

- Fully cured, dry concrete on all grade levels (Moisture vapor emissions should not exceed 5 pounds (ASTM F1869) or 85% RH (M700), 90% RH (M950) or 93% RH (MS160) with a pH range between 8 and 9.
- Approved suspended wood floors and underlayment.
- Portland cement-based self-levelling underlayment and patching compounds.
- Prepared ceramic tile, marble and cement terrazzo.
- Aluminum, steel and stainless steel.
- Embedded radiant-heated substrates where the maximum surface temperature of the floor does not exceed 85F (29°C) in any area.
- Existing inlaid resilient sheet flooring-single layer, fully adhered and well bonded.
- Existing vinyl composition tile (VCT) single layer, well bonded over on or above grade level only.

Note: Some previously manufactured vinyl floor covering and asphalt "cutback" adhesive contain asbestos. For preparation or removal of these products, refer to the Resilient Floor Covering Institutes publication "Recommended Work Practices for the Removal of Resilient Floor Covering". These work practices must be followed.

For a copy of the recommended work practices, please contact:

Resilient Floor Covering Institute (RFCI) 401 East Jefferson Street Suite 102 Rockville MD 20850

Site preparations

The substrate must be sound, smooth, dry and clean. Mechanically remove any dirt, wax, loose paint, existing adhesives and all foreign matter that would interfere with a good bond. Do not install LVT directly over cutback residue. If you encounter cutback residue, mechanically remove and apply a coat of **Mohawk SurfaceSeal** prior to installation of flooring. If installation is over gypcrete it is advisable to apply a coat of **Mohawk PrimeCoat** and allow to dry prior to installation of flooring.

Seal porous or dusty concrete surfaces with **Mohawk PrimeCoat** or **Mohawk HydroSeal 95**. Do not use on chemically cleaned substrates or over treated plywood substrates. The installation site must be acclimated with HVAC in operation. The floor and room temperature, as well as flooring material and adhesive, must be maintained at 65°–85° F, and the humidity below 65% for 48 hours prior to, during, and after pre-installation testing and installation. Use M700 PSA for installations over concrete substrates with moisture emission of 5 lbs. per 1000 square feet in 24 hrs. when tested in accordance with the latest version of ASTM F 1869 and 85-93% RH (according to adhesive used), when tested with the latest version of ASTM F 2170. If RH exceeds limit specified by each adhesive, use **Mohawk HydroSeal 95** to lower readings. pH should always be between 8-9. Lower pH readings on a concrete substrate may indicate that a sealer or sealed surface is present. Conduct adhesive bond testing on concrete substrates with pH below 8. All substrate preparation and testing procedures must conform to appropriate ASTM F710.

Over Ceramic

Remove any loose tiles and fill with appropriate Portland cement floor fill. Roughen surface of tile. Fill grout joints to the level of the surface of the ceramic tile with appropriate Portland Cement floor fill carefully following the floor fill manufacturer's instructions for mixing, priming and spreading material over ceramic tile.

Painted concrete

Because it's difficult to determine the type of paint might be on a substrate surface to receive floor covering, it is necessary to mechanically remove all paint and/or paint residue from the substrate prior to spreading adhesive and installing floor covering.

INSTALLATIONS

Follow the installation instructions and guidelines regarding adhesive application rate and method.

Luxury Vinyl Plank and Luxury Vinyl Tile

Porous substrates

When installing LVT and LVP over a porous substrate, the adhesive should be allowed to dry to the touch sufficient to prevent slippage. Loss of adhesion can result if the flooring is not installed within the working time of the adhesive. Roll the installation in both directions with a 75 lb. 3-section roller immediately after the flooring is placed, insuring complete contact with the adhesive.

Non-porous substrates

Install LVT and LVP into adhesive as it becomes dry to the touch with little or no transfer to finger when touched. This will normally require 30–60 minutes of drying time at suggested installation temperature and humidity. Do not install flooring into wet adhesive on non-porous substrates. Roll the installation in both directions with a 75 lb. 3-section roller immediately after flooring is placed, ensuring complete contact with adhesive.

TRAFFIC

Follow Mohawk's installation guidelines; restrict foot traffic for 24 hours after installation unless using MS160 Adhesive which can be walked on within one hour after installation. Restrict heavy traffic, rolling loads, or furniture placement for 72 hours after installation with M700 and M950; restrict this type of traffic for 24 hours with MS160. Additional time may be necessary if the installation is over a non-porous substrate. Allow at least five days following the installation before conducting wet cleaning procedures or initial maintenance.

CLEAN UP

Use a clean wet cloth to clean up adhesive while still wet; dried adhesive may require the use of an appropriate solvent.

SHELF LIFE

All Mohawk adhesives and installation sundries have a 1 year shelf life from manufacturing date in an un-opened container. These products are considered non-hazardous VOC compliant with CA SCAQMD Rule 1168. In case of eye contact, flush with water for 10-15 minutes. If irritation persists contact a physician. Prolonged skin contact may cause slight irritation, wash with soap and water. If swallowed, consult a physician. Avoid excessive heat or cold. Protect from freezing – especially MS160 which is more sensitive to extreme temperatures. Store indoors at a temperature of 60°-100°F. Safety glasses and gloves are recommended. DOT Hazard Class: Unregulated.

SUBSTRATE PREPARATION:

All substrate surfaces must be flat, clean, dry, smooth, and free of movement. Certain requirements may apply in order to prepare these substrates for resilient flooring. All surface imperfections should be filled and sanded with a Portland cement-based latex patching compound. Substrates covered with existing flooring may also be acceptable for residential and light commercial applications.

Ensure that concrete substrates are sufficiently dry by conducting moisture and pH tests. The substrate, regardless of the type must be flat, smooth, clean, dry, structurally sound and free of paint, old adhesive residue, wax, grease, oil, solvent, curing and parting compounds and other substances that could interfere with adhesion or the performance of the flooring. *Never use liquid adhesive remover or solvent cleaners for removing old adhesive residue or other substances on the substrate.* These substances must be mechanically removed. Conduct bond tests to confirm suitable adhesion to the substrate.

Flat – Within 3/16" in 10' radius and/or 1/8" in 6' radius - sand high areas or joints - fill low areas with a high compressive strength Portland base compound. Subfloor deflection should not exceed 1/360th of the span. The flatness of the substrate is particularly important for keeping joints tight and in alignment when installing large format tiles. Deviations in the substrate should not exceed 3/16" in 10' or 1/16" in 1'.

Dry – Select the appropriate moisture indicator test specifically designed for use with wood or concrete subfloors. Test and record moisture content results. **DO NOT INSTALL FLOORING IF MOISTURE TEST RESULTS EXCEED RECOMMENDED LIMITS.**

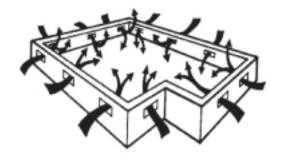
Concrete Substrates

- 1. Concrete substrates must be dry, smooth, and free from oil, dust, solvent, paint, wax, grease, and asphalt sealing compounds or other materials. The surface must be hard and dense, and free from powder or flaking.
- 2. New concrete slabs must be thoroughly dry (at least six weeks) and completely cured. Curing agents, surface hardeners and other additives may cause adhesive bonding failure. These should be removed by sanding or grinding.
- 3. All concrete slabs must be checked for moisture before installing material. Moisture emissions from subfloor cannot exceed 5 lbs. per 1,000 sq. ft. per 24 hours as measured with the calcium chloride test or in excess of the particular In Situ Relative Humidity level specified for each adhesive type. Responsibility for determining if the concrete is dry enough for installation of the flooring lies with the owner and installer.
- 4. Surface alkalinity of concrete substrate Concrete slabs should be tested for the presence of alkali salt build up. Excessive alkali can cause adhesive and vinyl failure. A simple pH paper test using distilled water and pH paper can determine the presence of excessive alkali salt. Pour a small amount of distilled water on to the slab and allow it to stand for a minimum of one minute. Place the pH paper strip into the distilled water. The acceptable range should be from 8-9 pH. Corrective measures must be taken if the pH exceeds these guidelines by applying a coat of Mohawk PrimeCoat.

Wood Substrates

NOTE: As with many other interior finish products, modification of existing structural components may be required for a successful installation.

- Nail or screw any areas that are loose or squeak. Wood panels should exhibit an adequate fastening pattern, glued/screwed or nailed as that system requires, using an acceptable nail pattern. Typical is 6" along bearing edges and 12" along intermediate supports. Flatten edge swell as necessary. Replace any water-damaged, swollen or delaminated subflooring or underlayment.
- 2. Wood underlayment panels should be a minimum of 1" or thicker and free of vertical deflection. All fasteners must be flush with the underlayment panels.
- 3. Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene membrane is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist should be no less than 18" and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation.



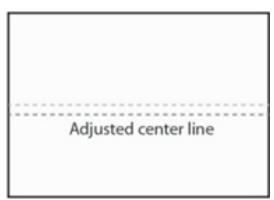
Floor Layout

First determine the direction to install the planks. As a general rule, planks are normally installed running in the long direction of the main room. Rectangular tiles may be installed in ashlar or herringbone configurations. When directional marks are printed on the back of a tile, that indicates all tiles should run in the same direction.

Place a mark in the center of the floor at each end of the room. Snap a chalk line between the marks.



Original Center Line



Center line after adjustment

To avoid small narrow planks along the walls, divide the distance from the center line to the wall by the plank or tile width (6, 7.25, 18, or 19.7). If the remainder is less than 3 inches, adjust the center line one half width of a plank in either direction. This will provide a balanced layout with larger cut pieces at the wall.

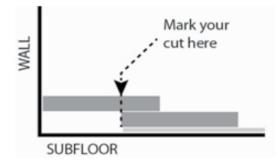
Finished Flooring Installation

Using the recommended notched trowel spread the adhesive over one half of the floor up to your use line. Do not apply excessive adhesive. Follow instructions above regarding dry time for porous or non-porous substrates before installing the plank or tile. Start installing the plank along the center line. Complete each row, including cut pieces at the wall, before proceeding to the next row. Offset end joints by at least 6 inches and position product in a random fashion for the best appearance.

Position the product lightly against the previous one, by pressing it firmly into place without sliding it. Remember to avoid small cuts of less than 6 inches at the ends of each row and place cut ends towards the wall. If it is necessary to adjust or remove a plank, use a heat gun to warm the plank first. Complete the opposite side of the room in the same fashion as the previous side.

Cutting a plank or tile to fit

The last row of product will need to be cut to fit to walls and other vertical surfaces. **Straight Cuts:** place a loose plank or tile directly over the top of the last full installed plank or tile, making sure to line up all edges. Using a plank to measure the distance from the wall to the last installed plank or tile, position the edge against the wall and mark the loose piece with a pencil where it meets the installed piece at the opposite edge from the wall.



Next, place the marked piece on a cutting board. Using a carpenter square as a guide, score the pencil line carefully with a sharp knife, then break/snap (or cut) the plank or tile along the score mark.

CAUTION: Keep fingers away from the knife blade to avoid injury. Install plank with the cut edge toward the wall.

Irregular cuts: Scribe plank to fit irregular shapes such as door trims, pipes, etc, and cut with a utility knife.

Immediately after Installation

Roll the entire floor with a 75 pound 3 section roller. Restrict to light traffic for the first 24 hours. Replace the base moldings and return appliances and furniture to the room by rolling or sliding them over strips of hardboard. Seal all areas that may be exposed to surface spills (i.e. tubs, toilets, and showers) with silicone caulking.

Tips & Warnings:

- Sweep regularly with a soft bristle broom or dry electrostatic cloth.
- Use felt protectors or 1" hard plastic castors under heavy pieces of furniture, fixtures and chairs.
- Use protective mats at all exterior entrances. Do not use mats or area rug cushions constructed of rubber or PVC. Instead use urethane backed products.
- Spiked heels or shoes in need of repair can severely damage the floor.
- Use protective matting under rolling chair castors.
- The sun's UV rays can change the color of the floor.
- Protect your floor when using a dolly for moving furniture or appliances or heavy fixtures. Never slide or roll heavy objects across the floor.

*Exterior walk off mats should be routinely maintained to avoid becoming a soil source.

Special Installation Requirements

- All plank products should be installed with end joints randomly staggered at least 8" apart.
- Planks and tiles can be combined on custom installations
- 18"x 36" and 12" x 24" tiles can be installed in an ashlar layout with a 9", 12" or 18" drop pattern, depending on the desired appearance. A square layout with all 4 corners lined up is not recommended.
- Using the Mohawk recommended adhesive and application will ensure good adhesion, tighter joints, and reduce the potential for indentation from rolling and static loads.

Installation Recommendations

Layout

Layout will depend on the product size and adhesive system being used. When installing 18" or 18"x 36" tiles it will be necessary to snap additional chalk lines perpendicular to the center line.

When planning the layout make sure tile and plank joints fall at least 6" (15.2cm) away from joints in the underlayment and or seams in existing flooring. Do not install over expansion joints.

Cutting

The product can be trimmed to fit using a sharp utility knife or tile cutter. When using a utility knife, score the surface of the tile and plank and flex it downward to break the tile at the score mark. Always place the cut edge against the wall.

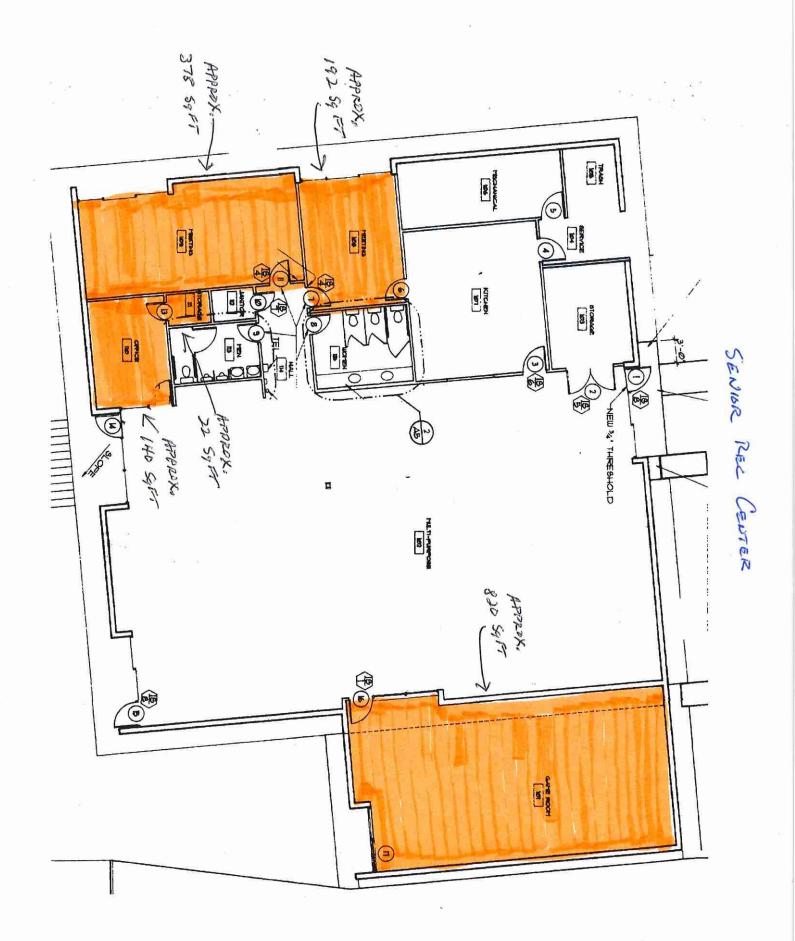
Finishing the Job

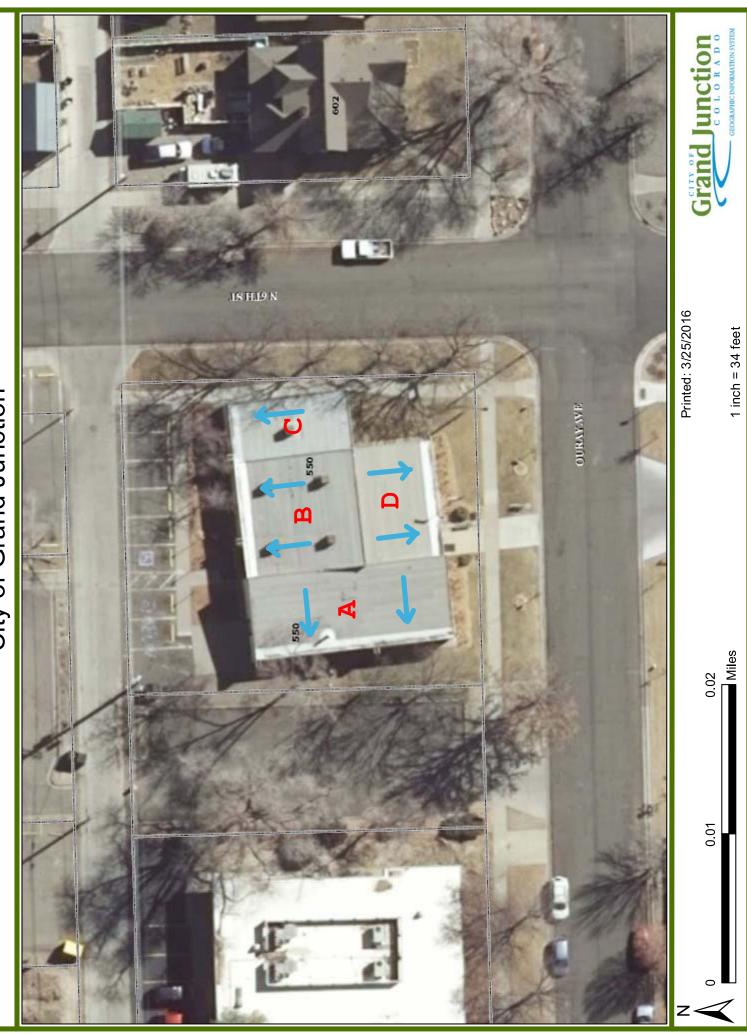
- Clean any adhesive smears on the face of the flooring immediately while wet with a clean cloth and dilute solution of neutral cleaner and water. Mineral spirits can be used to remove dried adhesive.
- For installations with M700 or M950 adhesives: restrict all foot traffic for at least 24 hours after installation. Resume normal traffic and heavy rolling load traffic after 72 hours.
- For installations with MS160: restrict foot traffic for one hour after installation. Heavy rollling load traffice should be avoided for 24 hours.
- Always use strips of hardwood or plywood when moving heavy objects such as furniture or equipment over the floor even when using carts or dollies with wheels.

For additional questions or concerns, please call Mohawk Technical Service at 888.387.9881, Option 3

Pre-installation Substrate Moisture Testing: Installer should use this section to record moisture content readings and provide to the owner for their records.

Installation Information Total Square Feet Installed:	
Moisture Content	% Moisture Content of Substrate
Test Method Used:	Calcium Chloride (ASTM F1869) RH % (ASTM F2170) Electronic Meter (Tramex or equivalent) pH Results
Moisture Readings:	





City of Grand Junction

PART1 GENERAL

1.01 SUMMARY

- A. Project Name: Senior Recreation Center Re-Roof Project Grand Junction, Colorado.
- B. Furnish and install elastomeric sheet roofing system, including:
 - 1. Roofing manufacturer's requirements for the specified warranty.
 - 2. Removal of entire existing roof membrane and flashings.
 - 3. Removal of all existing insulation down to the concrete deck.
 - 4. Preparation of roofing substrates.
 - 5. Wood nailers for roofing attachment.
 - 6. Insulation.
 - 7. Cover boards.
 - 8. Elastomeric membrane roofing. (60 mil white TPO)
 - 9. Metal 22 Gauge copings.
 - 10. Flashings.
 - 11. Walkway pads.
 - 12. Other roofing-related items specified or indicated on the drawings or otherwise necessary to provide a complete weatherproof roofing system.
 - 13. Meet Minimum 90 PSF Uplift.
 - C. Disposal of demolition debris and construction waste is the responsibility of Contractor. Perform disposal in manner complying with all applicable federal, state, and local regulations.
 - D. Comply with the published recommendations and instructions of the roofing membrane manufacturer.
 - E. Commencement of work by the Contractor shall constitute acknowledgement by the Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing membrane manufacturer. No modification of the Contract Sum will be made for failure to adequately examine the Contract Documents or the project conditions.

1.02 SUBMITTALS

- A Product Data:
 - 1. Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including)insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.
 - 2. Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed; where instructions allow installation options, clearly indicate which option will be used.
- B. Samples: Submit samples of each product to be used.
- C. Shop Drawings: Provide:
 - 1. The roof membrane manufacturer's standard details customized for this project for all relevant conditions, including flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains.
- D. Specimen Warranty: Submit prior to starting work.
- E. Pre-Installation Notice: Copy to show that manufacturer's required Pre Installation Notice (PIN) has been accepted and approved by the manufacturer.
- F. Executed Warranty.

1.03 QUALITY ASSURANCE

- A. Applicator Qualifications: Roofing installer shall have the following:
 - 1. At least five years of experience in installing the specified system.
 - 2. Capability to provide payment and performance bond to building owner.
- B. Pre-Installation Conference: Before start of roofing work, Contractor shall hold a meeting to discuss the proper installation of materials and requirements to achieve the warranty.
 - 1. Require attendance with all parties directly influencing the quality of roofing work or affected by the performance of roofing work.
 - 2. Notify Architect well in advance of meeting.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact and legible.
- B. Store materials clear of ground and moisture with weather protective covering.
- C. Keep combustible materials away from ignition sources.

1.05 WARRANTY

- A. Comply with all warranty procedures required by manufacturer, including notifications, scheduling, and inspections.
- B. Warranty: 20 year Full System Warranty covering membrane, roof insulation, Labor, and membrane accessories.
 - 1. Limit of Liability: No dollar limitation.
 - Scope of Coverage: Repair leaks in the roofing system caused by:
 a. Ordinary wear and tear of the elements.
 - b. Manufacturing defect in Firestone brand materials.
 - c. Defective workmanship used to install these materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer- Roofing System: Firestone Building Products Co. or equivalent.
- B. Manufacturer of Insulation and Cover Boards: Same manufacturer as roof membrane.
- C. Manufacturer of Metal Roof Edging: Metal supplied by manufacturer of roof membrane.1. Metal roof edging products by other manufacturers are not acceptable.

2.02 ROOFING SYSTEM DESCRIPTION

- A. Roofing System:
 - 1. Membrane: Thermoplastic Olefin (TPO).
 - 2. Thickness: As specified elsewhere.
 - 3. Provide neoprene membrane in grease catch pans as indicated on the drawings.
 - 4. Membrane Attachment: Mechanically Attached.
 - 5. Meets Minimum 90 PSF Uplift.
- B. Insulation:
 - 1. Use 1/4" per foot tapered Poly Iso to effect good drainage as required.
 - 2. Maximum Thickness: 3 inches
 - 3. Maximum Board Thickness: 3 inches; use a many layers as necessary; stagger joints in adjacent layers.

- C. Insulation Cover Board:
 - 1. Attachment: Cold adhesive attachment- I.S.O. FIX II Adhesive 12" O.C. Field, 6" O.C.
 - 2. Perimeter and 4" O.C. Corners

2.03 TPO MEMBRANE MATERIALS

- A. Membrane: Flexible, heat weldable sheet composed of thermoplastic polyolefin polymer and ethylene propylene rubber; complying with ASTM D 6878, with polyester weft inserted reinforcement and the following additional characteristics:
 - 1. Thickness: 0.060 inch (1.52 mm) plus/minus 10 percent, with coating thickness over reinforcement of 0.024 inch (0.61 mm) plus/minus 10 percent.
 - 2. Sheet Width: Provide the widest available sheets to minimize field seaming.
 - 3. Puncture Resistance: 265 lbf (1174 N), minimum, when tested in accordance FTM 101C Method 2031.
 - 4. Solar Reflectance: 0.79, minimum, when tested in accordance with ASTM C 1549.
 - 5. Color: White.
 - 6. Acceptable Product: ULTRAPLY TPO by Firestone or equivalent.
- B. Membrane Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.
- C. Curb and Parapet Flashing: Same material as membrane, with encapsulated edge which eliminates need for seam sealing the flashing-to-roof splice; precut to 18 inches (457 mm) wide.
- D. Formable Flashing: Non-reinforced, flexible, heat weldable sheet, composed of thermoplastic polyolefin polymer and ethylene propylene rubber.
 - 1. Thickness: 0.060 inch (1.52 mm) plus/minus 10 percent.
 - 2. Tensile Strength: 1550 psi (10.7 MPa), minimum, when tested in accordance with ASTM D 638 after heat aging.
 - 3. Elongation at Break: 650 percent, minimum, when tested in accordance with ASTM D 638 after heat aging.
 - 4. Tearing Strength: 12 lbf (53 N), minimum, when tested in accordance with ASTM D 1004 after heat aging.
 - 5. Color: White.
 - 6. Acceptable Product: ULTRAPLY TPO Flashing by Firestone or equivalent.
- E. Tape Flashing: 5-1/2 inch (140 mm) nominal wide TPO membrane laminated to cured rubber polymer seaming tape, overall thickness 0.065 inch (1.6 mm) nominal; TPO QuickSeam Flashing by Firestone or equivalent.
- F. Bonding Adhesive: Neoprene and SBR rubber blend, formulated for compatibility with the membrane other substrate materials, including masonry, wood, and insulation facings; ULTRAPLY Bonding Adhesive by Firestone or equivalent.
- G. Pourable Sealer: Two-part polyurethane, two-color for reliable mixing; Pourable Sealer by Firestone or equivalent.
- H. Seam Plates: Steel with barbs and Galvalume coating; corrosion-resistance complying with FM 4470.
- I. Termination Bars: Aluminum bars with integral caulk ledge; 1.3 inches

(33 mm) wide by 0.10 inch (2.5 mm) thick.

- J. Cut Edge Sealant: Synthetic rubber-based, for use where membrane reinforcement is exposed; UltraPly TPO Cut Edge Sealant by Firestone or equivalent.
- K. General Purpose Sealant: EPDM-based, one part, white general purpose sealant; UltraPly TPO General Purpose Sealant by Firestone or equivalent.
- L. Molded Flashing Accessories: Unreinforced TPO membrane premolded to suit a variety of flashing details, including pipe boots, inside corners, outside corners, etc.; UltraPly TPO Small and Large Pipe Flashing by Firestone or equivalent.
- M. Roof Walkway Pads: Non-reinforced TPO walkway pads, 0.130 inch (3 mm) by 30 inches (760 mm) by 40 feet (12.19 m) long with patterned traffic bearing surface; UltraPly TPO Walkway Pads by Firestone or equivalent.

2.04 ROOF INSULATION AND COVER BOARDS

- A. Polyisocyanurate Board Insulation (Flat and 1/4" Tapered) Closed cell polyisocyanurate foam with black glass reinforced mat laminated to faces, complying with ASTM C 1289 Type II Class 1, with the following additional characteristics:
 - Thickness: As indicated elsewhere.
 Size: 48 Inches by 48" Inches

 - 3. R-Value (LTTR): 3" = 17.4
 - 4. R-Value (LTTR): %" Tapered Varies on thickness
 - 5. Compressive Strength: 20 psi (138 kPa) when tested in accordance with ASTM C 1289.
 - 6. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
 - 7. Recycled Content: 19 percent post-consumer and 15 percent post-industrial, average.
- B. Cover Board: Firestone Dens Deck Prime
 - 1. Size: 48 inches by 48 inches.
 - 2. Thickness: Minimum 0.5 inches.
- C. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing system and warranty to be provided; use only adhesives furnished by roof membrane manufacturer.

2.05 METAL ACCESSORIES

- A. Parapet Copings: Formed metal coping utilizing Firestone Metal.
 - 1. Material and Finish: 22 gage, 0.022 inch thick galvanized steel with Kynar 500 finish in manufacturer's standard color; matching concealed joint splice plates; factory-installed protective plastic film.

2.06 ACCESSORY MATERIALS

- A. Wood Nailers: PS 20-dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade plywood; pressure preservative treated.
 - 1. Width: 3-1/2 inches (90 mm), nominal minimum, or as wide as the nailing flange of the roof accessory to be attached to it.
 - 2. Thickness: Same as thickness of roof insulation.

PART 3 INSTALLATION

3.01 GENERAL

- A. Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and recommendations for the specified roofing system. Where manufacturer provides no instructions or recommendations, follow good roofing practices and industry standards. Comply with federal, state, and local regulations.
- B. Obtain all relevant instructions and maintain copies at project site for duration of installation period.
- C. Does not start work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a manufacturer's warranty.
- D. Perform work using competent and properly equipped personnel.
- E. Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.
- F. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice; do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 to 80 degrees F (15 to 25 degrees C).
- G. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage caused by roofing work.
 - 1. Protect from spills and overspray from bitumen, adhesives, sealants and coatings.
 - 2. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray.
 - 3. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.
- H. Until ready for use, keep materials in their original containers as labeled by the manufacturer.
- I. Consult membrane manufacturer's instructions, container labels, and Material Safety Data Sheets (MSDS) for specific safety instructions. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition.

3.02 EXAMINATION

- A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment and that deflection will not strain or rupture roof components or deform deck.
- B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
- C. Examine roof substrate to verify that it is properly sloped to drains.
- D. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations and instructions; start of work constitutes acceptable of project conditions and requirements.

3.03 PREPARATION

- A. Take appropriate measures to ensure that fumes from adhesive solvents are not drawn into the building through air intakes.
- B. Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease and other materials that may damage the membrane.
- C. Fill all surface voids in the immediate substrate that are greater than 1/4 inch (6 mm) wide with fill material acceptable insulation to membrane manufacturer.
- D. Seal, grout, or tape deck joints, where needed, to prevent bitumen seepage into building.

3.04 INSULATION AND COVER BOARD INSTALLATION

- A. Install insulation in configuration and with attachment method(s) specified in PART 2, under Roofing System.
- B. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before the onset of inclement weather.
- C. Lay roof insulation in courses parallel to roof edges.
- D. Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 1/4 inch (6 mm). Fill gaps greater than 1/4 inch (6 mm) with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 1/4 inch (6 mm).
- E. Cold Adhesive Attachment: Apply in accordance with membrane manufacturer's instructions and recommendations; "walk-in" individual roof insulation boards to obtain maximum adhesive contact.

3.05 SINGLE-PLY MEMBRANE INSTALLATION

- A. Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time.
- B. Lay out the membrane pieces so that field and flashing splices are installed to shed water.
- C. Install membrane without wrinkles and without gaps or fish mouths in seams; bond and test seams and laps in accordance with membrane manufacturer's instructions and details.
- D. Install membrane adhered to the substrate, with edge securement as specified.
- E. Adhered Membrane: Bond membrane sheet to substrate using membrane manufacturer's recommended bonding material, application rate, and procedures.
- F. Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than 2 in 12 inches (1:6) using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by roofing manufacturer.
 - Exceptions: Round pipe penetrations less than 18 inches (460 mm) in diameter and square penetrations less than 4 inches (200 mm) square.
 - 2. Metal edging is not merely decorative; ensure anchorage of membrane as intended by

roofing manufacturer.

3.06 FLASHING AND ACCESSORIES INSTALLATION

- A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by membrane manufacturer's recommendations and details.
- B. Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the drawings, with horizontal leg of edge member over membrane and flashing over metal onto membrane.
 - 1. Follow roofing manufacturer's instructions.
 - 2. Remove protective plastic surface film immediately before installation.
 - 3. Install water block sealant under the membrane anchorage leg.
 - 4. Flash with manufacturer's recommended flashing sheet unless otherwise indicated.
 - 5. Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge.
 - 6. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional piece of self-adhesive flashing membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashing sections.
 - 7. When the roof slope is greater than 1:12, apply seam edge treatment along the back edge of the flashing.
- C. Existing Scuppers: Remove scupper and install new scupper.
- D. Scuppers: Set in sealant and secure to structure; flash as recommended by manufacturer.
- E. Roofing Expansion Joints: Install as shown on drawings and as recommended by roofing manufacturer.
- F. Flashing at Walls, Curbs, and Other Vertical and Sloped Surfaces: Install weather tight flashing at all walls, curbs, parapets, curbs, skylights, and other vertical and sloped surfaces that the roofing membrane abuts to; extend flashing at least 8 inches (200 mm) high above membrane surface.
 - 1. Use the longest practical flashing pieces.
 - 2. Evaluate the substrate and overlay and adjust installation procedure in accordance with membrane manufacturer's recommendations.
 - 3. Complete the splice between flashing and the main roof sheet with specified splice adhesive before adhering flashing to the vertical surface.
 - 4. Provide termination directly to the vertical substrate as shown on roof drawings.
- G. Roof Drains:
 - 1. Existing Drains: Remove all existing flashings, drain leads, roofing materials and cement from the drain; remove clamping ring.
 - Taper insulation around drain to provide smooth transition from roof surface to drain. Use specified pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope; slope not to exceed manufacturer's recommendations.
 - 3. Position membrane, then cut a hole for roof drain to allow 1/2 to 3/4 inch (12 to 19 mm) of membrane to extend inside clamping ring past drain bolts.
 - 4. Make round holes in membrane to align with clamping bolts; do not cut membrane back to bolt holes.
 - 5. Apply sealant on top of drain bowl where clamping ring seats below the membrane

- 6. Install roof drain clamping ring and clamping bolts; tighten clamping bolts to achieve constant compression.
- H. Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration.
 - 1. Pipes, Round Supports, and Similar Items: Flash with specified premolded pipe flashings wherever practical; otherwise use specified selfcuring elastomeric flashing.
 - Pipe Clusters and Unusual Shaped Penetrations: Provide penetration pocket at least 2 inches (50 mm) deep, with at least 1 inch (25 mm) clearance from penetration, sloped to shed water.
 - 3. Structural Steel Tubing: If corner radii are greater than 1/4 inch (6 mm) and longest side Of tube does not exceed 12 inches (305 mm}, flash as for pipes; otherwise, provide a standard curb with flashing.
 - 4. Flexible and Moving Penetrations: Provide weather tight gooseneck set in sealant and secured to deck, flashed as recommended by manufacturer.
 - 5. High Temperature Surfaces: Where the in-service temperature is, or is expected to be, In excess of 180 degrees F (82 degrees C), protect the elastomeric components from direct contact with the hot surfaces using an intermediate insulated sleeve as flashing substrate as recommended by membrane manufacturer.

3.07 FINISHING AND WALKWAY INSTALLATION

- A. Install walkways at access points to the roof, around rooftop equipment that may require maintenance.
- B. Walkway Pads: Adhere to the roofing membrane, spacing each pad at minimum of 1.0 inch (25 mm) and maximum of 3.0 inches (75 mm) from each other to allow for drainage.
 - If installation of walkway pads over field fabricated splices or within 6 inches (150 mm) of a splice edge cannot be avoided, adhere another layer of flashing over the splice and extending beyond the walkway pad a minimum of 6 inches (150 mm) on either side.
 - 2. Prime the membrane, remove the release paper on the pad, press in place, and walk on pad to ensure proper adhesion.

3.08 FIELD QUALITY CONTROL

- A. Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes (i.e. not a sales person).
- B. Perform all corrections necessary for issuance of warranty.

3.09 CLEANING

- A. Clean all contaminants generated by roofing work from building and surrounding areas, Including bitumen, adhesives, sealants, and coatings.
- B. Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with recommendations of manufacturers of components and surfaces.
- C. Remove leftover materials, trash, debris, equipment from project site and surrounding areas.

3.10 PROTECTION

A. Where construction traffic must continue over finished roof

membrane, provide durable protection and replace or repair damaged roofing to original condition.

END OF SECTION