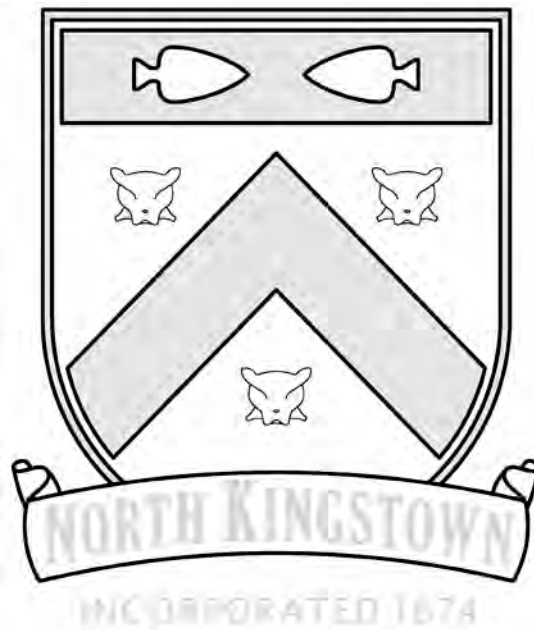


PROJECT MANUAL
NORTH KINGSTOWN
FREE LIBRARY
MEMBRANE ROOF REPLACEMENT

100 BOONE STREET
NORTH KINGSTOWN, RHODE ISLAND 02852



Construction Documents

June 18, 2021

OWNER:

Town of North Kingstown
100 Fairway Drive
North Kingstown, Rhode Island 02852

Architect:

Edward Rowse Architects, Inc.
400 Massasoit Ave.,
Suite 300, Second Floor
East Providence, Rhode Island 02914

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Town of
NORTH KINGSTOWN, RHODE ISLAND

100 Fairway Drive
North Kingstown, RI 02852-6202
Phone: (401) 291-3331
Fax: (401) 583-7125
www.northkingstown.org

INVITATION FOR BIDS

NORTH KINGSTOWN FREE LIBRARY MEMBRANE ROOF REPLACEMENT

*Sealed bids for the above will be accepted at the Town of North Kingstown Municipal Offices, ATTN: Purchasing/Finance, 100 Fairway Drive, North Kingstown, Rhode Island 02852, and clearly marked with the name of the item bid, and the date and time of opening, until **11:00am on Friday, July 9, 2021**. The bids will be publicly opened and read aloud.

A pre-bid meeting will be held on **Wednesday, June 23, 2021 at 1:00pm** at:

North Kingstown Free Library
100 Boone Street
North Kingstown, RI 02852

Questions are to be submitted in writing to Purchasing/Finance kkinder@northkingstown.org by **Tuesday, June 29, 2021 at 10:00am**. An Addendum, if necessary, will be posted NO LATER than **Wednesday, July 7, 2021 at 10:00am** answering any questions submitted at the site visits and/or email.

**NO BIDS WILL BE ACCEPTED AFTER THE FRIDAY, JULY 9, 2021
11:00AM DEADLINE.**

IT IS THE RESPONSIBILITY OF THE PROSPECTIVE BIDDERS TO MONITOR THE TOWN AND/OR STATE OF RHODE ISLAND PURCHASING WEBSITES FOR ANY SUBSEQUENT BID ADDENDUM. NO ADDENDA WILL BE ISSUED OR POSTED WITHIN FORTY-EIGHT (48) HOURS OF THE BID SUBMISSION DEADLINE.

The bid will be evaluated as to R.I.G.L. 45-55-5. (2) "Competitive Sealed Bidding" and the award shall be made on the basis of the lowest evaluated or responsive bid price. **The Town of North Kingstown reserves the right to reject any or all proposals or parts thereof; to waive any formality in same, or accept any proposal deemed to be in the best interest of the Town.**

A certificate of Insurance showing \$1 million General Liability and \$1 million Any Auto, with the Town being named as an additional insured, Worker's Compensation, with a waiver of subrogation will be required of the successful bidder.

A certified check of Bid Bond, payable to the Town of North Kingstown in the amount of five percent (5%) of the contract bid amount MUST be furnished by each General Contractor in accordance with the provisions included in the Information for Bidders.

A Performance Bond of one hundred percent (100%) of the contract price and a Labor and Material Bond of one hundred percent (100%) of the contract price with a satisfactory surety company will be required of successful bidder.

The Town of North Kingstown is exempt from payment of the Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30 Paragraph I, as amended. The Town of North Kingstown is exempt from payment of Federal Excise Taxes. The bid must be exclusive of taxes and will be so construed. Exemption certificates will be provided to the successful General Contractor and their sub-trade contractors.

The Town of North Kingstown will provide interpreters for the hearing impaired at any pre-bid or bid opening, provided a request is received three (3) days prior to said meeting by calling 294-3331, ext. 142, or (401) 294-3331, Ex. 600.

***PLEASE SUBMIT ONE (1) ORIGINAL, ONE (1) COPY
AND ONE (1) FLASHDRIVE WITH PDF COPY OF SUBMISSION.**

TOWN OF NORTH KINGSTOWN, RHODE ISLAND INFORMATION FOR BIDDERS

ARTICLE 1. RECEIPT AND OPENING OF BIDS

Sealed bids must be submitted in SEALED ENVELOPES, addressed to the Town of North Kingstown, Rhode Island, Director of Public Works, 2050 Davisville Road, North Kingstown, Rhode Island 02852, and clearly marked with the name of the item bid, and the date and time of opening. Bids will be received by the Town Purchasing Agent up to the specified time as noted on the Invitation For Bids, and publicly opened and read aloud at the specified time.

Proposals submitted for a specified item must not be combined under the same cover with any other bid item.

It is the bidder's responsibility to see that his bid is delivered within the time and at the place prescribed. Proposals received prior to the time of opening will be securely kept unopened. No responsibility will attach to any officer or person for the premature opening of a proposal not properly addressed and identified.

Any bid received after the time and date specified shall not be considered, by messenger or by mail; even if it is determined by the Town that such non-arrival before the time set for opening was due solely to delay in the mails for which the bidder is not responsible. Conditional or qualified bids will not be accepted.

ARTICLE 2. PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, both in words and figures. Erasures or other changes must be explained or noted over the signature of the bidder. Each bid must be submitted in sealed envelopes, clearly labeled, so as to guard against opening prior to the time set therefore.

The Town may consider any bid not prepared and submitted in accordance with the provisions hereof and reserves the right to reject any or all proposals in whole or in part, toward any item, group of items, or total bid; to waive any technical defect or formality in same, or to accept any proposal deemed to be in the best interest of the Town.

In the event more than one item is requested and/or listed on the Proposal Form, bidders may bid on any or all items. The Town reserves the right to make award on an item for item basis or aggregately, whichever may be in the best interest of the Town.

ARTICLE 3. TELEGRAPHIC MODIFICATION

Telephonic, telegraphic or oral bids, amendments or withdrawals will not be accepted.

ARTICLE 4. WITHDRAWAL OF BIDS

Bids may be withdrawn personally or by written request at any time prior to the time specified for the opening. Bids may be modified in the same manner. Negligence on the part of the bidder in preparing the bid confers no right of withdrawal or modifications of his bid after such bid has been opened.

ARTICLE 5. QUALIFICATIONS OF THE BIDDER

The Town reserves the right to request each bidder to present evidence that he is normally engaged in purveying the type of product or equipment bid on. No bid shall be considered from bidders who are unable to show that they are normally engaged in purveying the type of product or equipment specified in the bid proposal.

To receive full consideration, the bidder must submit literature and necessary details, when applicable, on the material or service he proposes to furnish in order that the Town may have full information available when analyzing the proposals.

ARTICLE 6. OBLIGATIONS OF THE BIDDER

At the time of opening of bids, each bidder will be presumed to have inspected the Specifications and Contract Documents (including all addenda) which has been sent to the address given by such bidder. The failure or omission of any bidder to receive or examine any form, instrument, or document or to inspect any item specified as a Trade-in shall in no way relieve any bidder from any obligation in respect to his bid. Any exceptions or deviations from the provisions contained in this Specification must be explained in detail and attached to proposal. If such deviations do not depart from the intent of this notice and are in the best interest of the Town, the proposal will receive careful consideration.

ARTICLE 7. BID SECURITY

Each proposal must be accompanied by bid security in the form of a Certified Check or Bid bond payable to the Town of North Kingstown, Rhode Island in the amount of FIVE **PERCENT (5%)** of the total amount bid. Bid security of unsuccessful bidders will be returned following award of bid and/or execution of a contract. Bid security of the successful bidder will be retained by the Town until bid requirements are met or forfeited to the Town upon bidder's failure to perform contract obligations.

Any successful bidder with drawing his bid subsequent to bid opening shall forfeit his bid deposit.

ARTICLE 8. "OR EQUAL" BIDDING

The Town intends to permit liberal scope in bidding and specifically does not intend to limit bidding to any one make or model. Whenever a material, article or piece of equipment is identified by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and any proposed material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided it is in the opinion of the town to be of equal substance and function.

ARTICLE 9. PRICES

Bidders shall state the proposed price in the manner as designated in the Bid Proposal Form. In the event that there is a discrepancy between unit prices and the extended totals, the unit prices shall govern. In the event that there is a discrepancy between the price written in words and written in figures, the prices written in words shall govern. The prices in this bid shall be irrevocable for ninety (90) days, or until the bid is awarded by the Town of North Kingstown. After award by the Town of North Kingstown, said prices shall then remain firm for the duration of the Contract.

ARTICLE 10. TAX EXEMPTIONS

The Town is exempt from payment of the Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30 Para. I, as amended. The Town is exempt from payment of Federal Excise Taxes. The prices bid must be exclusive of taxes and will be so construed. Exemption certificates will be completed as required by the successful bidder.

ARTICLE 11. CONTRACT PERIOD AND TERM OF AGREEMENT

Contract period: TBD _____. If financially advantageous to the Town of North Kingstown, these contracts may be renewed or extended, from time to time, when agreed to, in writing, by both parties.

ARTICLE 12. LABOR REGULATIONS

- The following paragraphs regarding nondiscrimination in employment shall be included and become part of these specifications:
- a. Contractors shall comply with the provisions of the General Laws of Rhode Island and attention is called to Title 37, Chapter 13, Section 1-16, relative to the payment of wages, obligations and charges by Contractors on public works projects.
 - b. Non-resident Contractors are subject to Section 44-1-6 of the Rhode Island General Laws, as amended. (OUT OF STATE CONTRACTORS.)
 - c. The successful bidder will be required to comply with the Davis-Bacon Act (40USC 2 to a-7) as supplemented by Department of Labor regulations (29CFR Part 5).
 - d. The successful bidder will be required to comply with the Contract Works Hours and Safety Standards Act (40 USC 327-330) as supplemented by Dept. of Labor Regulations (29CFR, Part 5).
 - e. The successful bidder will be required to comply with Executive Order 11246, entitled Equal Employment Opportunity, as amended, and as supplemented in Department of Labor regulations (41 CFR Part 60).
 - f. The successful bidder will be required to comply with the Copeland "Anti-Kickback" Act (18 USC 874) as supplemented in Department of Labor regulations (29 CFR, Part 3).
 - g. The successful bidder will be required to comply with the Safety and Health regulations (29 CFR, Part 1926 and all subsequent amendments) as promulgated by the Department of Labor.
 - h. The successful bidder will be required to comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352).

ARTICLE 13. INSURANCE

The Contractor shall assume responsibility and liability for all injuries to persons or damages to property, directly or indirectly due to, or arising out of, his operations under the contract and shall be responsible for the proper care and protection of all work performed for the Town.

The Contractor shall also indemnify and save harmless the Town of North Kingstown against any and all claims of whatever kind and nature due to, or arising out of, his breach or failure to perform any of the terms, conditions, or covenants of the contract resulting from acceptance of his bid.

The Contractor shall furnish the Director of Administrative Services with certificates of insurance from companies acceptable to the Town of North Kingstown. All insurance companies listed on certificates must be licensed to do business in the State of Rhode Island. The Contractor shall provide a certificate of insurance as specified on the bid proposal form attached. Contracts of insurance (covering all operations under this contract) shall be kept in force until the contractor's work is acceptable by the Town.

The limits of the insurance must be at least in the amounts specified below:

1. Commercial General Liability-Occurrence Form \$1,000,000/\$1,000,00
2. Automobile Liability - \$1,000,000
(With both of the above naming the Town as additional insured.)
3. Worker's Compensation (if legally allowed and available). Waiver of subrogation applies to Worker's Compensation.

The Contractor shall secure, pay for, and maintain insurance as necessary to protect himself against loss of owned or rented capital equipment and tools, with provision for waiver of subrogation against the Owner.

The Contractor shall require similar insurance in the above amounts to be taken out and maintained by each subcontractor. The contractor shall be fully responsible for the acts and omissions of his sub-contractors and of persons employed either directly or indirectly by him. Nothing contained in the contract shall create any contractual relation between any sub-contractor and the Town of North Kingstown.

ARTICLE 14. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

The successful bidder will be required to furnish the Town with a Performance Bond and labor and Material Payment Bond*, each in the amount of 100% of the contract price, as security for faithful performance of the Contract and executed by a surety company licensed to do business in the State of Rhode island and approved by the Town. The failure of the successful bidder to supply the required Bonds within a time specified or within such extended period the town of North Kingstown may grant based upon reasons determined sufficient by the Town, shall constitute a default, and the town may either award the contract to the next lowest bidder or re-advertised for bids.

*See attached samples to be used.

ARTICLE 15. LAWS, ORDINANCES AND CODES

All applicable Federal and State Laws, Ordinances and Codes of the Town of North Kingstown and regulations of all authorities having jurisdiction over this Project shall apply to this contract the same as though written herein in full. The North Kingstown Public Schools will not award the Contract to any Contractor who is, at the time, ineligible under the provisions of any applicable regulations issued by the Secretary of Labor, United State Department of Labor, or is not qualified under applicable Ordinances of the Town of North Kingstown, or the laws of the State of Rhode Island.

SELECTION CRITERIA (General Guidelines – (see Page 10 for detailed information)

The bid will be evaluated as to R.I. G.L.45-55-5. (2) "Competitive Sealed Bidding" and the award shall be made on the basis of the lowest evaluated or responsive bid price.

The following factors, and others as listed in the RFP, will be considered in determining the lowest evaluated or responsive bid price:

- Bid price
- Meeting the bid/insurance requirements
- Quality of work previously performed by the company for the Town and School Department of North Kingstown, if any
- Services offered
- Early payment discount

Past performance as reflected by the evaluation of private persons and officials of other governmental entities that have retained the services of the Vendor with respect to such factors as control of costs, quality of work, and an ability to meet deadlines.

ARTICLE 16. LIQUIDATED DAMAGES

Failure on the part of the Contactor to complete the project by the Substantial Completion date within the agreed upon time schedule will result in a liquidated damage cost of two hundred dollars (\$200.00) **per day**, excluding Saturdays, Sundays, and holidays, to the

Contractor, until completion (final acceptance), excluding warranty periods. The Town may apply liquidated damage costs to current payment requests not yet paid.

SECTION 00 01 15 – LIST OF DRAWINGS

GENERAL

The drawings for this project represent an integral part of the contract documents and should not be considered as a separate entity. They, along with the technical specifications, form a complete process of disseminating specific information required to perform the work of this project.

The following schedule indicates the drawings of this project, ordered for convenience only, and do not obligate the Contractor to perform the work in any specific sequence, nor construed as specific work for a specific trade, subcontractor or supplier.

DRAWING NUMBER	TITLE	SHEET NUMBER
GENERAL		
	TITLE SHEET	1 OF 8
ARCHITECTURAL		
A0.0	ABBREVIATIONS, LEGEND, NOTES & ROOF TYPE	2 OF 8
A1.0	OVERALL EXISTING ROOF PLAN	3 OF 8
A1.1	DEMOLITION ROOF PLAN	4 OF 8
A1.2	ROOF PLAN	5 OF 8
A1.3	OVERALL MAIN LEVEL FLOOR PLAN & LARGE SCALE PLAN	6 OF 8
A1.4	OVERALL MAIN LEVEL REFLECTED CEILING PLAN & PARTIAL LARGE SCALE CEILING PLAN	7 OF 8
A2.0	ROOF DETAILS	8 OF 8

END OF SECTION 00 01 15

SELECTION CRITERIA

The bid will be evaluate as to R.I.G.L. 45-55-5. (2) "Competitive Sealed Bidding" and the award shall be made on the basis of the lowest evaluated or responsive bidder.

The following factors will be considered in determining the lowest evaluated or responsive bidder:

Attendance of the Pre-Bid meeting HIGHLY RECOMMENDED;

Competence to perform the services as reflected by technical training and education; general experience; experience in providing the required services;

Past performance as reflected by the evaluation of private persons and officials of other governmental entities that have retained the services of the firm with respect to such factors as control of costs, quality of work, and an ability to meet deadlines;

Demonstrated experience in the type of work required;

Record of the firm in accomplishing work on other projects in the required time: (list references and projects completed or currently in progress on the Experience Sheet contained in this bid document)

Quality of work previously performed by the firm for the Town of North Kingstown, if any;

Quality of subcontractors proposed for this project (all subcontractors are to be properly licensed at time of bid opening and must be listed on the form contained in this bid document)

BID PRICE;

Meets or exceeds bid specifications;

Warranty/Guarantee;

Early payment discount.

EXPERIENCE SHEET

The following experience sheet shall be completed by each bidder. Any bid submitted without a fully completed experience sheet may be rejected by the Owner.

1. Have you ever failed to complete any work awarded to you? If so, please state where and why.

2. What projects similar to this one has your organization completed within the last 5 years?

(Separate sheets may be submitted for this information)

Class of Work	Contract Amount	When Completed	Name, address and telephone number of Contact person
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LAWS PERTAINING TO PUBLIC WORKS PROJECTS
(General Laws of Rhode Island [1977 Reenactment])
Chapter 37-12 and 37-13, as amended

37-13-1. "Public works" defined. – "Public Works" as used in this chapter shall mean any public work consisting of grading, clearing, demolition, improvement, completion, repair, alteration, or construction of any public road or any bridge, or portion thereof, or any public building, or portion thereof, or any heavy construction, or any public works projects of any nature or kind whatsoever.

37-13-4. Provisions applicable to public works contracts-Lists of subcontractors. –All public works shall be done by contract, subject to the same provisions of law relating thereto and to the letting thereof, which are applicable to similar contracts of the awarding authority or authorized agency, hereinafter call the "proper authority", in the general location where the work is to be performed and which are not contrary to the provisions of § § 37-13-1 – 37-13-14 and § 37-13-16. Each contractor after the award of a contract for public works shall submit to the proper authority a list of his or her subcontractors of any part or all of the work. The list shall be submitted in such manner or form as the proper authority shall uniformly require from contractors in all public works.

37-13-6. Ascertainment of prevailing rate of wages and other payments-Specifications of rate in call for bids and in contract. –Before awarding any contract for public works to be done, the proper authority shall ascertain from the director of labor and training the general prevailing rate of the regular, holiday, and overtime wages paid and the general prevailing payments on behalf of employees only, to lawful welfare, pension, vacation, apprentice training, and educational funds (payments to the funds must constitute an ordinary business expense deduction for federal income tax purposes by contractors) in the city, town, village, or other appropriate political subdivision of the state in which the work is to be performed, for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract for the public works. The proper authority shall, also, specify in the call for bids for the contract and in the contract itself the general prevailing rate of the regular, holiday, and overtime wages paid and the payments on behalf of employees only, to the welfare, pension, vacation, apprentice training, and education funds existing in the locality for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract or work.

37-13-7. Specifications in contract of amount and frequency of payment of wages. – (a) Every call for bids for every contract in excess of one thousand dollars (\$1,000), to which the State of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the State of Rhode Island or any political subdivision thereof, or any public agency or quasi-public agency and which requires or involves the employment of employees, shall contain a

provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the State of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates no less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" shall include:

- (1) The basic hourly rate of pay; and
- (2) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pension on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions, and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(C) The term "employees", as used in this section, shall include employees of contractors of subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsection (a) and (b).

(D) Omitted.

37-13-8 Investigation and determination of prevailing wages-filing of schedule.- The Director of Labor and Training shall investigate and determine the prevailing wages and payments made to or on behalf of employees, as set forth in § 37-13-7, paid in the trade or occupation in the city, town, village, or other appropriate political subdivision of the state and keep a schedule on file in his or her office of the customary prevailing rate of wages and payment made to or on behalf of the employees which shall be open to public inspection. In making a determination, the Director of Labor may adopt and use such appropriate and applicable prevailing wage rate determinations as have been made by the Secretary of Labor of the United States of America in accordance with the Davis-Bacon Act, as amended, 40 U.S.C. § 276a.

37-13-9 Statutory provisions included in contracts. -A copy of §§ 37-13-5, 37-13-6, and 37-13-7 shall be inserted in all contracts for public works awarded by the State, any city, town, committee, an authorized agency, or awarding authority thereof, or any person or persons in their behalf in which state or municipal funds are used if the contract price is in excess of one thousand dollars (\$1,000).

37-13-13 Furnishing payroll record to Director of Labor and Training. -Each contractor awarded a contract with a contract price in excess of one thousand dollars (\$1,000) for public work, and each subcontractor who performs work on public works, shall furnish a certified copy of his or her payroll record of his or her employees employed upon the public work to the director of labor and training on a weekly basis for the preceding week. The director of labor and training may promulgate reasonable rules and regulations to enforce the provisions of this section. A contractor or subcontractor who fails to comply with the provisions of this section shall be guilty of a misdemeanor and shall pay to the director of labor and training one hundred dollars (\$100) for each calendar day of noncompliance as determined by the director of labor and training. Any of those revenues shall be deposited as general revenues.

37-13-15 Review.-(a) There is hereby created an appeals board which shall be comprised of three (3) members who shall be appointed by the governor; provided, however, that each member of the appeals board shall have at least five (5) years experience with prevailing wage rates as they apply to the construction industry. The members of such appeals board shall serve without compensation.

The members of the appeals board shall be appointed for terms of three (3) years except that of the three (3) members originally appointed by each of the appointing authorities: one(1) shall be appointed for a term of one (1) year, one(1) shall be appointed for a term of two(2) years and one (1) for a term of three (3) years.

(b) Any person aggrieved by any action taken by the director of labor or his or her designated hearing officer under the authority of this chapter, or by the failure or refusal of the director of labor to take any action authorized by this chapter, may obtain a review thereof for the purpose of obtaining relief from the action or lack of action by filing a petition for administrative review and relief, to the appeals board as provided herein. Such petition for administrative review shall be filed within twenty (20) days of the action taken by the director of labor and training or designated hearing officer. The petition for administrative review shall be heard within ten (10) days of the date of filing. An aggrieved person under this section shall include:

- (1) Any person who is required to pay wages to his or her employees or make payments to a fund on behalf of his or her employees, as provided in this chapter;
- (2) Any person who is required to be paid wages for his or her labor or on whose behalf payments are required to be paid to funds, as provided by this chapter;
- (3) The lawful collective bargaining representative of a person defined in subdivision (2) above;
- (4) A trade association of which a person defined in subdivision (1) above is a member;
- (5) A proper authority as defined in this chapter;
- (6) A contractor who submitted a bid for work to be or which has been awarded under the provisions of this chapter or a trade association of which he or she is a member, and
- (7) A labor organization which has one or more written collective bargaining agreements with one or more employers or a trade association which sets forth the hours, wages, and working conditions of a craft, mechanic, teamster, or type or worker needed to execute the work, as provided in this chapter to the extent that it would be affected by the action or a failure to act of the director of labor or the hearing officer.

(c) Any aggrieved person as defined herein may obtain a review of a decision of the appeals board by filing a petition in the superior court in Providence County pursuant to the provisions of the administrative procedures act, praying for review and relief. The petition shall follow the course of and be subject to the procedures for causes filed in the court.

(d) The director is hereby empowered to enforce his or her decision and/or the decision of the appeals board in the superior court for the county of Providence.

37-13-16- Termination of work on failure to pay agreed wages.- Completion of work.—Every contract within the scope of this chapter shall contain the further provision that in the event it is found by the director of labor that any employee employed by the

contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the awarding party may, by written notice to the contractor or subcontractor, terminate his or her right as the case may be, to proceed with the work, or such part of the work as to which there has been a failure to pay the required wages, and shall prosecute the work to completion by contract or otherwise, and the contractor and his or her sureties shall be liable to the awarding party for any excess costs occasioned the awarding authority thereby.

(401) 222-6269

(401) 222-3053 – Al Pugliese

31

STATE TAX OFFICIALS

44-1-6

NOTES TO DECISIONS

1. In General.

The tax administrator was not authorized to promulgate and enforce a rule clearly con-

trary to the intent of the legislature. *Petrarca v. Tax Adm'r*, 113 R.I. 449, 322 A.2d 621 (1974).

Collateral References. Imprisonment for debt: constitutional provision against impris-

onment for debt as applicable to nonpayment of tax. 48 A.L.R.3d 1324.

44-1-5. [Repealed.]

Repealed Sections. This former section § 44-1-5) was repealed by P.L. 1965, ch. 68, (P.L. 1912, ch. 769, § 5; G.L. 1923, ch. 38, § 2. § 5; G.L. 1938, ch. 28, § 5; G.L. 1956,

44-1-6. Additional collection powers — Nonresident contractors. — (a) Any person doing business with a nonresident contractor shall withhold payment of an amount of three percent (3%) of the contract price until thirty (30) days after the contractor has completed the contract and has requested the tax administrator, in writing, to audit the records for the particular project, a receipted copy of the request to be furnished to the person holding the funds. The tax administrator shall, within thirty (30) days after receipt of the request, furnish to the nonresident contractor and to the person holding the funds either a certificate of no tax due or a certificate of sales and use tax or income tax withheld, or both, due from the nonresident contractor.

(b) Upon receipt of a certificate of no tax due, the person holding the payment may pay the nonresident contractor. Upon receipt of a certificate of taxes due, the person may pay to the contractor out of the amount withheld the excess over the amount of taxes set forth in the certificate together with the interest and penalties then assessed. If the tax administrator furnished neither certificate to both parties within thirty (30) days after receipt of a written request for the making of the audit, the person holding the payment may forthwith pay the payment withheld to the nonresident contractor under the terms of the contract free from any claims of the tax administrator against either the person holding the payment or the nonresident contractor for payment of sales or use taxes or income taxes withheld, or both.

(c) In the event the tax administrator shall serve upon the contractor and the person holding the payment a certificate showing the taxes due within a thirty (30) day period, the person holding the payment shall deposit with the tax administrator the amount set forth in the certificate which is not in excess of three percent (3%) of the contract price, taking a receipt for the amount, and shall thereupon be free from any claim of the nonresident contractor for that amount or of the tax administrator for sales and use taxes or income taxes withheld, or both, arising out of the materials, equipment, and

services used in performance of the contract of the nonresident contractor on that project.

(d) As used in this section, a nonresident contractor is one who does not maintain a regular place of business in this state. "A regular place of business" means and includes any bona fide office (other than a statutory office), factory, warehouse, or other space in this state at which the taxpayer is doing business in its own name in a regular and systematic manner, and which is continuously maintained, occupied, and used by the taxpayer in carrying on its business through its regular employees regularly in attendance. A temporary office at the site of construction shall not constitute a regular place of business.

History of Section.

P.L. 1974, ch. 229, § 2.

44-1-7. Interest on delinquent payments. — (a) Whenever the full amount of any state tax or any portion or deficiency thereof, as finally determined by the tax administrator, has not been paid on the date when it is due and payable, whether the time has been extended or not, there shall be added as part of the tax or portion or deficiency thereof interest at the rate as determined in accordance with subsection (b) of this section, notwithstanding any general or specific statute to the contrary.

(b) Each January 1 the tax administrator shall compute the rate of interest to be in effect for that calendar year by adding two percent (2%) to the prime rate which was in effect on October 1 of the preceding year. The resultant sum shall be the interest rate referred to in subsection (a) of this section and in § 44-1-7.1. "Prime rate" as used in this subsection means the predominant prime rate quoted by commercial banks to large businesses as determined by the board of governors of the federal reserve system. In no event shall the rate of interest exceed twenty-one percent (21%) per annum nor be less than twelve percent (12%) per annum.

History of Section.

P.L. 1974, ch. 151, art. 1, § 1; P.L. 1981, ch. 299, § 1; P.L. 1982, ch. 9, art. 4, § 1; P.L. 1984, ch. 289, § 1; P.L. 1993, ch. 188, art. 67, § 1.

Reenactments. The 1995 Reenactment (P.L. 1995, ch. 323, § 1) substituted "means" for "shall mean" in the third sentence in subsection (b).

44-1-7.1. Interest on overpayments. — (a) Notwithstanding any general or specific statute to the contrary, overpayments of state taxes shall bear interest at the rate as provided in § 44-1-7 from the date the tax was paid, or from the date including any extensions thereof the tax became due, whichever of the dates occurs the later.

(b) If any overpayment of state tax is refunded within 90 days after the last date prescribed (or permitted by extension of time) for filing the return of the tax, or within 90 days after the return is in

RELEASE OF LIENS

Whereas, the undersigned, have furnished labor or materials or both for the execution of work described in a contract named: _____, dated _____, owned by the Town of North Kingstown, hereinafter called "Owner."

Now, therefore, the undersigned, for and in consideration of the property and of other valuable consideration to each of them paid, the receipt whereof is hereby acknowledged, do hereby release and discharge any and all manner of liens, claims and demands whatsoever which the undersigned on any of them now have or might or could have on or against said property of the Owner thereof for work done or materials furnished as aforesaid, or in any other manner, from the commencement of work on said property to the date hereof.

The Contractor also certifies that all of his sub-Contractors and suppliers which have furnished any labor or materials for an amount of \$500.00 or more, for said job, have signed this Release of Liens.

The Contractor assumes full responsibility to hold the Town of North Kingstown safe and harmless from any lien for materials and/or labor which might occur from aforesaid work.

IN WITNESS WHEREOF, the undersigned have caused this Release of Liens to be duly executed on the respective dates indicated.

By: _____
(Contractor) _____ *(Authorized Signature)*

 _____ *(Date)*

Trade (Supplier) / Company Name / Authorized Signature / Date

Contractor may sign if materials and/or Subcontractors charges are \$500.00 or less.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

<p>PRODUCER</p> <p style="text-align: center;">X</p>	<p>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.</p>	
<p>INSURED</p> <p style="text-align: center;">X</p>	<p>INSURERS AFFORDING COVERAGE</p> <p>INSURER A: X</p> <p>INSURER B:</p> <p>INSURER C:</p> <p>INSURER D:</p> <p>INSURER E:</p>	<p>NAIC #</p>

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR ADD'L LTR INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS								
	<p>GENERAL LIABILITY</p> <p><input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY</p> <p><input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR</p> <p>GEN'L AGGREGATE LIMIT APPLIES PER:</p> <p><input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC</p>	X	X	X	<p>EACH OCCURRENCE \$ 1,000,000</p> <p>DAMAGE TO RENTED PREMISES (Ea occurrence) \$</p> <p>MED EXP (Any one person) \$</p> <p>PERSONAL & ADV INJURY \$ 1,000,000</p> <p>GENERAL AGGREGATE \$ 1,000,000</p> <p>PRODUCTS - COMP/OP AGG \$ 1,000,000</p>								
	<p>AUTOMOBILE LIABILITY</p> <p><input checked="" type="checkbox"/> ANY AUTO</p> <p><input type="checkbox"/> ALL OWNED AUTOS</p> <p><input type="checkbox"/> SCHEDULED AUTOS</p> <p><input type="checkbox"/> HIRED AUTOS</p> <p><input type="checkbox"/> NON-OWNED AUTOS</p>	X	X	X	<p>COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000</p> <p>BODILY INJURY (Per person) \$</p> <p>BODILY INJURY (Per accident) \$</p> <p>PROPERTY DAMAGE (Per accident) \$</p>								
	<p>GARAGE LIABILITY</p> <p><input type="checkbox"/> ANY AUTO</p>				<p>AUTO ONLY - EA ACCIDENT \$</p> <p>OTHER THAN EA ACC \$</p> <p>AUTO ONLY: AGG \$</p>								
	<p>EXCESS/UMBRELLA LIABILITY</p> <p><input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE</p> <p>DEDUCTIBLE</p> <p>RETENTION \$</p>				<p>EACH OCCURRENCE \$</p> <p>AGGREGATE \$</p> <p>\$</p> <p>\$</p> <p>\$</p>								
	<p>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</p> <p>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?</p> <p>If yes, describe under SPECIAL PROVISIONS below.</p>	X	X	X	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">WC STATUTORY LIMITS</td> <td style="width: 50%;">OTHER</td> </tr> <tr> <td>E.L. EACH ACCIDENT</td> <td>\$ 100,000</td> </tr> <tr> <td>E.L. DISEASE - EA EMPLOYEE</td> <td>\$ 100,000</td> </tr> <tr> <td>E.L. DISEASE - POLICY LIMIT</td> <td>\$ 500,000</td> </tr> </table>	WC STATUTORY LIMITS	OTHER	E.L. EACH ACCIDENT	\$ 100,000	E.L. DISEASE - EA EMPLOYEE	\$ 100,000	E.L. DISEASE - POLICY LIMIT	\$ 500,000
WC STATUTORY LIMITS	OTHER												
E.L. EACH ACCIDENT	\$ 100,000												
E.L. DISEASE - EA EMPLOYEE	\$ 100,000												
E.L. DISEASE - POLICY LIMIT	\$ 500,000												
	OTHER												

SAMPLE ONLY

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Town of North Kingstown is an Additional Named Insured

Waiver of Subrogation applies to Worker's Compensation

<p>CERTIFICATE HOLDER</p> <p>Town of North Kingstown 100 Fairway Drive North Kingstown RI 02852-5762</p>	<p>CANCELLATION</p> <p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL _____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.</p> <p>AUTHORIZED REPRESENTATIVE</p>
---	---

DOCUMENT 00 41 13 - BID FORM

Date: _____

To: Town of North Kingstown, Finance Department
100 Fairway Drive
North Kingstown, Rhode Island 02852
Attn: Kristine Kinder, Purchasing / Finance

Project: North Kingstown Free Library
Membrane Roof Replacement
100 Boone Street,
North Kingstown, Rhode Island 02852

Submitted by:

(Include in the above spaces the firm's legal name, address, telephone, fax number, contact and email address.)
(All information should be typed or printed.)

1. BASE BID

The Base Bid schedule **Substantial Completion date shall be determined by the proposed Bidder as _____ and the Final Completion date for Work shall be set at thirty (30) calendar days after the Substantial Completion date as determined by the proposed Bidder.**

“TIME IS OF THE ESSENCE”

Having examined the Place of the Work and all matters referred to in the Instructions to Bidders, and in the Contract Documents prepared by Edward Rowse Architects, Inc., Architect for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the sum of:

\$,				,				.		
----	--	--	---	--	--	--	---	--	--	--	---	--	--

(Numeric)

(Written)

WE HAVE INCLUDED THE REQUIRED 5% BID SURETY AS REQUIRED BY THE INVITATION TO BID.

2. ADDENDA

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

Addendum No. 1, dated _____ Addendum No. 2, dated _____
Addendum No. 3, dated _____ Addendum No. 4, dated _____

3. ACCEPTANCE

The bidder understands that the Owner reserves the right to reject any or all bids and to waive any formalities in the bidding.

The bidder agrees that this bid shall be good and MAY NOT be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of his bid, the Bidder will execute the formal contract attached within 10 days and deliver a performance bond, a labor and material payment bond, and a certificate of insurance, as required by the general conditions.

The bid surety attached for the sum of 5% of the bid, is to become the property of the Owner in the event the contract and bonds are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to his own organization, that his BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID, with any other BIDDER or with any competitor.

4. SCHEDULE (Contract Time)

If this Bid is accepted, unless indicated otherwise on the bid form, Bidder will achieve a **Substantial Completion date of** _____ at which date the Owner's operations can commence.

******TIME IS OF THE ESSENCE******

5. JOINT VENTURES

Firms that are bidding on this project as part of a Joint Venture Partnership shall meet the following criteria in order to be eligible to participate in the Project.

- a) At least one (1) of the firms participating in the Joint Venture Partnership shall have been incorporated or otherwise legally established as a construction business in the State of Rhode Island and Providence Plantations for not less than ten (10) years.
- b) Each entity shall have participated and completed a minimum of two (2) previous Joint Venture Partnerships together of the same magnitude as this Project in the last ten (10) years.

Joint Venture Partnerships that have submitted a Bid for this project shall meet all of the eligibility requirements detailed above and shall submit all documentation that may be requested by the Owner in regard to the Joint Venture Partnership within five (5) days of notice of consideration of acceptance of Bid. Joint Venture Partnerships that do not submit the appropriate requested information shall not be eligible for Bid Award.

6. BIDDER ACKNOWLEDGEMENTS

In accordance with Article 13, Insurance, included in the Information for Bidders, the BIDDER shall provide a certificate of insurance covering all operations under this contract. The certificate of

insurance meeting all conditions set forth therein shall be submitted prior to execution of the formal contract.

<p>REQUIREMENT FOR LICENSE NUMBER:</p> <p>In compliance with the requirements of Rhode Island General Law, Section 5-65-23, my Rhode Island license number for the work to be performed by this firm as prime contractor is:</p> <p>LICENSE TYPE: _____ LICENSE NUMBER: _____</p>
--

7. SALES TAX

The Town of North Kingstown, Rhode Island is exempt from payment of the Rhode Island Sales Tax under the 1956 General laws of the State of Rhode Island, 44-18-30 Paragraph I, as amended. Exemption certificates will be completed as required by the successful bidder.

8. BID FORM SIGNATURE(S)

The undersigned declares: that the only person interested in this proposal as principals are named herein as such; that no official of the Owner and no person acting for or employed by the Owner is interested directly or indirectly in this proposal or in any contract which may be made under it, or in any expected profits to arise there from; that his proposal is made in good faith, without fraud, collusion with any other person bidding or refraining from bidding for the same work; that he has examined the contract drawings relating to the contract covered by this proposal and in regard to all conditions pertaining to the work and carefully checked his estimates of cost and from them makes this proposal.

(Bidder's Signature)

Corporate Seal:

(Bidder's name – Printed or Typed)

(Bidder's Title – Printed or Typed)

<p>THE CONTRACTOR SHALL PROVIDE AN AFFIDAVIT THAT THE PERSON WHO HAS AFFIXED HIS or HER SIGNATURE TO THIS BID FORM IS ACTIVELY AND LEGALLY AUTHORIZED TO BIND THE FIRM CONTRACTUALLY. THIS FORM MUST BE SUBMITTED WITH AND AFFIXED TO THE BID FORM.</p>

END OF SECTION 00 41 13

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

that
of

as Principal, hereinafter call Contractor, and,
as Surety, hereinafter called Surety, are held firmly bound unto

TOWN OF NORTH KINGSTOWN, RHODE ISLAND

as obligee, hereinafter called Owner, in the amount of
in lawful money of the United States
for the payment whereof Contractor and Surety bind themselves, their heirs, executors,
administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Contractor
entered into a certain contract with the Owner, dated the *day of*
a copy of which is hereto attached and made a part hereof for the construction of:

for the **TOWN OF NORTH KINGSTOWN, RHODE ISLAND**, in accordance with the
Contract and the Contract Documents.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if
Contractor shall promptly and faithfully perform said Contract, and shall promptly make
payment to all claimants as hereinafter defined, for all labor and material used or
reasonably required for use in the performance of the Contract, then this obligation shall
be null and void; otherwise, it shall remain in full force and effect subject, however, to
the following conditions:

1. The Surety, for valued received, hereby stipulates and agrees that no change,
extension of time, alteration, or condition to the terms of the contract or to WORK
to be performed thereunder or the SPECIFICATIONS accompanying the same
shall in any way affect its obligation on this BOND, and it does hereby waive
notice of any such change, extension of time, alteration or addition to the terms of
the contract or to the WORK or to the SPECIFICATIONS.

2. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
3. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
4. No suit or action shall be commenced hereunder by any claimant;
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, or one (1) year from the date on which final payment under the contract falls due, whichever is later, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

5. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this _____ day of _____

(Principal) (Seal)

(Witness)

By: _____
(Title)

(Surety) (Seal)

(Witness)

By: _____

SECTION 00 43 43 — GENERAL WAGE DECISION

The State of Rhode Island Department of Labor, Division of Professional Regulation General Decision Modification document current as of the bid issuance date for this Project, is an integral part of the Bid Documents for use in fulfilling prevailing wage rate requirements. A copy is available on the web site of the State of Rhode Island Department of Administration, Division of Purchases.

The Division of Purchases Web Site Address:

www.ridop.ri.gov

In accordance with RIGL 37-13-13; every Contractor and Subcontractor awarded a contract for Town projects shall submit completed RI Certified Weekly Payroll forms listing employees employed on the project to the Awarding Authority (Town of North Kingstown Representatives) on a monthly basis for all work completed in the preceding month. Awarding Authorities, Contractors and Subcontractors shall provide any and all payroll records to the RI Department of Labor & Training within ten (10) days of any request that is made by the department.

END OF SECTION 00 43 43

SECTION 00 45 30 – CONTRACTOR'S EQUAL EMPLOYMENT CERTIFICATION

_____ certifies that it

- 1. Intends to use the following listed construction trades in the work under the Contract:

- 2. Will comply with the minority manpower ratio and specific affirmative action steps contained herein; and
- 3. Will obtain from each of its subcontractors and submit to the Owner prior to the award of any subcontract under this Contract the subcontractor certification.

(Signature of authorized representative of contractor)

(Date)

(Name and title)

END OF SECTION 00 45 30

SECTION 00 45 35 – SUBCONTRACTOR’S EQUAL EMPLOYMENT CERTIFICATION

_____ certifies that it

- 1. Intends to use the following listed construction trades in the work under the Contract:

- 2. Will comply with the minority manpower ratio and specific affirmative action steps contained herein; and
- 3. Will obtain from each of its subcontractors and submit to the Owner prior to the award of any subcontract under this Contract the subcontractor certification.

(Signature of authorized representative of contractor)

(Date)

(Name and title)

END OF SECTION 00 45 35

SECTION 00 45 46 – BIDDER OSHA CERTIFICATION

Chapter 306 of the Acts of 2004
An Act Relative to the Health and Safety on Construction Projects

_____ (Name of General Contractor) hereby certifies.
that it, and all its subcontractors who are not filed sub bidders shall

certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

Signed under the penalties of perjury. _____ (date)

Signature of authorized representative of contractor

Print name of authorized representative of contractor.

END OF SECTION 00 45 46

Standard Form of Agreement Between
Owner and Contractor

where the basis of payment is a
STIPULATED SUM

AGREEMENT

Made as of the _____ day of _____ in the year Two Thousand and Twenty

BETWEEN the Owner: Town of North Kingstown, Rhode Island
(Name and address) 100 Fairway Drive
North Kingstown RI 02852

and the Contractor:
(Name and address)

The Project is: North Kingstown Free Library
Membrane Roof Replacement
100 Boone Street,
North Kingstown RI 02852

The Owner and Contractor agree as set forth below:

ARTICLE 1

THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral, and includes the bid specifications and all documentation incorporated into the request for bids for the NORTH KINGSTOWN FREE LIBRARY MEMBRANE ROOF REPLACEMENT project, located within the Town of North Kingstown, Rhode Island.

ARTICLE 2
THE WORK OF THIS CONTRACT

The Contractor shall execute the entire Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others, or as follows:

ARTICLE 3
DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

3.1 The date of commencement is the date from which the Contract Time of Paragraph 3.2 is measured, and shall be the date of this Agreement, as first written above, unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.
(Insert the date of commencement, if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

DATE SHALL BE SET IN THE NOTICE TO PROCEED.

Unless the date of commencement is established by a notice to proceed issued by the Owner, the Contractor shall notify the Owner in writing not less than five days before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.

3.2 The Contractor shall achieve Substantial Completion of the entire Work as listed in the Bid Form.

(Insert the calendar date or number of calendar days after the date of commencement. Also insert any requirements for earlier Substantial Completion of certain portions of the Work, if not stated elsewhere in the Contract Documents.)

, subject to adjustments of this Contract Time as provided in the Contract Documents.

(Insert provisions, if any, for liquidated damages relating to failure to complete on time.)

ARTICLE 4
CONTRACT SUM

4.1 The Owner shall pay the Contractor in current funds for the Contractor's performance of the Contract the Contract Sum of To Be Determined (TBD), subject to additions and deductions as provided in the Contract Documents.

4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
(State the numbers or other identification of accepted alternates. If decisions on other alternates are to be made by the Owner subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date until which that amount is valid.)

4.3 Unit prices, if any, are as follows:

ARTICLE 5
PROGRESS PAYMENTS

- 5.1 Based upon Applications for Payment submitted to the Owner by the Contractor, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.**
- 5.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:**
- 5.3 OMITTED.**
- 5.4 Each Application for Payment shall be based upon the Schedule of Values submitted by the Contractor in accordance with the Contract Documents. The Schedule of Values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Owner may require. This Schedule, unless objected to by the Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.**
- 5.5 Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.**
- 5.6 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:**
- 5.6.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the Work in the Schedule of Values, less retainage of five percent (5%).**
- 5.6.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of five percent (5%).**
- 5.6.3 Subtract the aggregate of previous payments made by the Owner; and**
- 5.6.4 Subtract amounts, if any, for which the Owner has withheld or nullified an Application for Payment.**
- 5.7 The progress payment amount determined in accordance with Paragraph 5.6 shall be further modified under the following circumstances:**
- 5.7.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to ninety-eight percent (98%) of the Contract Sum, less such amounts as the Engineer shall determine for incomplete Work and unsettled claims.**

ARTICLE 6
FINAL PAYMENT

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

6.1.1 The Contract has been fully performed by the Contractor; and

6.1.2 A final Application for Payment has been issued by the Contractor and approved by the Town.

6.2 Such final payment shall be made by the Owner not more than 45 days after the issuance of the Final Application for

Payment, or as follows:

(Usury laws and requirements under the Federal Truth in Lending Act, similar state and local consumer credit laws and other regulations at the Owner's and Contractor's principal places of business, the location of the Project and elsewhere may affect the validity of this provision. Legal advice should be obtained with respect to deletions or modifications, and also regarding requirements such as written disclosures or waivers.)

ARTICLE 7
MISCELLANEOUS PROVISIONS

7.1 Other provisions:

All payment applications must include certified payrolls for the time period being billed.

7.2 Where reference is made in this Agreement to a provision of the General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

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

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

ARTICLE 8
TERMINATION OR SUSPENSION

8.1 The Contract may be terminated by the Owner or the Contractor as provided in Articles 13, 54 & 55 of the General Conditions.

8.2 The Work may be suspended by the Owner as provided in Article 60 of the General Conditions.

This Agreement is entered into as of the day and year first written above and is executed in at least three original copies of which one is to be delivered to the Contractor and the remainder to the Owner.

OWNER

CONTRACTOR

(Signature)

(Signature)

Ralph Mollis, Town Manager
(Printed name and title)

(Printed name and title)

General Terms

RELEASE OF LIENS

Whereas, the undersigned, have furnished labor or materials or both for the execution of work described in a contract named: “ _____, dated _____, owned by the Town of North Kingstown, hereinafter called “Owner.” Now, therefore, the undersigned, for and in consideration of the property and of other valuable consideration to each of them paid, the receipt whereof is hereby acknowledged, do hereby release and discharge any and all manner of liens, claims and demands whatsoever which the undersigned on any of them now have or might or could have on or against said property of the Owner thereof for work done or materials furnished as aforesaid, or in any other manner, from the commencement of work on said property to the date hereof.

The Contractor also certifies that all of his sub-Contractors and suppliers which have furnished any labor or materials for an amount of \$500.00 or more, for said job, have signed this Release of Liens.

The Contractor assumes full responsibility to hold the Town of North Kingstown safe and harmless from any lien for materials and/or labor which might occur from aforesaid work.

IN WITNESS WHEREOF, the undersigned have caused this Release of Liens to be duly executed on the respective dates indicated.

_____ by _____ Date _____
Contractor Authorized Signature

Trade (Supplier) / Company Name / Authorized Signature / Date

Contractor may sign if materials and/or Subcontractors charges are \$500.00 or less.

R. I. G. L. 44-1-6 ADDITIONAL COLLECTION POWERS- Nonresident Contractors. – (a) Any person doing business with a nonresident Contractor shall withhold payment of an amount of three percent (3%) of the contract price until thirty (30) days after the Contractor has completed the contract and has requested the tax administrator, in writing, to audit the records for the particular project, a receipted copy of the request to be furnished to the person holding the funds. The tax administrator shall, within thirty (30) days after receipt of the request, furnish to the nonresident Contractor and to the person holding the funds either a certificate of no tax due or a certificate of sales and use tax or income tax withheld, or both, due from the nonresident Contractor.

(b) Upon receipt of a certificate of no tax due, the person holding the payment may pay the nonresident Contractor. Upon receipt of a certificate of taxes due, the person may pay to the Contractor out of the amount withheld the excess over the amount of taxes set forth in the certificate together with the interest and penalties then assessed. If the tax administrator furnished neither certificate to both parties within thirty (30) days after receipt of a written request for the making of the audit, the person holding the payment may forthwith pay the payment withheld to the nonresident Contractor under the terms of the contract free from any claims of the tax administrator against either the person holding the payment or the nonresident Contractor for payment of sales or use taxes or income taxes withheld, or both.

(c) In the event the tax administrator shall serve upon the Contractor and the person holding the payment a certificate showing the taxes due within a thirty (30) day period, the person holding the payment shall deposit with the tax administrator the amount set forth in the certificate which is not in excess of three percent (3%) of the contract price, taking a receipt for the amount, and shall thereupon be free from any claim of the nonresident Contractor for that amount or of the tax administrator for sales and use taxes or income taxes withheld, or both, arising out of the materials, equipment, and services used in performance of the contract of the nonresident Contractor on that project.

(d) As used in this section, a nonresident Contractor is one who does not maintain a regular place of business in this state. “A regular place of business” means and includes any bona fide office (other than a statutory office), factory, warehouse, or other space in this state at which the taxpayer is doing business in its own name in a regular and systematic manner, and which is continuously maintained, occupied, and used by the taxpayer in carrying on its business through its regular employees regularly in attendance. A temporary office at the site of construction shall not constitute a regular place of business.

For further information, please contact the Rhode Island State Tax Administrator at (401) 222-6269; or Al Pugliese – (401) 222-3053.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

as Principal, hereinafter call Contractor and,

as Surety, hereinafter called Surety, are held firmly bound unto
TOWN OF NORTH KINGSTOWN, RHODE ISLAND

as obligee, hereinafter called Owner, in the amount of
in lawful money of the United States

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Contractor entered into a certain contract with the Owner, dated the *day of*. a copy of which is hereto attached and made a part hereof for the construction of:

for the TOWN OF NORTH KINGSTOWN, RHODE ISLAND, in accordance with the Contractor and the Contract Documents.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or condition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change,

extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

WHENEVER Contractor shall be and declared by Owner to be in default under the Contract, the Owner having performed Owner's Obligations

thereunder, the Surety shall promptly remedy the default, or shall promptly

- 1) Complete the Contract in accordance with its terms and conditions, or
- 2) Obtain a bid or bids from qualified contractors acceptable to Owner for completing the Contract in accordance with its terms and conditions, and upon determination by the Owner and Surety shall arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the Contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for

which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by the Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators, or successors of the Owner.

Signed and sealed this day of

WITNESS

BY: _____

WITNESS

BY: _____

IMPORTANT: Surety Companies executing BONDS Must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

LAWS PERTAINING TO PUBLIC WORKS PROJECTS
(General Laws of Rhode Island [1977 Reenactment])
Chapter 37-12 and 37-13, as amended

37-13-1. “Public works” defined. – “Public Works” as used in this chapter shall mean any public work consisting of grading, clearing, demolition, improvement, completion, repair, alteration, or construction of any public road or any bridge, or portion thereof, or any public building, or portion thereof, or any heavy construction, or any public works projects of any nature or kind whatsoever.

37-13-4. Provisions applicable to public works contracts – Lists of subcontractors. – All public works shall be done by contract, subject to the same provisions of law relating thereto and to the letting thereof, which are applicable to similar contracts of the awarding authority or authorized agency, hereinafter called the “proper authority”, in the general location where the work is to be performed and which are not contrary to the provisions of § 37-13-1 – 37-13-14 and § 37-13-16. Each contractor after the award of a contract for public works shall submit to the proper authority a list of his or her subcontractors of any part or all of the work. The list shall be submitted in such manner or form as the proper authority shall uniformly require from contractors in all public works.

37-13-6. Ascertainment of prevailing rate of wages and other payments- Specifications of rate in call for bids and in contract. – Before awarding any contract for public works to be done, the proper authority shall ascertain from the director of labor and training the general prevailing rate of the regular, holiday, and overtime wages paid and the general prevailing payments on behalf of employees only, to lawful welfare, pension, vacation, apprentice training, and educational funds (payments to the funds must constitute an ordinary business expense deduction for federal income tax purposes by contractors) in the city, town, village, or other appropriate political subdivision of the state in which the work is to be performed, for each craft, mechanic, teamster, laborer, or type of workman needed to execute the contract for the public works. The proper authority shall, also, specify in the call for bids for the contract and in the contract itself the general prevailing rate of the regular, holiday, and overtime wages paid and the payments on behalf of employees only, to the welfare, pension, vacation, apprentice training, and education funds existing in the locality for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract or work.

37-13-7. Specifications in contract of amount and frequency of payment of wages. – (a) Every call for bids for every contract in excess of one thousand dollars (\$1,000), to which the state of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the state of Rhode Island or any political subdivision thereof, or any public agency or quasi-public

agency and which requires or involves the employment of employees, shall contain a provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the state of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" shall include:

(1) The basic hourly rate of pay; and

(2) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions,

and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(c) The term "employees", as used in this section, shall include employees of contractors or subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsections (a) and (b).

(d) omitted

37-13-8. Investigation and determination of prevailing wages – Filing of schedule.- The director of labor and training shall investigate and determine the prevailing wages and payments made to or on behalf of employees, as set forth in § 37-13-7, paid in the trade or occupation in the city, town, village, or other appropriate political subdivision of the state and keep a schedule on file in his or her office of the customary prevailing rate of wages and payments made to or on behalf of the employees which shall be open to public inspection. In making a determination, the director of labor may adopt and use such appropriate and applicable prevailing wage rate determinations as have been made by the secretary of labor of the United State of America in accordance with the Davis-Bacon Act, as amended, 40 U.S.C. § 276a.

37-13-9 Statutory provisions included in contracts. – A copy of §§ 37-13-5, 37-13-6, and 37-13-7 shall be inserted in all contracts for public works awarded by the state, any city, town, committee, an authorized agency, or awarding authority thereof, or any person or persons in their behalf in which state or municipal funds are used if the contract price is in excess of one thousand dollars (\$1,000).

37-13-13. Furnishing payroll record to director of labor and training. – Each contractor awarded a contract with a contract price in excess of one thousand dollars (\$1,000) for public works, and each subcontractor who performs work on public works, shall furnish a certified copy of his or her payroll record of his or her employees employed upon the public works to the director of labor and training on a weekly basis for the preceding week. The director of labor and training may promulgate reasonable rules and regulations to enforce the provisions of this section. A contractor or subcontractor who fails to comply with the provisions of this section shall be deemed guilty of a misdemeanor and shall pay to the director of labor and training one hundred dollars (\$100) for each calendar day of noncompliance as determined by the director of labor and training. Any of those revenues shall be deposited as general revenues.

37-13-15 Review. – (a) There is hereby created an appeals board which shall be comprised of three (3) members who shall be appointed by the governor; provided, however, that each member of the appeals board shall have at least five (5) years experience with prevailing wage rates as they apply to the construction industry. The members of such appeals board shall serve without compensation. The members of the appeals board shall be appointed for terms of three (3) years except that of the three (3) members originally appointed by each of the appointing authorities: one (1) shall be appointed for a term of one (1) year, one (1) shall be appointed for a term of two (2) years and one (1) for a term of three (3) years.

- (b) Any person aggrieved by any action taken by the director of labor or his or her designated hearing officer under the authority of this chapter, or by the failure or refusal of the director of labor to take any action authorized by this chapter, may obtain a review thereof for the purpose of obtaining relief from the action or lack of action by filing a petition for administrative review and relief, to the appeals board as provided herein. Such petition for administrative review shall be filed within twenty (20) days of the action taken by the director of labor or designated hearing officer. The petition for administrative review shall be heard within ten (10) days of the date of filing. An aggrieved person under this section shall include:
- (1) Any person who is required to pay wages to his or her employees or make payments to a fund on behalf of his or her employees, as provided in this chapter;
 - (2) Any person who is required to be paid wages for his or her labor or on whose behalf payments are required to be paid to funds, as provided by this chapter;
 - (3) The lawful collective bargaining representative of a person defined in subdivision (2) above;
 - (4) A trade association of which a person defined in subdivision (1) above is a member;
 - (5) A proper authority as defined in this chapter;
 - (6) A contractor who submitted a bid for work to be or which has been awarded under the provisions of this chapter or a trade association of which he or she is a member, and
 - (7) A labor organization which has one or more written collective bargaining agreements with one or more employers or a trade association which sets forth the hours, wages, and working conditions of a craft, mechanic, teamster, or type or worker needed to execute the work, as provided in this chapter to the extent that it would be affected by the action or the failure to act of the director of labor or the hearing officer.

(c) Any aggrieved person as defined herein may obtain a review of a decision of the

appeals board by filing a petition in the superior court in Providence County pursuant to the provisions of the administrative procedures act, praying for review and relief and the petition shall follow the course of and be subject to the procedures for causes filed in the court.

(d) The director is hereby empowered to enforce his or her decision and/or the decision of the appeals board in the superior court for the county of Providence.

37-13-16 -- Termination of work on failure to pay agreed wages -- Completion of work. – Every contract within the scope of this chapter shall contain the further provision that in the event it is found by the director of labor that any employee employed by the contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the awarding party may, by written notice to the contractor or subcontractor, terminate his or her right as the case may be, to proceed with the work, or such part of the work as to which there has been a failure to pay the required wages, and shall prosecute the work to completion by contract or otherwise, and the contractor and his or her sureties shall be liable to the awarding party for any excess costs occasioned the awarding authority thereby.

GENERAL CONDITIONS

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PART I

ARTICLE 1: CONTRACT AND CONTRACT DOCUMENTS

The drawings, specifications, and addenda enumerated in Article 1 of the Special Conditions, the Advertisement for Bids, the Information for Bidders, and the Bid Proposal as accepted by the OWNER, shall be binding upon the parties to this Agreement as if fully set forth therein. Whenever the terms Contract Documents is used, it shall mean and include this Contract, Special Conditions, General Conditions, the Information for Bidders, the Bid Proposal, Addenda, the Technical Specifications and the Drawings. The OWNER shall interpret his own requirements. In case of conflict or inconsistency between the provisions of the signed portions of the Contract Documents and those of the specifications, the provisions of the signed portions shall govern.

ARTICLE 2: DEFINITIONS

The following terms as used in this Contract are defined as follows:

- a. CHANGE ORDER - A written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.
- b. CONTRACT DOCUMENTS - The contract, including Advertisement for Bids, Information for Bidders, Bid, Bid Bond, Agreement, Payment Bond, Performance Bond, General Conditions, Special Conditions, Technical Specifications, Notice of Award, Notice To Proceed, Change Order, Drawings, and Addenda.
- c. CONTRACTOR - A person, firm or corporation with whom the Contract is made by the OWNER.
- d. DRAWINGS - The part of the Contract Documents which show the characteristics and scope of the work to be performed and which have been prepared or approved by the Engineer.
- e. ENGINEER - Shall mean for the purpose of this Contract, the firm of Public Works Director who shall act as the authorized representative of the Owner whenever reference is made for such authorization.
- f. FIELD ORDER - A written order effecting a change in the work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.
- g. NOTICE OF AWARD - The written notice of the acceptance of the Bid from the Owner to the successful Bidder.
- h. NOTICE TO PROCEED - Written communication issued by the Owner to the Contractor authorizing him to proceed with the work and establishing the date of commencement of the work.
- i. OWNER: - shall mean, for the purpose of this Contract, the party as defined in the Agreement section of the Contract Documents.

j. RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the Owner who is assigned to the Project Site or any part thereof.

k. SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a SubContractor, Manufacturer, Supplier or Distributor, which illustrate how specific portions of the work shall be fabricated or installed.

l. SPECIFICATIONS (TECHNICAL SPECIFICATIONS) - A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

m. SUBCONTRACTOR - A person, firm, or corporation supplying labor and materials, or only labor, for work at the site of the project; for, and under a separate Contract or Agreement with the CONTRACTOR.

n. SUBSTANTIAL COMPLETION - That data as certified by the Engineer when the construction of the Project or the specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purpose for which it is intended.

o. WORK ON THE PROJECT: - Work to be performed at the location of the project, including the transportation of materials and supplies to or from the site by employees of the CONTRACTOR or any SUBCONTRACTOR.

ARTICLE 3: QUANTITIES OF ESTIMATE

Whenever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents including the Bid Proposal; they are given for use in comparing bids and the right is especially reserved by the OWNER to increase or diminish them as may be deemed necessary or desirable by the OWNER. Such increases or decreases shall in no way affect this Contract, nor shall any such increases or decreases give cause for claims or liabilities for damages.

ARTICLE 4: CONFLICTING CONDITIONS

Any provisions of these General Conditions which may be in conflict or inconsistent with any of the articles in the Special Conditions shall be void to the extent of such conflict or inconsistency.

ARTICLE 5: PROVISIONS OF LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, the Contract shall forthwith be physically amended to make such insertion or correction.

ARTICLE 6: NOTICE AND SERVICE THEREOF

The service of any notice, letter, or other communication shall be deemed to have been made by one of the contracting parties on the other party to the Contract when such letter, notice or other communication has been

delivered to the legal office address of the addressee, by a duly authorized representative of the addressor in person, or when such notice, letter, or other communication has been deposited in any regularly maintained mailbox of the United States Post Office, in a properly addressed, postpaid wrapper. The date of such service shall be considered to be the date of such personal delivery or mailing.

The address of the Contractor noted in his bid and/or the address of his field office on or near the site of work shall be considered his legal address for the purposes as set forth above.

ARTICLE 7: GRATUITIES

a. If it is found, after notice and hearing, by the Owner that gratuities (in the form of entertainment, gifts or otherwise) were offered or given by the Contractor, or any agent or representative of the Contractor, to any official, employee or agent of the Owner, or of the State, with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performance of this Contract, the Owner may, by written notice to the Contractor, terminate the right of the Contractor to proceed under this Contract or may pursue each other rights and remedies provided by law or under this Contract: Provided, that the existence of the facts upon which the Owner makes such findings shall be in issue any may be reviewed in proceedings pursuant to the "Remedies" clause of this Contract.

b. In the event this Contract is terminated as provided in Paragraph (a) hereof, the Owner shall be entitled (1) to pursue the same remedies against the Contractor as it could pursue in the event of a breach of the Contract by the Contractor, and (a) as a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the Owner) which shall be not less than three nor more than ten times the cost incurred by the Contractor in providing any such gratuities to any such officer or employee.

ARTICLE 8: COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the Owner shall have the right to annul this Contract without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE 9: REMEDIES

Except as may be otherwise provided in this contract, all claims, counterclaims, disputes and other matters in question between the Owner and the Contractor arising out of or relating to this agreement or the breach thereof will be decided by arbitration if the parties hereto mutually agree, or in a court of competent jurisdiction within the State in which the Owner is located.

PART II

The rights and obligations of the CONTRACTOR under this Contract shall include, but not be limited to the following:

ARTICLE 10: REPRESENTATIONS OF THE CONTRACTOR

The Contractor represents and warrants:

- a. That he is financially solvent and that he is experienced and competent to perform the type of work required under this Contract and that he is able to furnish the plant materials, supplies, or equipment that may be necessary to perform the work as specified.
- b. That he is familiar with all Federal, State and municipal laws, ordinances, orders, and regulations which may in any way affect the project work, or the employment of persons thereon, including but not limited to any special acts relating to the work or to the project of which is a part.
- c. That such temporary and permanent work required by the Contract Documents to be done by him will be satisfactorily constructed and can be used for the purpose for which it was intended and that such construction will not injure any person or damage property.
- d. That he has carefully examined the drawings, specifications, and addenda, if any, and the site of the work and that from his own investigations, he has satisfied himself as to the nature and location of the work, the character of equipment and other facilities needed for the performance of the work, the general and local conditions, and all other items that may effect the work.
- e. That he is aware of the hazards involved in the work and the danger to life and property both evident and inherent and that he will conduct the work in a careful and safe manner without injury to persons or property.

ARTICLE 11: CONTRACTOR'S OBLIGATIONS

The Contractor shall perform all work in a good Workmanlike manner, and in accordance with the plans and specifications and any supplements thereto, and according to any directions or orders given by the Owner. He shall furnish all supplies, materials, facilities, equipment, and means necessary or proper to perform and complete the work required by this Contract. He shall furnish, erect, maintain, and remove any construction plant or temporary work as may be required. He alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operation.

The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract and specifications and shall do, carry on, and complete the entire work to the satisfaction of the Owner.

The Contractor shall be solely responsible for all the work and shall provide all precautionary measures necessary for preventing injury to persons or damage to property. All injury or damage of whatever nature resulting from the work or resulting to persons, property, or the work during its progress,

from whatever cause, shall be the responsibility of the Contractor.

The Contractor shall hold the Owner and Engineer, or their duly authorized agents, harmless and defend and indemnify them against damages or claims for damages due to injuries to persons or property arising out of the execution of the project work, and for damages to materials furnished for the work, for infringement of inventions, patents, and patent rights used in doing the work, and for any act, omission, or instance of neglect by the Contractor, his agents, employees, or subContractors.

The Contractor shall bear all losses resulting to him, including but not limited to losses sustained on account of the character, quality, or quantity of any part of the work, or all parts of the work, or because the nature of the conditions in or on the project site are different from what was estimated or indicated, or on account of the weather, elements, or other causes.

ARTICLE 12: TIME FOR COMPLETION AND LIQUIDATED DAMAGES

a. It is hereby understood and mutually agreed by and between the Contractor and the Owner that the date of beginning and the time of completion of the work as specified in this Contract are ESSENTIAL CONDITIONS of this Contract, and it is further mutually understood and agreed that the work embraced in this Contract shall be Commenced on a date to be specified in the Notice to Proceed.

b. The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified, and further that time of completion as agreed upon is reasonable, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

c. If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a partial consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Contract, not as a penalty, but as liquidated damages for such breach of Contract as hereinafter set forth for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the work.

d. The said amount is fixed and agreed upon by and between the Owner and the Contractor, and said amount is agreed to be the amount of damages the Owner would sustain in such an event as the above-mentioned, and said amount shall be retained from time to time by the Owner from current periodical payments.

e. It is further agreed that time is of the essence in each and every portion of the Contract and specifications; where in a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the Contractor shall not be charged when the delay in completion of the work is due to:

1. Any preference, priority, or allocation order duly issued by the government, subsequent to the date of the Contract.

2. Unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to acts of God, or of the public enemy, act of the Owner, acts of another contractor, floods, epidemics, strikes, and unusually severe weather.

3. Any delays of subContractors or suppliers approved by the Owner. Provided further that the Contractor shall within ten days (10) from the beginning of the delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner in writing of the causes of the delay. The Owner shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

ARTICLE 13: TERMINATION FOR DEFAULT; DAMAGES FOR DELAY; TIME EXTENSIONS

a. If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will insure its completion within the time specified in this Contract, or any extension thereof, or fails to complete said work within such time, the Owner may, by written notice to the Contractor, terminate his right to proceed with the work or such part of the work as to which there has been a delay. In such event, the Owner may take over the work and prosecute the same to completion, by Contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefore. Whether or not the Contractor's right to proceed with the work is terminated, he and his sureties shall be liable for any damage to the Owner resulting from his refusal or failure to complete the work within the specified time.

b. If fixed and agreed liquidated damages are provided in the Contract and if the Owner so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Owner in completing the work.

c. If fixed and agreed liquidated damages are provided in the Contract and if the Owner does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

d. The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

1. The delay in the completion of the work arises from causes other than normal weather beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the Owner in either its sovereign or contractual capacity, acts of another Contractor in the performance of a Contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subContractors or suppliers arising from causes other than normal weather beyond the control and without the fault or negligence of both the Contractor and such subContractors or suppliers; and

1. The Contractor, within 10 days from the beginning of any such delay (unless the Owner grants a further period of time before the date of final payment under the Contract), notifies the Owner in writing of the causes of delay.

The Owner shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in his judgment, the findings of fact justify such and extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in the Remedies clause of this Contract.

e. If, after notice of termination of the Contractor's right to proceed Under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of the parties shall, if the Contract contains a clause providing for termination for convenience of the Owner, be the same as if the notice of termination had been issued pursuant to such clause. If, in the foregoing circumstances, this Contract does not contain a clause providing for termination for convenience of the Owner, the Contract shall be equitably adjusted accordingly; failure to agree to any such adjustment shall be subject to the Remedies clause of this Contract.

f. The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.

g. As used in paragraph (d) (1) of this clause, the term, "SubContractors or suppliers", means Contractors or suppliers at any tier.

ARTICLE 14: CONTRACT SECURITY

The Contractor shall furnish Payment and Performance Bonds in an amount equal to at least one hundred percent (100%) of the Contract price as security for the faithful performance of the Contract, and for the payment of all persons performing labor on the project under this Contract and furnishing materials, equipment and all other incidentals in connection with this Contract. The Surety on such bonds shall be a duly authorized surety company, licensed to do business in the State of Rhode Island and satisfactory to the Owner. The cost of the same shall be paid by the Contractor. Prior to the starting of any work, the bonds must be approved by the Owner.

ARTICLE 15: ADDITIONAL OR SUBSTITUTE BOND

If at any time the Owner, for justifiable cause, shall become dissatisfied with any Surety or Sureties holding payment bonds, the Contractor shall, within five (5) days after notice from the Owner to do so, substitute an acceptable bond or bonds in such form and Signed by such other Surety as may be satisfactory to the Owner. The Premiums of such bonds shall be paid by the Contractor. No further payments will be deemed due, nor will be made until the new Surety or Sureties shall have furnished such an acceptable bond to the Owner.

ARTICLE 16: INDEMNITY

The Contractor shall at all times indemnify and save harmless the Owner and the Engineer, their servants and agents, from any and all claims and from any suits, litigations, damages, losses or the like arising out of injuries sustained or alleged to have been sustained by any persons or property in connection with the contract work, caused in whole or in part by acts or omissions of the Contractor, his subcontractors, materialmen, or anyone directly or indirectly connected with the contract work.

ARTICLE 17: SUPERINTENDENCE BY THE CONTRACTOR

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Owner in every possible way.

At the site of the work, the Contractor shall, at all times, employ a construction superintendent who shall have full authority to act for the Contractor. It is understood that the employment of such representative shall be acceptable to the Owner and shall be such a person as can be continued in the capacity for the duration of the Contract, unless he ceases to be on the Contractor's payroll.

ARTICLE 18: CONTRACTOR TO LAY OUT HIS OWN WORK

The Owner will establish such general reference points as in his judgment will enable the Contractor to proceed with the work. The Contractor, at his own expense, shall provide all materials and equipment and such qualified helpers as the Owner may require for setting the general reference points and shall protect and preserve all stakes, benches, and other markers used to identify the reference points. The Contractor shall lay out all the Contract work from the above and shall be responsible for the accuracy of all lines, grades and measurements.

ARTICLE 19: COMPETENT HELP TO BE EMPLOYED

The Contractor shall employ experienced foremen, craftsmen and other workmen competent in the work in which they are to be engaged.

ARTICLE 20: PERMITS AND REGULATIONS

The Contractor shall procure all permits, licenses, and approvals necessary for the execution of the Contract work. The Town shall waive all application fees for Town permits. **STATE FEES ARE NOT WAIVED.**

The Contractor shall comply with all laws, regulations, ordinances, orders and rules relating to the performance of the work, the protection of the adjacent property, and the maintenance of passageways, guard fences, and other protective facilities.

ARTICLE 21: CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES

Within five (5) days after the date of "Notice to Proceed", the Contractor shall deliver to the Owner an estimated construction progress schedule in a form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the contract documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Owner: 1. a detailed estimate, giving a complete breakdown of the contract price; and 2. periodic itemized estimates of the work done for the purpose of making partial payments thereon.

The Contractor shall perform the work of this Contract to conform with the schedule as approved by the Owner, except that the Owner reserves the right to amend and alter the construction schedule at any time, in a manner which is deemed to be in the best interest of the Owner to do so. The Contractor shall arrange his work to conform with this schedule as it may be revised from time to time by the Owner, at no additional expense to the Owner. The Contractor shall notify the Owner immediately of any circumstances which may affect the performance of the work in accordance with current construction schedule.

ARTICLE 22: SEQUENCE OF THE WORK

The Contractor shall be required to prosecute his work in accordance with a schedule prepared by him in advance in accordance with additional requirements specified herein and approved by the Owner. This scheduling shall state the methods and shall forecast the times of doing each portion of the work. Before beginning any portion of the work, the Contractor shall give the Owner advance notice and ample time for making necessary preparations.

ARTICLE 23: AUDIT; ACCESS TO RECORDS

The Contractor shall maintain books, records, documents and other evidence directly pertinent to performance of work under this Contract in accordance with generally accepted accounting principles and practices. The Contractor shall also maintain the financial information and data used by the Contractor in the preparation or support of the cost submission or for any negotiated contract or change order and a copy of the cost summary submitted to the Owner. The Contractor will provide proper facilities for such access and inspection.

Audits conducted pursuant to this Provision shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing or audit agency(ies).

The Contractor agrees to the disclosure of all information and reports resulting from the access to records pursuant to paragraphs above, to any of the agencies referred to above, provided that the Contractor is afforded the opportunity for an audit exit conference, and an opportunity to comment and submit any supporting documentation on the pertinent portions of the draft audit report that the final audit report will include written comments of reasonable length, if any, of the Contractor.

Records under paragraphs above, shall be maintained and made available during performance on work under this Contract and until three years from the date of final payment for the project. In addition, those records which relate to any "Dispute", appeal agreement, or litigation, or the settlement of claims arising out of such performance, or costs or items to which an audit exception has been taken, shall be maintained and made available until three years after the date of resolution of such appeal, litigation, claim or exception.

ARTICLE 24: REPORTS, RECORDS AND DATA

The Contractor and each of his subcontractors, shall submit to the Owner such schedules of quantities, and costs, progress schedules, pay-

rolls, reports, estimates, records and other data as the Owner may request concerning the work performed or to be performed under this Contract.

ARTICLE 25: DIFFERING SITE CONDITIONS

- a. The Contractor shall promptly and before such conditions are disturbed, notify the Owner in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in this Contract, or (2) unknown physical conditions at the site, of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this Contract. The Owner shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any of the work under this Contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the Contract modified in writing accordingly.
- b. No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in (a) above; provided, however, the time prescribed therefore may be extended by the Owner.
- c. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

ARTICLE 26: PAYMENTS BY THE CONTRACTOR

The Contractor shall pay:

- a. for all transportation and utility services not later than the 20th day of each calendar month following that in which services were rendered.
- b. for all materials, tools, and other expendable equipment to the extent of 90 percent of the cost thereof, not later than the 20th day of the calendar month following that in which such items were delivered to the site of work, and the balance of the cost thereof not later than the 30th day following the completion of that part of the work in or on which such material, tools, or equipment are incorporated or used.
- c. To each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of such subcontractor's interest therein.

ARTICLE 27: GENERAL GUARANTEE

Neither the final certificate of payment nor any provision in the contract documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty workmanship or materials. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a

period of one year (1) from the date of final acceptance of the work, unless a longer period is specified by the Owner. The Owner will give final notice of observed defects with reasonable promptness.

ARTICLE 28: COMPLETENESS OF THE WORK

In addition to the specified or described portions of the work, all other work and all other materials, equipment and labor of whatever description, necessary or required to complete the work, or for carrying out the full intent of the drawings and specifications, such work, labor, materials, and equipment shall be provided by the Contractor, and payment therefore shall be considered as having been included in the prices stipulated for the appropriate item of work listed in the bid.

ARTICLE 29: CARE OF THE WORK

The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance by the Owner, whether or not the same has been covered by partial payments made by the Owner.

ARTICLE 30: PROTECTION OF CONSTRUCTION FEATURES

The Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, adjoining property and such incidentals, and to avoid damage thereto. The Contractor shall completely repair any damage at no additional expense to the Owner.

ARTICLE 31: SAFETY AND HEALTH REGULATIONS

These Contract Documents, and the joint and several phases of construction hereby contemplated, are to be governed, at all times, by the applicable provisions of the Federal law(s) including but not limited to the following:

1. Williams-Steiger Occupational Safety and Health Act, 1970, Public Law 92-596;
2. Part 1910 of the Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
3. This project is subject to all of the Safety and Health Regulations (CFR 29, Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974. Contractors are urged to become familiar with the requirements of These regulations.

In the event of any inconsistencies between the above laws and regulations and the provisions of these Contract Documents, the laws and regulations shall prevail.

ARTICLE 32: PROTECTION OF WORK AND PROPERTY - EMERGENCY

- a. The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Contract. He shall at all times safely guard and protect his own work, materials incorporated into the work or stockpiled at the site, and that of adjacent property, from damage. The Contractor shall replace or make good any such damage, loss or injury.
- b. In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Owner, in a diligent manner. He shall notify the Owner immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Owner for approval.
- c. Where the Contractor has not taken action but has notified the Owner of an emergency threatening injury to persons or damage to the work or to any adjoining property, he shall act as instructed or authorized by the Owner.
- d. The amount of reimbursement claimed by the Contractor on account of any Emergency action shall be determined in the manner provided elsewhere in the Contract Documents.

ARTICLE 33: FIRE PREVENTION AND PROTECTION

All State and municipal rules and regulations with respect to fire prevention, fire-resistant construction, and fire protection shall be strictly adhered to and all work and facilities necessary therefor shall be provided and maintained by the Contractor in an approved manner.

All fire protection equipment such as water tanks, hoses, pumps, extinguishers, and other materials, and apparatus, shall be provided for the protection of the contract work, temporary work, and adjacent property. Trained personnel experienced in the operation of all fire protection equipment and apparatus shall be available on the site whenever work is in progress, and at such other times as may be necessary for the safety of the public and the work.

ARTICLE 34: PROTECTION OF LIVES AND HEALTH

- a. In order to protect the lives and health of his employees under this Contract, the Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction", issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational diseases, and injuries requiring medical attention or causing loss of time from work arising out of, and in the course of employment on the Contract work.
- b. The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operation.

ARTICLE 35: PROTECTION AGAINST HIGH WATER AND STORM

The Contractor shall take all precautions to prevent damage to work or equipment by high water or by storms. The Owner may prohibit the carrying out of work at any time when in his judgment high waters or storm conditions are unfavorable or unsuitable, or at any time regardless of the weather when proper precautions are not being taken to safeguard previously constructed work or work in progress.

In case of damage caused by the failure of the Contractor to take adequate precautions, the Contractor shall repair or replace equipment damaged and shall make such repairs or rebuild such parts of the damaged work as the Owner may require, at no additional cost to the Owner.

ARTICLE 36: FIRST AID TO INJURED

The Contractor shall keep in his office, ready for immediate use, all articles necessary for giving first aid to injured employees. He shall also provide arrangements for the immediate removal and hospital treatment of any employees injured on the work who require the same.

ARTICLE 37: HURRICANE PROTECTION

Should hurricane warnings be issued, the Contractor shall take every precaution to minimize danger to person, to the work and to adjacent property. These precautions shall include closing all openings, removing all loose materials, tools and equipment from exposed locations, and removing all scaffolding and other temporary work.

ARTICLE 38: USE OF PREMISES AND REMOVAL OF DEBRIS

The Contractor undertakes, at his own expense:

- a. To take every precaution against injuries to persons or damage to property.
- b. To store his apparatus, materials, equipment, and supplies in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or any others.
- c. To place upon the work or any part thereof, only such loads as are consistent with the safety of that portion of the work.
- d. To clean frequently all refuse, scrap, and debris caused by his operations, so that the work site is maintained in a neat, workmanlike appearance.
- e. To effect all cutting, fitting, or patching of his work required to make the same conform to the drawings and specifications, and except with the consent of the Owner, not to cut or otherwise alter the work of any other Contractor.
- f. Before final payment, to remove all surplus materials falsework, temporary structures, including foundations thereof, plants of any description, and debris of any nature resulting from his operations, so that the site is left in a neat, orderly, and workmanlike condition.

ARTICLE 39: CORRECTION OF WORK

All work, materials, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Owner, who shall be the final judge of the quality and suitability of the work performed under this Contract. Should any of the work performed fail to meet with his approval, it shall be forthwith reconstructed, made good, replaced, and/or corrected as the case may be, by the Contractor, at his own expense. Rejected material shall be immediately removed from the site. If, in the opinion of the Owner, it is undesirable to replace, reconstruct, or correct any of the work not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor shall be reduced by such amounts as in the judgment of the Owner shall be equitable.

ARTICLE 40: FAILURE TO REPAIR

Any emergency arising from the interruption of electric, gas, water, or sewer service due to the activities of the Contractor, shall be repaired by the Contractor as quickly as is possible. If and when, in the opinion of the Owner, the Contractor is not initiating repair work as expeditiously as possible upon notification to do so, the Owner may, at his own option, make the necessary repairs using his own forces or those of others. The cost of such repairs shall be subtracted from the payments due to the Contractor.

ARTICLE 41: WEATHER CONDITIONS

In the event of temporary suspension of the work, or during inclement weather, or whenever the Owner shall direct, the Contractor shall, and shall cause his subContractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Owner, any work or materials are damaged or injured by reason of failure to protect them on the part of the Contractor, or any of his subContractors, or otherwise damaged or injured by the Contractor's negligence, or are found to be defective, such materials or work shall be removed and replaced at the expense of the Contractor.

ARTICLE 42: WORK IN COLD WEATHER

The Owner may determine when conditions are unfavorable for work and may order the work, or any portion thereof, suspended whenever, in his opinion, the conditions are not such as will insure first class work.

ARTICLE 43: BUS LINE INTERFERENCE

Whenever it may be necessary to interfere with any bus lines, notice shall be given to the corporation owning the same, and reasonable time will be given to said corporation to arrange the schedule for operation of the bus line, as it may be necessary.

ARTICLE 44: NIGHTWORK

Nightwork, or work on Saturdays, Sundays, or legal holidays requiring the presence of an engineer or inspector, will not be permitted except in case of emergency, and only upon the approval of the Owner.

Should it be necessary for the Owner to operate an organization for continuous nightwork or for emergency nightwork, the lighting, safety and other facilities which are deemed necessary shall be provided by the Contractor. Compensation for this work shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the bid, and no extra compensation will be paid by the Owner.

ARTICLE 45: LIGHTS, BARRIERS, WATCHMEN, AND INDEMNITY

The Contractor shall erect and maintain such barriers, lighting, warning lights, danger warning signals, and signs that will prevent accidents during the construction work and protect the work and insure the safety of personnel and the public at all times and places; the Contractor shall indemnify and protect the Owner and Engineer in every respect from injury or damage whatsoever caused by any act of neglect by the Contractor or his subContractors, or their servants or agents. In addition to the above, when and as necessary, or when required by the Owner, the Contractor shall post signs and employ watchmen or flagmen, for the direction of traffic at the site and for excluding at all times unauthorized persons from the work site, for which the Contractor shall be paid no additional compensation. The Contractor shall be responsible for excluding at all times from the land within the easement areas, all persons not directly connected with the work.

All work occurring on State of Rhode Island highways shall be clearly identified, protected and the public's safety ensured by erection of signs, barriers and all other provisions as outlined in the Manual on Uniform Traffic Control Devices for Streets and Highways; issued by U. S. Department of Transportation, Federal Highway Administration, 1978; Part VI, Traffic Controls for Streets and Highway Construction and Maintenance Operations.

ARTICLE 46: LOADING

No part of the structures involved in this Contract shall be loaded during construction with a load greater than it is calculated to carry with safety. Should any accidents or damage occur through any violation of this requirement, the Contractor will be held responsible under his Contract and bond.

ARTICLE 47: DISPOSAL OF MATERIALS

The materials used in the construction of the work, shall be deposited in such manner so they will not endanger persons or the work, and so that free access may be had at any time to all hydrants and gates in the vicinity of the work. The materials shall be kept trimmed up so that as little inconvenience as possible to the public or adjoining tenants is caused.

ARTICLE 48: FINISHING AND CLEANING UP

In completing his operations, the Contractor shall immediately remove all surplus material, tools, and other property belonging to him, leaving the entire street or surroundings free and clean and in good order, at no additional expense to the Owner. The Contractor shall exercise special care in keeping the rights-of-way and private lands upon which work

is performed free and clean of all debris, and shall remove all tools and other property when they are not in use.

In case the Contractor fails or neglects to promptly remove all surplus materials, tools, and incidentals after backfilling, leaving the street or surrounding area clean and free of debris, and do the required repaving when ordered, the Owner may, after 24 hours notice, cause the work to be done and the cost thereof deducted from any payment due to the Contractor.

ARTICLE 49: SPIRITUOUS LIQUORS

The Contractor shall neither permit nor suffer the introduction of spirituous liquors upon the work embraced in this Contract, nor the use of the same.

ARTICLE 50: DUST CONTROL

The Contractor shall exercise every precaution and means to prevent and control dust arising out of all construction operations from becoming a nuisance to abutting property owners or surrounding neighborhoods. Pavements adjoining the pipe trench shall be kept broomed off and washed clean of excess materials wherever and whenever directed. Repeated daily dust control treatment shall be provided to satisfactorily prevent the spread of dust until permanent pavement repairs are made and until earth stockpiles have been removed, and all construction operations that might cause dust have been completed. No extra payment will be made for these dust control measures, compensation shall be considered to be included in the prices stipulated for the appropriate items as listed in the bid.

If so directed by the Owner, the Contractor shall furnish and apply calcium chloride for supplemental control of dust.

Calcium chloride shall conform to the requirements of AASHO M 144 (ASTM D-98) except that the pellet form and the flake form shall be equally acceptable.

Calcium chloride shall be applied only at the locations, at such times and in the amount as may be directed by the Owner. It shall be spread in such manner and by such devices that uniform distribution is attained over the entire area on which it is ordered placed.

There will be no separate payment for this work. The cost of the work shall be included in the price bid for the various other items of work.

PART III

The rights and obligations of the OWNER under this Contract shall include, but not be limited to the following:

ARTICLE 51: THE OWNER'S AUTHORITY

The Owner shall give all orders and directions contemplated under this Contract and specifications relative to the execution of the work.

The Owner shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this Contract and shall decide all questions which may arise in relation to said work and the construction thereof.

The Owner's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract or specifications, the determination or decision of the Owner shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected by such questions. The Owner shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found to be obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor and other Contractors performing work for the Owner, shall be adjusted and determined by the Owner.

ARTICLE 52: ALL WORK SUBJECT TO CONTROL BY THE OWNER

a. In the performance of the work, the Contractor shall abide by all orders, directions, and requirements of the Owner, and shall perform all work to the satisfaction of the Owner, and at such times and places, but such methods, and in such manner and sequence as he may require. The Owner shall determine the amounts, quality, acceptability, and fitness of all parts of the work. The Owner shall interpret the drawings, specifications, contract documents, all other documents, and the extra work orders. The Owner shall also decide all other questions in connection with the work. The Contractor shall employ no plant, equipment, materials, methods or men to which the Owner objects and shall remove no plant, materials, or equipment or other facilities from the work site without the Owner's permission. Upon request, the Owner will confirm in writing any oral order, direction, requirement, or determination.

b. Inspectors shall be authorized to inspect all work done and materials furnished. Such inspection may extend to all parts of the work and to the preparation or manufacture of the materials to be used. The presence or absence of an inspector shall not relieve the Contractor from any requirements of the Contract. In case of any dispute arising between the Contractor and the inspector as to materials furnished or the manner in which the work is being executed, the inspector shall have the authority to reject material or suspend work until the question has been decided by the Owner. The inspector shall not be authorized to revoke, alter, enlarge, relax, or release any requirement of these specifications, nor to approve or accept any portion of the work, nor to issue instructions contrary to the drawings and specifications. The inspector shall in no case act as foreman or perform other duties for the Contractor, or interfere with the management of the work by the latter. Any advice which the inspector may give the Contractor shall in no way be construed as binding the Owner, or the Engineers in any way, nor releasing the Contractor from the fulfillment of the terms of the Contract.

ARTICLE 53: THE OWNER'S CONTROL NOT LIMITED

The enumeration in this Contract of particular instances in which the opinion, judgment, discretion, or determination of the Owner shall control or in which work shall be performed to his satisfaction or subject to his approval or inspection, shall not imply that only matters similar to those enumerated shall be so governed and performed, but without exception all the work shall be so governed and performed.

ARTICLE 54: RIGHT OF THE OWNER TO TERMINATE THE CONTRACT

In the event that any of the provisions of this Contract are violated by the Contractor, or any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract, such notice to contain the reasons for such intention to Terminate the Contract. If, within ten days (10) such violation or delay shall not cease and satisfactory arrangement or correction made, the Contract shall, at the expiration of the ten days, cease and immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the power to take over and perform the Contract, provided, however, that if the Surety does not commence performing thereof within ten days 10) from the date of mailing to such Surety a Notice of Termination, the Owner may take over the work and prosecute the same to completion by Contract or force account at the expense of the Contractor, and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby.

ARTICLE 55: TERMINATION FOR CONVENIENCE

a. The performance of work under this Contract may be terminated by the Owner in accordance with this clause in whole, or from time to time in part, whenever the Owner shall determine that such terminate shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

b. After receipt of a Notice of Termination, and except as otherwise directed by the Owner, the Contractor shall:

1. Stop work under the Contract on the date and to the extent specified in the Notice of Termination;

2. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the Contract as is not terminated;

3. Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;

4. Assign to the Owner, in the manner, at the times, and to the extent directed by the Owner, all of the right, title and interest of the Contractor under the orders and subcontracts so terminated. In which case, the Owner shall have the right, in its discretion, to settle, or pay any or all claims arising out of the termination of such orders and subcontracts;

5. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Owner to the extent he may require, which approval or ratification shall be final for all the purposes of this clause;

6. Transfer title to the Owner, and deliver in the manner, at the times, and to the extent, if any, directed by the Owner,

(i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of the work terminated by the Notice of Termination, and

(ii) the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the Owner.

7. Use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Owner, any property of the types referred to in (6) above; provided, however, that the Contractor (i) shall not be required to extend credit to any purchaser, and (ii) may acquire any such property under the conditions prescribed and at a price or prices approved by the Owner: And, provided further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Owner to the Contractor under this Contract or shall otherwise be credited to the price or cost of the work covered by this Contract or paid in other such manner as the Owner may direct;

8. Complete performance of such part of the work as shall not have been terminated by the Notice to Termination; and

9. Take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.

C. After receipt of a Notice of Termination, the Contractor shall submit to the Owner his termination claim, in the form and with the certification prescribed by the Owner. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Owner upon request of the Contractor made in writing within such one-year period or authorized extension thereof. However, if the Owner determines that the facts justify such action, he may receive and act upon any such termination claim at any time after such one-year period or extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Owner may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

d. Subject to the provisions of paragraph (c), the Contractor and the Owner may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or Partial termination of work pursuant to this clause which amount or amounts may include a reasonable allowance for profit on work done: Provided, that such agreed amount or amounts, exclusive of Settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price or work not terminated. The Contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in Paragraph (e) of this clause, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Owner to agree upon the whole amount to be

paid to the Contractor by reason of the termination of work pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Contractor pursuant to this Paragraph (d).

E. In the event of the failure of the Contractor and the Owner to agree as provided in Paragraph (d) upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, the Owner shall determine, on the basis of information available to him, the amount, if any, due to the Contractor the amounts determined as follows:

1. With respect to all contract work performed prior to the effective date of the Notice of Termination, the total (without duplication of any items) of:

i. The cost of such work;

ii. The cost of settling and paying claims arising out of the termination of work under subcontracts or orders provided in Paragraph (b) (5) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by the subcontractor prior to the effective date of the Notice of Termination of work under this Contract, which amounts shall be included in the cost on account of which payment is made under (i) above, and

iii. A sum, as profit on (i) above, determined by the Owner to be fair and reasonable: Provided, however, that if it appears that the Contractor would have sustained loss on the entire Contract had it been completed, no profit shall be included or allowed under this subdivision (iii) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and

2. The reasonable cost of the preservation and protection of property incurred pursuant to Paragraph (b) (9); and any other reasonable cost incidental to termination of work under this Contract, including expense incidental to the determination of the amount due to the Contractor as the result of the termination of work under this Contract.

The total sum to be paid to the Contractor under (1) above shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. Except for normal spoilage, and except to the extent that the Owner shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor under (1) above, the fair value, as determined by the Owner, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Owner, or to a buyer pursuant to Paragraph (b) (7).

F. The Contractor shall have the right to dispute under the clause of this Contract entitled "Remedies" from any determination made by the Owner under Paragraph (c) or (e) above, except that, if the Contractor has failed to submit his claim within the time provided in Paragraph (c) above and has failed to request extension of such time, he shall have no such right of appeal. In any case where the Owner has made a determination of the amount due under Paragraph (c) or (e) above, the Owner shall pay to the Contractor the following: (1) if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Owner or (2) if a "Remedies" proceeding is initiated, the amount finally determined in such "Remedies" proceeding.

g. In arriving at the amount due the Contractor under this clause, there shall be deducted (1) all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this Contract, (2) any claim which the Owner may have against the Contractor in connection with this Contract, and (3) the agreed price for, or the proceeds of sale of any materials, supplies, or other things kept by the Contractor or sold, pursuant to the provisions of this clause, and not otherwise recovered by or credited by the Owner.

h. If the termination hereunder be partial, prior to the settlement of the terminated portion of this Contract, the Contractor may file with the Owner a request in writing for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract (the portion not terminated by the Notice of Termination) and such equitable adjustment as may be agreed upon shall be made in such price or prices; however, nothing contained herein shall limit the right of the Owner and the Contractor to agree upon the amount or amounts to be paid to the Contractor for the completion of the continued portion of the Contract when said Contract does not contain an established contract price for such continued portion.

ARTICLE 56: RIGHTS OF ACCESS

Nothing herein contained or shown on the drawings shall be construed as giving the Contractor exclusive occupancy of the work area. The Owner or any other Contractors employed by him, the various utility companies, Contractors or subcontractors employed by State or Federal agencies, or any other agencies involved in the general project or upon public rights-of-way, may enter upon or cross the area of work or occupy portions of the area as is directed or necessary.

When the territory of one contract is the convenient means of access to the other, the Contractor shall arrange his work in such a manner as to permit such access to the other and prevent unnecessary delay to the work as a whole.

ARTICLE 57: RIGHTS-OF-WAY AND SUSPENSION OF WORK

Land and rights-of-way for the purpose of this Contract shall be furnished by the Owner to the extent shown on the drawings; the Owner will use due diligence in acquiring said lands and rights-of-way as speedily as possible. If, however, lands or rights-of-way cannot be obtained before work on the project begins, the Contractor shall begin his work upon such

land or rights-of-way as have been previously acquired by the Owner, and no claims for damages whatsoever will be allowed by reason of the delay in obtaining the remaining land and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement by reason of litigation, or by reason of its inability to procure the lands or rights-of-way for the said work, the Contractor shall not be entitled to make or assert a claim for damages by reason of the said delay, or to withdraw from the Contract except by consent of the Owner. Time for completion of work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

ARTICLE 58: CONFORMANCE WITH DIRECTIONS

The Owner may make alterations in the line, grade, plan, form, dimension, or materials of the work, or any part thereof, either before or after the commencement of construction. Should such alterations diminish the quantity included in any item of work to be done and paid for at a unit price, the Contractor shall have no claim for damages or for anticipated profits on the work that thus may be dispensed with. If they increase the quantity included in any such item, such increase shall be paid for at the stipulated prices.

ARTICLE 59: INTERPRETATION OF THE DRAWINGS AND SPECIFICATIONS

Except for the Contractor's executed set, all drawings and specifications are the property of the Owner. The Owner will furnish the Contractor, without charge, three (3) sets of the drawings and specifications. Additional sets will be furnished upon request, at actual cost of reproduction. Such drawings and specifications are not to be used on other work and those sets in usable condition shall be returned to the Owner upon request at the completion of cessation of the work or termination of the Contract. The Contractor shall keep one (1) copy of the drawings and specifications at the work site at all times and shall give the Owner and their representatives access thereto. Anything on the drawings and not mentioned in the specifications, or anything in the specifications that is not shown on the drawings shall have the same force and effect as if mentioned in both. In case of conflict or inconsistency between the drawings and the specifications, the specifications shall take precedence. Any discrepancy in the figures and the drawings shall be immediately submitted to the Owner for decision and the decision of the Owner shall be final.

In case of differences between small and large scale drawings, the large scale drawings shall take precedence.

ARTICLE 60: SUSPENSION OF WORK

a. The Owner may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the Owner.

b. If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the Owner in administration of this Contract, or by his failure to act within the time specified in this Contract

(or if no time is specified, within a reasonable time), an adjustment shall be made for any increase in the cost of performance of this Contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the Contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent (1) that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or (2) for which an equitable adjustment is provided for or excluded under any other provision of this Contract.

c. No claim under this clause shall be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Owner in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such suspension, delay or interruption, but not later than the date of final payment under the Contract.

ARTICLE 61: INSPECTION

The authorized representatives and agents of the Owner shall be permitted to inspect all work materials, payrolls, records of personnel, invoices for materials, and other relevant data and records.

PART IV

ARTICLE 62: SUBCONTRACTORS

The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The Contractor shall not award work to any subcontractor other than those listed in his bid, without the prior written approval of the Owner, which approval will not be given until the Contractor submits a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work, to bind the subcontractors to the contract documents insofar as applicable to the subcontract work and to give the Contractor the same power as regards to terminating any subcontract that the Owner may exercise over the Contractor under any provisions of the contract documents.

Nothing contained in this Contract shall create any contractual relationship between the Owner and any subcontractor.

ARTICLE 63: MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage to the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor who shall indemnify and save harmless the Owner against any such claim.

ARTICLE 64: ASSIGNMENTS

The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without the written consent of the Owner. In case the Contractor assigns all or part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms, or corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

ARTICLE 65: SEPARATE CONTRACTS

The Owner reserves the right to let other contracts in connection with the construction of the contemplated work of the project, or contiguous projects of the Owner. The Contractor, therefore, will afford to any such other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, will properly connect and coordinate his work with theirs, and will not commit or permit any act which will interfere with the performance of their work.

The Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for storage of materials and in the detailed execution of the work. Failure by the Contractor to keep informed on the progress or defective workmanship by others, shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with and performance of his own work.

ARTICLE 66: WORK BY OTHERS

The Owner reserves the right to do any other work which may be connected with, or become a part of, or be adjacent to the work embraced by this Contract, at any time, by Contract or otherwise. The Contractor shall not interfere with the work of such others as the Owner may employ, and shall execute his own work in such a manner as to aid in the execution of the work of others as may be required. No backfilling of trenches or excavations will be permitted until such work by the Owner is completed.

PART V

ARTICLE 67: WAGE UNDERPAYMENTS AND ADJUSTMENTS

The Contractor agrees that in case of underpayment of wages to any worker on the project under this Contract by the Contractor or any of his subcontractors, the OWNER will withhold from the Contractor out of payments due to him, an amount sufficient to pay such worker the difference between the wages required to be paid under this contract and the wages actually paid such worker for the total number of hours worked, and that the OWNER may disburse such amount so withheld by it for, and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amount withheld pursuant to this article may be in addition to the percentage to be retained by the OWNER pursuant to other provisions of this Contract.

ARTICLE 68: PAYMENT OF EMPLOYEES

The Contractor and each of his subcontractors shall pay each of their employees engaged in the work on the project under this Contract in full, in cash, and not less than once a week, less legally required deductions, provided, that when circumstances render payment in cash unfeasible or impracticable, then payment by check may be effected upon consideration that funds are made available in a local bank and checks may be cashed without charge, trade requirements, or inconvenience to the worker.

ARTICLE 69: NON-DISCRIMINATION IN EMPLOYMENT

In connection with the performance of the work under this Contract, the Contractor agrees not to discriminate against employee because of race, religion, color, or national origin. The aforesaid provisions shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other forms of compensation and selection for training, including apprenticeship.

ARTICLE 70: APPRENTICES

Apprentices shall be permitted to work only under a bona fide apprenticeship program registered with a State Apprenticeship Council which is recognized by the Federal Committee on Apprenticeship, United States Department of Labor; or if no such Council exists in a State, under a program registered with the Bureau of Apprenticeship, United States Department of Labor.

PART VI

ARTICLE 71: SHOP OR SETTING DRAWINGS

a. The Contractor shall submit promptly to the Owner six (6) copies of each shop or setting drawing prepared in accordance with a schedule predetermined by the Contractor. After examination of such drawings by the Owner, and the return thereof, if resubmission is required, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Owner with six (6) corrected copies.

Regardless of corrections made in or approval given to such drawings by the Owner, the Contractor will, nevertheless, be responsible for the accuracy of such drawings and for their conformity to the drawings and specifications, unless he notifies the Owner in Writing of any deviations at the time he furnishes the drawings.

b. Shop drawings of all fabricated work shall be submitted to the Owner for approval and no work shall be fabricated by the Contractor save at his own risk until approval has been given by the owner. The Special Conditions define the shop drawings required for this project.

c. The Contractor shall submit all shop and setting drawings on dates sufficiently in advance of requirements to enable the Owner ample time for reviewing the same, including time for correcting, resubmission and reviewing, if necessary, and no claim for delay will be granted the Contractor by reason of his failure in this respect.

d. All shop drawings submitted must bear the stamp of the Contractor as evidence that the drawings have been checked by him. Any drawings submitted without this stamp of approval will not be considered and will be returned to the Contractor for resubmissions. If the shop drawings show deviations from the requirements of the Contract Documents because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal to the Owner, in order that an acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract Documents even though the shop drawings have been approved.

e. Where shop drawings are submitted by the Contractor that indicate a departure from the Contract which the Owner deems to be a minor adjustment in his interest and not involving a change in the contract price or extension of time, the Owner may approve the drawings but the approval will contain in substance, the following:

"The modification shown on the attached drawings is approved in the interest of the Owner to effect an improvement for the project and is ordered with the understanding that it does not involve any change in the contract price or an extension of time, that it is subject generally to all contract stipulations and covenants; and that it is without prejudice to any rights of the Owner under the contract and bond or bonds."

f. The approval of the shop drawings will be general and shall not relieve the Contractor from the responsibility for adherence to the Contract, nor shall it relieve him of the responsibility for any error which may exist.

g. The Contractor agrees to hold the Engineer and the Owner harmless and defend them against damages or claims for damages arising out of injury to others or property of third persons which result from errors on shop, working or setting drawings whether or not they have been approved by the Engineer and/or the Owner.

ARTICLE 72: WORK TO BE ACCOMPLISHED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS

The work, during its progress and its completion, shall conform to the lines and grades shown on the drawings and to the directions given by the Owner from time to time, subject to such modifications or additions as he shall determine to be necessary during the execution of the work; and in no case will any work be paid for in excess of such requirements. The work shall also be accomplished in accordance with the data in these specifications.

ARTICLE 73: CONTRACTOR TO CHECK DIMENSIONS AND SCHEDULES

The Contractor will be required to check all dimensions and quantities shown on the drawings or schedules given to him by the Owner, and shall notify the Owner of all errors therein which he may discover by examining and checking the same. The Contractor shall not take advantage of any error or omissions in these specifications, drawings, or schedules. The Owner will furnish all instructions should such error or omissions be discovered,

and the Contractor shall carry out such instructions as if originally specified.

ARTICLE 74: PLANIMETER

For estimating quantities in which the computation of areas by analytic and geometric methods would be comparatively laborious, it is stipulated and agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such areas.

ARTICLE 75: ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Owner prepare jointly a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing, and installation of materials, supplies, and equipment, and the completion of the various parts of the work; each schedule to be subject to change from time to time in accordance with the progress of the work.

ARTICLE 76: MATERIALS, SERVICES AND FACILITIES

It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever, necessary to protect, execute, complete, and deliver the work within the specified time. If approved by the Owner, any work necessary to be performed after regular hours, on Saturdays, Sundays, or legal holidays, shall be performed by the Contractor without additional expense to the Owner.

ARTICLE 77: CONTRACTOR'S TITLE TO MATERIALS

No material, supplies, or equipment for the work shall be purchased by the Contractor or any subcontractor, subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor warrants good title to all material, supplies, and equipment installed or incorporated in the work and further warrants upon completion of all work, to deliver the premises, together with all improvements and appurtenances constructed or placed thereon by him, to the Owner free from any claims, liens, or charges, or encumbrances and further agrees that neither he nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to alien upon the premises or any improvement or appurtenance thereon.

ARTICLE 78: INSPECTION AND TESTING OF MATERIALS

All materials and equipment used in the construction of the project shall be new and of current manufacture. Testing will be done in accordance with accepted standards and as directed by the Owner; the laboratory or inspection agency shall be selected by the Owner. Except as specified elsewhere in these specifications, the Owner will pay for laboratory inspection. All materials and workmanship shall be subject to inspection, examination, and testing by the Owner at any and all times during manufacture and/or construction and at any and all places where such manufacture and or construction is carried on, to establish conformance with these specifications and suitability for uses intended. Without additional charge, the Contractor shall furnish promptly all reasonable facilities, labor, and materials necessary to make tests so required safe and convenient. He shall also furnish and mill, factory, or other such tests based on the standards and Tentative Standards of the American Society for Testing Materials as required by the Owner.

ARTICLE 79: DEFECTIVE MATERIALS

No materials shall be laid or used which are known, or may be found to be in any way defective. Any materials found to be defective at the site of work or upon installation shall be replaced by the Contractor at his own expense. Notice shall be given to the Owner of any defective or imperfect material. Defective or unfit material found to have been laid, shall be removed and replaced by the Contractor with sound and unobjectionable material without additional cost to the Owner.

ARTICLE 80: PATENTS

- a. The Contractor shall hold and save the Owner harmless from liability of Any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the Contract, including its use by the Owner.
- b. License and/or royalty fees for the use of a process which is authorized by the Owner must be reasonable, and paid to the holder of the patent, or his authorized agent, directly by the Contractor.
- c. If the Contractor uses any design, device or material covered by letters, patent, or copyright, he shall provide for such use by suitable agreement with the Owner of such patent or copyrighted design, device, or material.
- d. It is mutually agreed and understood that, without exception, the contract prices shall include all royalties, license fees, or costs arising out of the use of such process, design, device, or materials, in any way involved in the work. The Contractor and/or his Surety shall indemnify and save the Engineer and the Owner harmless from all claims for infringement by reason of use of such patented material, device or design, in connection with the work under this Contract, and shall indemnify the Engineer and the Owner for any cost, expense, or damage which it may be obligated to pay for reason of such infringement at any time during the prosecution of the work.

ARTICLE 81: "OR APPROVED EQUAL CLAUSE"

a. Whenever a material or article required is specified or shown on the drawings by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design may be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the Owner's opinion. It shall not be purchased or installed without his written approval. In all cases, new material shall be used on the project.

b. If two or more brands, makes of material, devices or equipment are shown or specified, each should be regarded as the approved equal of the other. Any other brand, make or material, device or equipment, which, in the opinion of the Owner or his authorized agent, is the recognized approved equal of that specified, considering quality, workmanship, and economy of operation, and is suitable for the purpose intended, may be accepted.

c. If any other material or article is substituted for items shown or specified, the project must result in a savings in the contract price and the Contractor shall submit evidence that the substitute product is equal. Upon approval of the substitute product, the Owner will issue a deductive change order.

d. If an equipment manufacturer must have a specified period of experience with his product, equipment which does not meet with the specified experience period may, at the option of the owner, be considered if the equipment supplier or manufacturer is willing to provide a bond or cash deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure.

PART VII

ARTICLE 82: INSURANCES

The Contractor shall be responsible for maintaining insurance coverage in force for the life of this Contract of the kind and adequate amounts to secure all of his obligations under this Contract and with insurance companies licensed to write such insurance in the State of Rhode Island and acceptable to the Owner. The kinds and amounts of such insurance carried shall not be less than the kinds and amounts of insurance coverage designated in the Insurance Requirements, and the Contractor agrees that the stipulation herein of the kinds and minimum amounts of coverage or the acceptance by the Owner of certificates indicating the kinds and limits of coverage shall in no way limit the liability of the Contractor to any such kinds and amounts of insurance coverage. All policies issued shall indemnify and save harmless the Owner, the Engineer, and their agents or representatives from any and all claims for damages arising out of the Contract, to either persons or property. Policies and certificates of all insurance shall be submitted to the Owner by the Contractor prior to preparation of the construction contract. In the event that the form of any policy or certificate of the amount of the insurance of the companies writing the same are not satisfactory to the Owner, the Contractor shall secure other policies or certificates in form and amount and with such companies that are satisfactory to the Owner.

The Contractor shall not cause policies to be cancelled or permit them to lapse and all insurance policies shall include a clause to the effect that the policy shall not be subject to cancellation or a reduction in the required limits of liability amounts of insurance until notice has been sent by registered mail to the Owner, stating when, not less than ten (10) days thereafter, such cancellation or reduction shall be effective. All certificates of insurance shall contain true transcripts from the policy, authenticated by the proper officer of the insurer evidencing in particular, those insured, the extent of the insurance, the location and operations to which the insurance applies the expiration date, and the above-mentioned notice of cancellation clause.

The Contractor shall be responsible for the provision of indential insurance coverages for all his subcontract operations and, in the event that the Contractor's policies do not cover each and every subcontractor, certificates of insurance issued on policies by companies that are acceptable to the Owner covering each and every subcontractor shall be filed under the Owner prior to the commencement of such subcontract operations. All insurance specified in this Contract shall be provided by the Contractor, at no additional expense to the Owner.

PART VIII

ARTICLE 83: COMPENSATION TO BE PAID TO THE CONTRACTOR

a. The Owner will pay and the Contractor shall receive as full compensation for everything furnished and done by the Contractor under this Contract, the unit prices and lump sum prices set opposite the respective items in the accepted bid form herein contained, and payment for approved extra work. The cost of all work required not specifically included in any items herein mentioned, and also for all loss or damage arising out of the nature of the work aforesaid or from the action of the elements, or from any unforeseen obstruction or difficulty encountered in the prosecution of the work and for all risks of every description connected with the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work as herein specified, and for assuming all duties, and liabilities, herein required, and for well and faithfully completing the work, and the whole thereof, as herein provided, shall be the responsibility of the Contractor.

b. The amount of the Contract (accepted bid prices) listed in the bid is based on the estimated quantities and the unit and/or lump sum price as set forth in the bid. It is understood and agreed that the Contractor will accept as payment the actual measured quantities at the unit and/or lump sum price as set forth in the accepted bid.

c. The estimated quantities given in the bid proposal for the various items of work are given for the purpose of comparing the bids offered for the work under this Contract and if it is found in the performance of the Contract work that any or all of the said estimated quantities are not even approximately correct the Contractor shall have no claim for anticipated profits, or for loss of profit, or for increase in prices as listed in the accepted bid because of the difference between the quantities of the various items of work actually done and the estimated quantities stated in the accepted bid.

d. No payment or compensation will be made to the contractor for damages because of hindrance or delay from any cause in the progress of the work, whether such hindrances or delays be avoidable or unavoidable.

ARTICLE 84: PAYMENTS TO CONTRACTOR

a. At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR shall submit to the OWNER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the OWNER may reasonably require. If payment is requested with the OWNER'S permission on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, in accordance with the manufacturers' recommendation and as required by the Owner, the partial payment estimate shall also be accompanied by such supporting data satisfactory to the OWNER as will establish the OWNER'S title to the material and equipment and protect his interest therein, including applicable insurance. The OWNER will within ten (10) days after receipt of each partial payment estimate either indicate in writing his approval or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will within thirty (30) days of presentation to him of an approved partial payment estimate pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate.

b. Removed.

c. With each partial payment estimate, the CONTRACTOR shall certify in writing that the project AS-BUILT DRAWINGS are being maintained accurately and currently. Said certificate shall be signed by the CONTRACTOR'S SUPERINTENDENT and the CONTRACTOR'S ENGINEER or SURVEYOR. Any payment estimate not having said certification attached will be subject to refusal of payment.

d. Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval and concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

e. The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

f. Upon completion and acceptance of the WORK, the OWNER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages but except such sums as may be lawfully retained by the OWNER shall be paid to the CONTRACTOR within forty-five (45) days of completion and acceptance of the WORK.

g. The CONTRACTOR will indemnify and save the OWNER or the OWNER'S REPRESENTATIVE harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools and all supplies incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall at the OWNER's request furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed in accordance with the terms of the CONTRACT DOCUMENTS but in no event shall the provisions of this Sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

ARTICLE 85: CHANGE ORDERS

a. The Owner may, at any time, without notice of the sureties, by written order designated or indicated to be a Change Order, make any change in the work within the general scope of this Contract, including but not limited to changes:

1. In the Specifications (including drawings and designs);
2. In the method or manner of performance of the work;
3. In the Owner-furnished facilities, equipment, materials, services, or site; or
4. Directing acceleration in the performance of the work.

b. Any other written order or an oral order (which terms as used in this paragraph (b) shall include direction, instruction, interpretation or determination) from the Owner, which causes any such change, shall be treated as a change order under this clause, provided that the Contractor gives the Owner written notice stating the date, circumstances and source of the order and that the Contractor regards the order as a Change Order.

c. Except as herein provided, no order, statement, or conduct of the Owner shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

d. If any change, by change order, causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly: Provided, however, that no claim for any change order (b) above shall be allowed

for any costs incurred more than 20 days before the Contractor gives written notice as therein required: and, provided, further, that in case of defective specifications for which the Owner is responsible, the equitable adjustment shall include only increased cost reasonably incurred by the Contractor in attempting to comply with such defective specifications.

e. If the Contractor intends to assert a claim for an equitable adjustment under this clause, he must, within 30 days after receipt of a written change order under (a) above or the furnishing of a written notice under (b) above, submit to the Owner a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the Owner. The statement of claim hereunder may be included in the notice under (b) above.

f. No claim by the Contractor for an equitable adjustment hereunder for any amount shall be allowed unless agreed to by Change Order prior to the work being done.

ARTICLE 86: CHANGES IN THE WORK

No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved changes shall be determined by one or more, or a combination of the following methods as the Owner shall direct:

- a. Unit price bid previously approved;
- b. The actual cost of: labor, materials, ownership or rental costs of construction plant and equipment during the use of item on the extra work; power and consumable supplies for the operation of power and equipment;
- c. Insurance;
- d. Social Security, Old Age, and Unemployment contributions.

To the cost of "b" above, there shall be added a fixed fee to be agreed upon but not to exceed 15%. The fee shall be compensation to cover the cost of supervision, overhead, bonds, profit, and any other general expenses.

If a subcontractor performs the work, he shall be entitled to a maximum of 15% as a fixed fee, and the general Contractor be entitled to a maximum of 5% (of the cost of the subcontract work excluding subcontractor fixed fee) as a fixed fee.

ARTICLE 87: CLAIMS FOR EXTRA COST

No claims for extra work or cost will be allowed unless the same were done in pursuance of a written order of the Owner as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When the work is performed under terms specified elsewhere in the

Contract, the Contractor shall furnish satisfactory bills, payrolls, and vouchers covering all items of cost and upon the Owner's request, give him full access to the accounts relating thereto.

ARTICLE 88: CHANGES AND MODIFICATIONS

The Owner reserves the right to delete or cancel any item or items or parts thereof as listed in the bid, without recourse by the Contractor. The Owner also reserves the right to add to any item as listed in the bid. The compensation to be paid to the Contractor for such additional extensions, appurtenances or items shall be made under the applicable items in the bid. If no applicable items are provided in the bid, the compensation to be paid the Contractor shall be set forth under the article entitled "Changes in the Work" as found herein.

ARTICLE 89: ACCEPTANCE OF THE FINAL PAYMENT CONSTITUTES RELEASE

The acceptance of the Final Payment by the Contractor shall be and shall operate as a release to the Owner for all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act or neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate as a release of the Contractor or his Surety from any obligations under this Contract or the performance and payment bond.

SECTION 01 10 00 – SUMMARY**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Project Information
 - 2. Work covered by the Contract Documents.
 - 3. Type of the Contract.
 - 4. Work phases.
 - 5. Work under other contracts.
 - 6. Products ordered in advance.
 - 7. Owner-furnished products.
 - 8. Use of premises.
 - 9. Owner's occupancy requirements.
 - 10. Work restrictions.
 - 11. Specification formats and conventions.
 - 12. Payment Procedures
 - 13. Miscellaneous provisions.
 - 14. Applicable codes that pertain to this project.

1.3 PROJECT INFORMATION

- A. Project Identification: North Kingstown Free Library – Fire Alarm Replacement
 - 1. Project Location: 100 Boone Street,
North Kingstown, RI 02852
 - 2. Owner: Town of North Kingstown Rhode Island,
100 Fairway Drive,
North Kingstown, RI 02852-5762
 - 3. Owner's Representatives:
Phil Bergeron, & Dante Marinaro,
Project Managers
North Kingstown Department of Public Works
- B. Architect: Edward Rowse Architects, Inc., 400 Massasoit Avenue, Suite 300, Second Floor, East Providence, Rhode Island 02914
 - 1. Architect's Representative:
James M. Partridge, AIA, Project Architect

1.4 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.

- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.

1.5 WORK COVERED BY CONTRACT DOCUMENTS

- A. All construction work shall be performed during the hours (7:00 AM to 5:00 PM) Monday through Friday.
- B. Work of this Contract is comprised of the removal and replacement of the existing fully adhered single ply EPDM membrane roof system with wood fiber cover board and rigid insulation down to the existing concrete deck, located at the flat roof area of the building which is approximately 1,850 gross square feet. Provide a new fully adhered single ply EPDM membrane roof system that will include: a high density polyisocyanurate cover board over tapered polyisocyanurate rigid insulation, on a vapor barrier applied over the existing concrete deck and all required roof flashings for a complete roof system that will meet current building energy code requirements and provide a minimum 25 year warranty..
- C. The contractor must provide all material, labor, tools, plant, supplies, equipment, transportation, superintendence, temporary construction of every nature and all other services and facilities necessary to complete the construction for the Owner, including all incidental work as required or described in the contract documents.
- D. Type of Contract:
 - 1. Project will be constructed under a single prime contract.

1.6 WORK UNDER OTHER CONTRACTS

- A. The Owner reserves the right to engage with others to perform work not identified as being within the scope of this Project.

1.7 USE OF PREMISES

- A. General: During the construction period the Contractor shall have full use of the premises within the construction limits shown on the drawings for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to operate the building for its intended use.
1. Owner Occupancy: Allow for Owner occupancy of Project building for use by the public.
 2. Driveways and Entrances: Keep driveways, loading areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 3. The Project Building and its site to remain free from dust, debris etc. all in accordance with the Contract Documents.
 4. The Project building and its site is "Tobacco, Drug and Alcohol Free". Use or possession of tobacco, alcohol or drugs will not be tolerated.
- B. It is essential to point out that the Owner shall have full access to the site and building to conduct business as required to perform their work. The Contractor must not under any circumstances, at any time during the project plan or otherwise schedule any shut down of any services, including but not limited to utilities, access to and from the facility, including public roadways and walkways, that will adversely affect the operations of the existing building unless these interruptions are otherwise coordinated previously in advance with the Owner.
- C. Limit use of the site premises to work in areas as indicated on drawings. Do not disturb portions of the site beyond the areas in which the Work is indicated unless otherwise approved in writing by the Architect and Owner. The Contractor shall plan and budget accordingly to account for this condition as disruptions to daily business activities will not be tolerated.
- D. The following are some of the identified issues:
1. Driveways, Walkways, and Entrances to and from the existing building complex:
 - a. Keep driveways, parking areas, walkways and entrances serving the existing building premises clear and available to the Owner, the Owner's employees, public and emergency vehicles at all times. Do not use these areas for parking or storage of materials at any time during operations.
 2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 3. Driveway and Entrances: Daily maintenance of all affected parking areas, roadways and walkways is required.
 4. Vehicular and pedestrian traffic is always expected to be maintained at all existing doorways during construction operations.
- E. Parking of Trade Contractor's vehicles, his employee's vehicles or those of trade subcontractors are not allowed on any public or private road bordering the sites. The Contractor shall submit to the Architect and Owner an on-site parking plan for review which shall include assigned parking places for the Owner and Architect.
- F. The Owner will continue to use the existing building parking lot(s) not affected by the construction. These parking lot(s) are not available for the contractor's or his employees use unless approved by the Owner. Any on site parking permitted shall take place within the project property lines except for vehicle access areas and emergency routes.
- G. Notify the Owner a minimum of seventy-two (72) hours before terminating or interrupting utilities on site.

1.8 SECURITY PLANS

- A. The existing facility will be considered to be secure facility. Site security will be maintained before, during and after construction, at all times of the day. Contractor shall develop a security plan and submit prior to start of construction for owner's approval. The owner has the right to approve or reject the plan.
1. Workers will be identified by a contractor issued photo identification pass. The pass system shall be approved by the owner. If any discrepancies exist, the worker will not be permitted entry to the property. Visitors and short-term workers shall receive a visitor's pass issued by the contractor. This pass shall be approved by the Owner.
 2. This pass will be worn above the waist in a clearly visible, conspicuous place by all workers/visitors.
 3. Before a construction worker identification pass can be issued for contract workers providing a service on the property requiring a period more than eight (8) hours to complete, a formal inquiry must be made through the Bureau of Criminal Identification to determine whether the applicant has a criminal record. A copy of the completed Criminal History Check from the individual workers state of residence shall be given to the Owner. If the applicant has no criminal record the identification pass will be processed. Should an applicant be found to have a criminal record sufficient to be deemed inappropriate for entry (felony conviction) the identification pass will not be processed.
 4. Visitors Pass: This type of pass is temporarily issued to persons who will be visiting or working on the construction site for a limited time to provide a service requiring a period not to exceed eight (8) hours to complete and will not require completion of a criminal background consent form. This category of pass is issued by the contractor to persons entering the property under the above-mentioned circumstances. Special visitor passes are considered controlled security items. Hence, the contractor will obtain proper identification from the individual the pass is to be issued to. The contractor will retain the identification until the special visitor's pass is returned. In addition, each pass recipient will sign a Visitor Pass Log Book. Workers who have not yet received their photo identification pass will be issued this pass in an interim basis until their pass is processed. This pass will be worn above the waist in a clearly visible, conspicuous place by all visitors.

1.9 OCCUPANCY REQUIREMENTS

- A. Occupancy: Maintain existing exits, unless otherwise indicated.
1. Maintain access to existing walkways, corridors, and other means of egress components. Do not close or obstruct walkways, corridors, or other building means of egress components without written permission from Owner and authorities having jurisdiction.
 2. Provide not less than seventy-two (72) hour's notice to Owner of activities that will affect Owner's operations.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.

1.10 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

- B. Existing Utility Interruptions: Do not interrupt utilities serving the facility occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect and Owner not less than seventy-two (72) hours in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Architect's and Owner's written permission.
- C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner or others.
1. Notify Owner not less than four days in advance of proposed disruptive operations.
 2. Obtain Owner's written permission before proceeding with disruptive operations.

1.11 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format numbering system.
1. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used situations. These conventions are as follows:
1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.12 CODES, RULES AND REGULATIONS

- A. All work is to be in accordance with the latest requirements of:
1. Federal, State and Municipal Laws
 2. Rhode Island Building and Fire Codes
 3. National Plumbing Code
 4. National Electric Code
 5. Any prevailing rules, regulations pertaining to adequate protection and/or guarding of any moving parts or otherwise hazardous locations.

1.13 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.14 JOB SAFETY AND ACCIDENT PREVENTION

- A. All construction work on this project must be performed in compliance with the Occupational Safety and Health Act of 1970 or with local or State occupational safety and health regulations enforced by an agency of the locality or State under a plan approved by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA)
- B. All contractors and subcontractors shall comply with requirements of the Occupational Safety and Health Act of 1970 or revisions thereto, which are applicable during the term of this contract and hold the Owner and Architect and/or their agents harmless from any claim or loss that may result from violations of or claims under this act.
- C. See the General Conditions for further requirements.

1.15 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.

- c. Items required to be indicated as separate activities in Contractor's construction schedule.
 2. Submit the schedule of values to Architect and Owner at earliest possible date but no later than 15 days from date of notice to proceed.
 3. Sub schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments; provide sub schedules showing values coordinated with each phase of payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one-line item for each Specification Section.
1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 - a. Include separate line items labor and materials.
 3. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 4. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 5. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 6. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
 7. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.16 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Submit Application for Payment to Architect by the 23rd of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

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- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit digital signed and notarized copy of each Application for Payment to Civil Engineer by a method ensuring receipt within 24 hours. Include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Schedule of unit prices.
 5. Submittal schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of building permits.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A-1994, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707-1994, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.

1.17 MISCELLANEOUS PROVISIONS

A. Project Schedule...

1. It is mandatory that the project be substantially completed on the date indicated on the Bid Form at which time a phased move in and occupancy period has been established for use through on date indicated on the Bid Form which is the date that Full Business operations are to commence. All shelled spaces and specific elevators will be made available to the Owner (exclusively) on date indicated on the Bid Form which will permit the Owner to begin receiving, assembling and start distribution of furnishings, equipment, and other miscellaneous systems to the appropriate building locations.
2. The Final Completion date for all Work shall be on date indicated on the Bid Form.

B. "TIME IS OF THE UTMOST ESSENCE"

1. Once the engineering and architectural work is completed and accepted by the Architect & Engineer for full business operations on date indicated on the Bid Form, work required to complete the project shall take place during normal hours that the facility is in operation, late afternoons (after 3:30 p.m.), evenings, Saturdays and holidays), as such the Contractor shall plan and budget this work accordingly. When requested by the Contractor, the Owner will evaluate if some work tasks can take place during after business hours and the Owner will approve or disapprove the requests in writing on a case-by-case basis. The Owner reserves the right to reject the proposed work schedule to maintain efficient and undisturbed business and security operations.
2. Once work has been established as substantially complete the Contractor shall have a maximum of thirty (30) days to complete the work.

C. SUPERINTENDENCE OF SUBCONTRACTORS

1. The contractor must supervise subcontractors in accordance with the provisions of General Conditions. A project superintendent shall be on site whenever any work is being performed. Superintendent shall be an employee of the Contractor.
2. Project superintendent shall be acceptable to the Owner and Architect. Submit superintendent's qualifications for review and acceptance within two days of the notice of award or notice to proceed whichever is first.

D. COORDINATION

1. Prior to commencement of subcontract work, a designated representative of each subcontractor shall meet with project superintendent, Owner and Architect at the site to discuss requirements and scope of Work.

2. The Contractor and all subcontractors will be required to attend a preconstruction conference at a date and time set by the Owner.

E. BEHAVIOR OF PERSONNEL

1. If in the opinion of the Owner or Architect, any employee of the Contractor or his subcontractors is physically or mentally unfit for work or exhibits behavior incompatible with work site environment, said employee may be required to leave property and may be refused re-admittance.

F. DRAWINGS AND SPECIFICATIONS

1. All work drawn on Plans and not specified or all work specified and not drawn are part of Contract Work required to be done and are to be executed as fully as if described in both of these ways. Only work specifically noted in the following manner shall be considered as not being in the contract:
 2. ".....by Owner".
 3. ".....NIC (Not In Contract)".
 4. If, after examination of Contract Drawings and Specifications, or after a visit to the premises, any discrepancies, omissions, ambiguities, or conflicts are found in or amount contract documents or there is doubt as to their meaning, Architect is to be notified at the earliest possible date. Where information sought is not clearly indicated or specified, the Architect will issue addendum to the Contractor clarifying conditions, which addendum will become part of the Contract Documents. Neither the Owner nor the Architect will be responsible for any oral instructions.
 5. If there are two ways and/or instruction in drawings and/or specifications, it shall be assumed that the Contractor has based his base bid price on the most expensive way.
 6. If duplication is shown on drawings and/or specifications of work by more than one trade, Architect shall determine which trade shall do work and rebate shall be due from the other trades to Owner.
 7. Drawings DO NOT include any necessary components for construction safety.
 8. In all work shown on Drawings, figured dimensions are to be followed in all cases, though they may differ from scaled measurements. Before beginning the work, Contractor is to check through and verify all dimensions/elevations and call to the attention of the Architect any apparent or manifest discrepancy.
 9. Contractor shall verify all dimensions with existing and actual field conditions, prior to start of any work.
 10. All work and materials shown on drawings shall be interpreted by the Contractor as being new work and materials to be furnished and installed unless are specifically indicated as existing to remain.

1.18 APPLICABLE CODES

- A. All proposed facility renovations have been designed in accordance with the latest edition of the 2019 Rhode Island State Building Code (SBC-1) which incorporates the 2015 International Building Code with amendments by reference. In addition, the latest editions of the following codes were also incorporated as follows:
1. 2019 Rhode Island State Plumbing Code (SBC-3) which incorporates the 2015 International Plumbing Code with amendments.
 2. 2019 Rhode Island State Energy Conservation Code (SBC-8) which incorporates the 2015 International Energy Conservation Code with amendments.
 3. Rhode Island Life Safety Code which incorporates the 2015 Edition of NFPA 101, Chapter 13; Chapter 39 & Chapter 42 with amendments.

4. Occupational Safety and Health Administration (OSHA), and the American National Standards Institute (ANSI), 2003 Editions.”.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 11 16 – CONSTRUCTION PHASING AND SCHEDULING**PART 1 - GENERAL****1.1 GENERAL REFERENCE**

- A. The General Conditions and Division 1 of these specifications are hereby included as part of this section.

1.2 REQUIREMENTS INCLUDED

- A. Date of Completion
- B. Coordination
- C. Work Hours
- D. Work Sequence and Scheduling

1.3 RELATED REQUIREMENTS

- A. Section 013300 – Submittal Procedures: Construction schedules
- B. Section 015000 - Temporary Facilities and Controls: Temporary enclosures, protection of completed work, and cleaning.
- C. Section 017300 – Execution: Cutting and patching.

1.4 DATE OF COMPLETION

- A. Date of substantial and final completion shall be as indicated on the Bid Form.

1.5 COORDINATION

- A. Coordinate work of the various sections of specifications and all drawings, to assure efficient and orderly sequence of installation of construction elements, and with provisions for accommodating items installed later.
- B. Verify characteristics of elements of interrelated operating equipment are compatible; coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. **COOPERATION**
 - 1. Contractor and Subcontractors shall make every effort to cooperate with the other Contractors on the site and in such manner not to delay or interfere with carrying forward other Contractor's work.
 - 2. Contractor and Subcontractors shall coordinate their work with adjacent work and cooperate with other trades to facilitate general progress of work. Each trade shall afford other trades every reasonable opportunity for installation of their work and for storage of their materials. All material storage locations shall be approved by the Architect.

1.6 WORKING HOURS

- A. In no case shall Contractor or any Subcontractor perform any work on project, except during regular working hours without in each instance, notifying the Architect and Owner's Representative in order that they may be present to assist during work. This shall not be interpreted as a measure to prevent the Contractor from working "overtime" under any circumstances, but merely to ensure that the Architect or Owner's Representative may have the opportunity to be on hand to assist the Contractor, as may be required, to interpret Contract Documents, Plans or Specifications and to ensure that construction operations will not interfere with Owner's Operations.
1. Normal working hours for the purpose of this construction project shall be 7:00 AM to 5:00 PM Monday through Friday. The building will be occupied by the Owner during construction. The Owner's operations will take precedence over the Contractor's operations.
- B. If found necessary to reach a proper stopping place in any portion of the work, or to complete work within the Contract time limit, the Contractor shall work his forces and forces of his Subcontractors overtime without addition to the Contract Price. The Contractor shall insure that installation of Work under any subcontract does not interfere with nor delay progress of the building work, nor with progress of any independent contracts running concurrently.

1.7 GENERAL WORK SEQUENCE and SCHEDULING REQUIREMENTS

- A. Contractor shall schedule and construct work in phases to accommodate Owner's continuous and uninterrupted use of the facility during the construction period.
- B. The building will be occupied during all the construction process. The construction schedule shall be developed around the understanding that the building will be occupied and that they cannot be closed nor can the Owner's operations stop. The Contractor shall perform the work of this contract in a manner that causes no disruption to the continuous occupation of the building and site for its intended purposes.
1. NO EXITS OR WALKWAYS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF OWNER.
2. Construction schedule shall be approved by the Owner.
3. Owner's use of the building and site shall have priority in the scheduling of work.
- a. The cleaning and securing of the area(s) shall be acceptable to the Owner. It shall be the responsibility of the Contractor to obtain these requirements prior to start of any such work.
- F. The Contractor must submit a detailed schedule of work for the entire project. This schedule must include manufacturers' delivery dates. No work will begin within any building until all delivery dates are established and approved by the Owner.
1. Preliminary schedule shall be submitted within 10 working days of notice to proceed or purchase order whichever shall come first.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)
END OF SECTION 01 11 16

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue through Contractor supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request or 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail" forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail" form acceptable to Architect.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Requests for Information (RFIs).
 - 3. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
 - 1. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.
 - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.
- B. Frivolous RFIs: RFIs generated by the contractor because of his failure to adequately study and compare the Contract Documents, or coordinating their own work, shall be considered frivolous. The contractor shall pay all A/E and owner costs associated with responding to these RFIs.
- C. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.

11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- D. RFI Forms: AIA Document G716 or another form that in the sole opinion of the Architect is acceptable.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days plus seven days for consultants for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Frivolous, incomplete or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect
 4. RFI number including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
- G. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within five days if Contractor disagrees with response.
1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
1. Conduct the conference to review responsibilities and personnel assignments.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Preparation of record documents.
 - m. Use of the premises and existing building.
 - n. Work restrictions.
 - o. Working hours.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.
 - r. Procedures for moisture and mold control.
 - s. Procedures for disruptions and shutdowns.
 - t. Construction waste management and recycling.
 - u. Parking availability.
 - v. Office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. First aid.
 - y. Security.
 - z. Progress cleaning.
 4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - i. Submittal procedures.
 - j. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- D. Progress Meetings: Conduct progress meetings at weekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
 2. Attendees: In addition to representatives of Owner, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.

- 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
- 1.8 Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 013100 "Project Management and Coordination" for submitting Contractor's construction schedule.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Engineer / Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 20 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect / Engineer's final release or approval.
 - g. Scheduled date of fabrication.

- h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.
- B. Contractor must submit Initial Submittal Schedule to Architect, Engineer and Owner's Project Manager for review within ten (10) days of the notice to proceed.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect / Engineer's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will not be provided by Architect / Engineer for Contractor's use in preparing submittals.
- B. Architect / Engineer will not process or review submittals that have not been reviewed by the Contractor or that do not have the Contractor's review / approval stamp on them.
- C. Submittals received by Architect / Engineer after 1:00 p.m. will be considered as received the following working day.
- D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
- 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect / Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- E. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect / Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
- 1. Initial Review: Allow 7 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect / Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 - a. Allow additional 7 days for review of each submittal where it is necessary for review by Architect / Engineer or Owner consultant.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 7 days for review of each resubmittal.
 - a. Allow additional 7 days for review of each submittal where it is necessary for review by Architect / Engineer or Owner consultant.
- F. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
- 1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect / Engineer.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect / Engineer.
 - d. Name of Contractor.
 - e. Name of subcontractor.
 - f. Name of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alph numeric suffix (e.g., 061000.01R1).
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
 4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect / Engineer will discard submittals received from sources other than Contractor.
 - a. Transmittal Form for Paper Submittals: Use AIA Document G810.
 - b. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
 - 1) Project name.
 - 2) Date.
 - 3) Destination (To:).
 - 4) Source (From:).
 - 5) Name and address of Architect / Engineer.
 - 6) Name of Contractor.
 - 7) Name of firm or entity that prepared submittal.
 - 8) Names of subcontractor, manufacturer, and supplier.
 - 9) Category and type of submittal.
 - 10) Submittal purpose and description.
 - 11) Specification Section number and title.
 - 12) Specification paragraph number or drawing designation and generic name for each of multiple items.
 - 13) Drawing number and detail references, as appropriate.
 - 14) Indication of full or partial submittal.
 - 15) Transmittal number numbered consecutively.
 - 16) Submittal and transmittal distribution record.
 - 17) Remarks.
 - 18) Signature of transmitter.
- G. Options: Identify options requiring selection by Architect / Engineer.
- H. Deviations: Identify deviations from the Contract Documents on submittals.

- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect / Engineer's action stamp.
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect / Engineer's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
 1. Action Submittals: Submit digital copy of each submittal unless otherwise indicated. Architect / Engineer will return reviewed digital submittal.
 2. Informational Submittals: Submit digital copy of each submittal unless otherwise indicated. Architect / Engineer will not return reviewed digital copy.
 3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.

- d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. Digital copy of Product Data unless otherwise indicated. Architect / Engineer will return reviewed digital copy.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
 3. Submit Shop Drawings in the following format:
 - a. One digital copy of each submittal. Architect / Engineer will retain reviewed digital copy and return one digital reviewed submittal to Contractor.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

- a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Civil Engineer will return submittal with options selected.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Submit product schedule in the following format:
 - a. One digital copy product schedule or list unless otherwise indicated. Architect / Engineer will return one reviewed digital copy to Contractor.
- F. Coordination Drawings Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
 - G. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
 - H. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Summary."
 - I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
 - J. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of Architect, Engineer's and Owners, and other information specified.
 - K. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
 - L. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

- M. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- N. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- O. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- P. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- Q. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- R. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- S. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- T. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- U. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and five paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION**3.1 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect / Engineer.
 - 1. Contractor shall clearly identify "any" and "all" deviations from the contract documents.
 - 2. Contractor shall clearly identify items which need clarification with other trades than the trade submitting the submittal.
 - 3. Contractor shall clearly identify "any" and "all" modifications to the contract documents required by the submittal.
- B. Resubmittals shall have "all" changes, modifications , etc. clearly identified. Failure to identify changes, modifications, etc. shall be justification for returning the submittal without A/E review.
- C. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 Section "Closeout Procedures."
- D. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
- E. Failure of Contractor to properly review or stamp submittal shall be justification for returning the submittal without A/E review.
- F. Contractor shall submit documents required by authorities having jurisdiction and obtain their approvals prior to submission to the Architect / Engineer.

3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or revisions required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Informational Submittals: Engineer will review each submittal and will not return it or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

- 1. All utilities shall be listed in the Contractor's name for the duration of the Contract or until such time Substantial Completion is reached and approved by the Owner.

- A. Temporary utilities include, but are not limited to, the following:

- 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Temporary heat
 - 4. Ventilation
 - 5. Telephone service
 - 6. Sanitary facilities, including drinking water

- B. Support facilities include, but are not limited to, the following:

- 1. Storage sheds
 - 2. Temporary enclosures
 - 3. Hoists and temporary elevator use
 - 4. Temporary project identification signs and bulletin boards
 - 5. Waste disposal services
 - 6. Rodent and pest control
 - 7. Construction aids and miscellaneous services and facilities

- C. Security and protection facilities include, but are not limited to, the following:

- 1. Barricades, warning signs, and lights
 - 2. Environmental protection
 - 3. Security

- D. Removal of all temporary utilities, facilities and controls.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities and construction shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to Owner, Architect, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Contractor shall provide temporary sanitary facilities. Coordinate location with Owner.
- C. Water Service: Owner will provide water-service used by all entities for construction operations as long use is limited. Should charges be considered, the Owner will notify the Contractor in writing. The Contractor shall provide their own drinking water.
- D. Electric Power Service: Owner shall pay electric-power-service use charges for electricity used by all entities for construction operations as long as use is limited. The Owner reserves the right to charge the Contractor for excessive use. Should charges be considered, the Owner will notify the Contractor in writing.
- E. Rubbish: The Contractor shall supply adequate covered waste receptacles in accordance with Section 017419 "Construction Waste Management & Disposal" for waste, debris and rubbish. All waste receptacles must be immediately removed from the site when full. The grounds in the area of the waste receptacles must be cleaned daily and prior to moving the receptacles to another location on the project. Disposal shall be off-site in a legal dump intended for that use.

1.5 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
 - 3. Indicate sequencing of work that requires water and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- D. Dust, Noise and Fire Protection-Control Plan: Submit coordination drawing and narrative that indicates the dust, noise and fire protection-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of work.
 - 2. Waste handling procedures.
 - 3. Other dust-control measures.
 - 4. Noise control plan and coordination of noise producing activities with Owners facility operations.

1.6 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and Regulations.
- D. Regulations: Contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, fire department and rescue squad rules.
 - 5. Environmental protection regulations.
- E. Standards: Each contractor shall comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," and ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition."
- F. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.7 PERSONNEL SECURITY

- A. Bureau of Criminal Identification (Employee Record Checks)
 - 1. The Contractor shall ensure that all parties involved in the Project are made aware of this condition of employment as there will be NO EXCEPTION to this policy.
 - 2. The Contractor shall initialize, perform (by authorized agency) the CORI check and pay for all cost of the actual background checks.
 - 3. In projects of this scope, it has been established by the Owner, in conjunction with the advice of all local security agencies involved in Homeland Security that it is in the best interest of all parties involved in the project that everyone is subject to Bureau Criminal Identification (BCI) checks otherwise known as an Employee Record Check.
 - 4. The Contractor, all Sub-Contractors, Sub-Sub-Contractors, Vendors, Materials Suppliers, Consultants, Testing Firms and other personnel conducting business at the project site shall provide their full name, maiden name, date of birth, and a photocopy of their valid driver's license on forms that are approved by the Owner for a BCI check on all personnel involved in the project scope. Copies of these forms will be provided to the Owner. These forms shall be fully executed by the aforementioned parties including obtaining the signature of the person (applicant) a clear copy of their driver's license and appropriate witness by a Notary Public.
 - 5. The Contractor shall provide "COMPLETED" BCI check information to the Owner for all persons involved in the project prior to mobilization on the site and will continue to submit these forms on a continuous basis (a minimum of three (3) business days before an employee is scheduled to work) throughout the project to accommodate trades and services as they mobilize during the various phases of the project. No individual will be permitted to work on site until the completed BCI form has been submitted and the employee is approved by the owner for access.
 - 6. The Contractor shall maintain a list of ALL personnel which has been submitted to the Owner for this Work every two (2) weeks, or more frequently as may be requested by the Architect and Owner.

7. It is the intent of this record check to protect the interest of all parties involved in the Project and ultimately the end user group that will occupy the Police and Fire Headquarters against possible threats of terrorism, and/or direct threats to those persons involved in the project or those that will occupy the Police and Fire Headquarters once completed. The BCI check is not intended to forbid or disqualify persons from work that have records that are minor in nature but will identify those persons that may have been involved in criminal activities that are of concern to the owner from a security overview perspective.
8. As such, only those persons approved by the owner will be allowed on site to perform work during the Project. The owner will keep all information confidential and will not disclose any information to other than the parties directly involved in the process. The lists of those employees approved will be maintained separately from those that have not.

1.8 PROJECT WORK SITE SECURITY

- A. The Contractor shall protect the Work, the existing premises, and/or the Owner's operations from theft, vandalism, and unauthorized entry during the entire course of the Project.
- B. The Contractor shall initiate the program in conjunction with the Owner's program at the mobilization of the Project.
- C. The Contractor shall maintain the program throughout the construction period until Owner occupancy and appropriate transfer of Insurance has been completed.
- D. Entry Control:
 1. The Contractor shall restrict the entrance of persons and vehicles into the Project site, in accordance with the approved list of personnel.
 2. The Contractor shall allow entrance on the site only to authorized persons with the proper identification that are on the approved list.
 3. The Contractor shall maintain a log of workers and visitors, which will be available to the Owner upon request.
 4. Coordinate the access of the Architect's, Owner's personnel to the site in coordination with the Contractor's security forces.

1.9 VEHICULAR ACCESS

- A. Existing locations as approved by the Owner.
- B. The Contractor shall provide unimpeded access for emergency vehicles. The Contractor shall maintain at provide minimum 20-foot width driveways with sufficient turning space between and around combustible materials.
- C. The Contractor shall provide and maintain full access to fire hydrants and maintain control valves free of any obstructions.
- D. The Contractor shall remove mud from all construction vehicle wheels before entering streets and cleanup dirt, rocks, and debris that fall on the street from construction vehicles daily. The Contractor is encouraged to clearly bring this requirement to the attention of all sub-contractors involved in the Project. The Contractor shall continuously maintain and assure that all areas of the temporary walkways, vehicle ways (sally port), and emergency egress ways that cross construction access ways are always free from dirt, mud, gravel, water, ice and etc.
- E. Any vehicle or piece of equipment that is leaking oil and/or any other fluids shall promptly be repaired or otherwise removed from the site upon discovery of same. Any fluids being discharged shall be collected and legally disposed of from the time of discovery and the actual repair. Discharge into the soil, drainage systems, or stockpiled materials shall not be permitted. The Contractor shall promptly notify the proper authorities of any such discharge and shall be

responsible for the legal cleanup, abatement, and disposal that may be required as a result of the discharge.

1.10 PARKING

- A. The Contractor shall park only within areas as approved by the Owner.
- B. When site space is not adequate, the Contractor shall make arrangements with the Owner for additional off-site parking as may be required to accommodate the Construction Staff. These sites may or may not be adjacent to the project construction work site. Contractor will be responsible for transporting personnel from off-site areas to work site.
 - 1. All costs for off-site parking shall be the responsibility of the Contractor and be in the base bid.
- C. Use of existing off-site streets, parking areas, and driveways is not permitted for construction traffic. Tracked vehicles are not allowed on paved areas.
- D. The Contractor shall not allow heavy vehicles or construction equipment in existing parking areas at any time.
- E. The Contractor shall designate four (4) parking spaces for exclusive use by the Owner/Architect.
- F. Permanent Pavements and Parking Facilities:
 - 1. The Contractor shall avoid loading existing and new surfaces including, but not limited to, concrete walks, pavements, gravel lots, etc. beyond the paving design capacity. Tracked vehicles are not allowed on these surfaces.
 - 2. At no time shall the Contractor block any access route, parking area or drive through route that could endanger persons utilizing the existing facility and parking areas.

1.11 MAINTENANCE OF VEHICULAR ACCESS AND PARKING AREAS:

- A. The Contractor shall maintain the traffic and parking areas in a sound condition free of excavated material, construction equipment, products, mud, snow, and ice.
- B. The Contractor shall maintain existing and permanent paved areas used for construction and promptly repair breaks, potholes, low areas, standing water, and other deficiencies to maintain the paving and drainage in the original or specified condition.

1.12 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.
- B. Weather Protection:
 - 1. Submit weather protection plan to the Architect for review. Any changes to approved plan must be approved by the Architect.
 - 2. Provide protection for all work areas affected by moisture and cold, such as building floor areas, masonry scaffolds and fabrication areas by covering, enclosing and/or heating to maintain a relatively dry work area with a minimum temperature of 40 degrees F at the working surface so as to permit a normal progression of construction work. Weather protection is not required for site work, excavation, pile driving, steel erection, roofing, and similar operations normally done in the open.

3. Provide accurate Fahrenheit thermometers for every 2,000 square feet of floor space, located as directed by the Architect.
- C. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide concrete bases for supporting posts.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry".
- C. Gypsum Board: Minimum 1/2 inch (12.7 mm) thick by 48 inches (1219 mm) wide by maximum available lengths; regular-type panels with tapered edges. Provide fire rated panels where required by code or contract documents.
- D. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.
- E. Paint: Comply with requirements in Division 9 painting Sections.

2.2 TEMPORARY FACILITIES

- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

D. Installation of Weather Protection facilities shall comply with all safety regulations including provisions for adequate ventilation and fire protection. All fabric materials used for temporary enclosure or other temporary facilities shall be fire retardant material.

E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the fire alarm system in area where work is to be performed according to coordination drawings.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.

3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

F. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

G. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel.

1. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.

2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial

- Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
3. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- B. Parking: Onsite parking will be limited, use of designated areas of Owner's existing parking areas as indicated on the site work plan included in the Construction Document set of drawings for construction personnel.
 - E. Project Identification and Temporary Signs: Provide Project identification and other signs. Install signs where indicated to inform public and individuals seeking entrance to Project. No other signs are permitted, except those that are required by law.
 1. Provide temporary, directional signs for owner's employees and visitors going to the facility.
 2. Provide temporary, directional signs for construction personnel and visitors.
 3. Maintain and touchup signs so they are legible at all times.
 - F. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
 - G. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."
 - H. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
 - I. Hoisting Facilities
 1. Provide hoisting facilities as required for the vertical movement of all materials.
 2. Comply with OSHA for all hoists, conveyers, and elevators and maintain the facilities in compliance with the law.
 - J. Scaffolding and Staging
 1. Contractor shall furnish erect and maintain exterior staging and scaffolding for use during construction of building. Each subcontractor shall furnish, erect and maintain staging and scaffolding required in work under his subcontract. Staging shall conform to federal, state, and local requirements. On completion of his work, each subcontractor shall dismantle and remove his staging and scaffolding.
 - K. Temporary Use of Permanent Stairs & Elevator: Cover finished permanent stairs and elevator cab with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.
- 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION
- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - B. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control

procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Temporary Egress: Maintain temporary egress from existing occupied facilities as required by authorities having jurisdiction.
- E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
- F. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and tenants from fumes and noise.
 - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
 - 2. Construct dustproof partitions with two layers of 6-mil (0.14-mm) polyethylene sheet on each side. Cover floor with two layers of 6-mil (0.14-mm) polyethylene sheet, extending sheets 18 inches (460 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1219 mm) between doors. Maintain water-dampened foot mats in vestibule.
 - 3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 - 4. Insulate partitions to control noise transmission to occupied areas.
 - 5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 - 6. Protect air-handling equipment.
 - 7. Provide walk-off mats at each entrance through temporary partition.
- G. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
 - 1. Prohibit smoking on all areas of the building site.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 01 50 00

SECTION 01 73 00 - EXECUTION**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.
 - 2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor and professional engineer.
- B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
 - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.

2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
 - a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or those results in increased maintenance or decreased operational life or safety.
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Fire-detection and -alarm systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction.
 2. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or those results in increased maintenance or decreased operational life or safety.
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Equipment supports.
 - d. Piping, ductwork, vessels, and equipment.
 - e. Noise- and vibration-control elements and systems.
 3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of utilities and other construction affecting the Work.
- C. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Examine roughing-in for electrical systems to verify actual locations of connections before equipment and fixture installation.
 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- D. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
1. Description of the Work.
 2. List of detrimental conditions, including substrates.
 3. List of unacceptable installation tolerances.
 4. Recommended corrections.
- E. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements:
 - 1. Verify space requirements and dimensions of items shown diagrammatically on Drawings.
 - 2. Verify required finished ceiling height requirements prior to fabrication of HVAC and fire protection system piping or ductwork.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings. If discrepancies are discovered, notify Architect promptly.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned

with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- E. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 5. Proceed with patching after construction operations requiring cutting are complete.
- F. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- G. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Division 01 Sections.
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

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

- C. Protect the existing adjacent construction and provide special protection where specified in the individual Specification Sections.
- D. Repair adjacent construction damaged by the construction operations to the original condition to the satisfaction of the Owner per the requirements of the Contract Documents.
- E. Prohibit unnecessary traffic from the existing and completed building areas and landscaped areas.
- F. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

END OF SECTION 01 73 00

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.3 DEFINITIONS

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

1.4 PERFORMANCE REQUIREMENTS

- A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:
 - 1. Construction Waste:
 - a. Metals.
 - b. Wiring.
 - c. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.

- 4) Plastic sheet and film.
- 5) Polystyrene packaging.
- 6) Wood crates.
- 7) Plastic pails.

1.5 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 7 days of date established for the Notice of Award.

1.6 INFORMATIONAL SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use Form CWM-7 for construction waste and Form CWM-8 for demolition waste. Include the following information:
 1. Material category.
 2. Generation point of waste.
 3. Total quantity of waste in tons (tonnes).
 4. Quantity of waste salvaged, both estimated and actual in tons (tonnes).
 5. Quantity of waste recycled, both estimated and actual in tons (tonnes).
 6. Total quantity of waste recovered (salvaged plus recycled) in tons (tonnes).
 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.7 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements, that employs a LEED-Accredited Professional, certified by the USGBC, as waste management coordinator.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
1. Review and discuss waste.
 2. Review requirements for documenting quantities of each type of waste and its disposition.
 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of site-preparation and construction waste generated by the Work. Use Form CWM-1 for construction waste and Form CWM-2 for site preparation waste. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Use Form CWM-3 for construction waste and Form CWM-4 for site preparation waste. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 2. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Use Form CWM-5 for construction waste and Form CWM-6 for site preparation waste. Include the following:
1. Total quantity of waste.
 2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
 3. Total cost of disposal (with no waste management).
 4. Revenue from salvaged materials.
 5. Revenue from recycled materials.
 6. Savings in hauling and tipping fees by donating materials.
 7. Savings in hauling and tipping fees that are avoided.

8. Handling and transportation costs. Include cost of collection containers for each type of waste.
9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 1. Comply with operation, termination, and removal requirements in Division 01 Section "Temporary Facilities and Controls."
- B. Waste Management Coordinator: This can be the contractor's project manager, superintendent or other qualified individual acceptable to the Architect. Waste management coordinator shall be responsible for implementing, monitoring, and reporting status of waste management work plan.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Sale and Donation: Not permitted on Project site.

3.3 RECYCLING WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

- D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
1. Contractor's Option: As this construction site is very limited in area the use of co-mingled collection system with off site separation is acceptable.
 2. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 3. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 4. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 5. Store components off the ground and protect from the weather.
 6. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

3.5 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

3.6 ATTACHMENTS

- A. Form CWM-1 for construction waste identification.
- B. Form CWM-2 for demolition waste identification.
- C. Form CWM-3 for construction waste reduction work plan.
- D. Form CWM-4 for demolition waste reduction work plan.
- E. Form CWM-5 cost/revenue analysis of construction waste reduction work plan.
- F. Form CWM-6 cost/revenue analysis of demolition waste reduction work plan.
- G. Form CWM-7 for construction waste reduction progress report.
- H. Form CWM-8 for construction waste reduction progress report.

END OF SECTION 01 74 19

FORM CWM-1: CONSTRUCTION WASTE IDENTIFICATION

MATERIAL CATEGORY	GENERATION POINT	EST. QUANTITY OF MATERIALS RECEIVED* (A)	EST. WASTE - % (B)	TOTAL EST. QUANTITY OF WASTE* (C = A x B)	EST. VOLUME CY (CM)	EST. WEIGHT TONS (TONNES)	REMARKS AND ASSUMPTIONS
Packaging: Cardboard							
Packaging: Boxes							
Packaging: Plastic Sheet or Film							
Packaging: Polystyrene							
Packaging: Pallets or Skids							
Packaging: Crates							
Packaging: Paint Cans							
Packaging: Plastic Pails							
Site-Clearing Waste							
Masonry or CMU							
Lumber: Cut-Offs							
Lumber: Warped Pieces							
Plywood or OSB (scraps)							
Wood Forms							
Wood Waste Chutes							
Wood Trim (cut-offs)							
Metals							
Insulation							
Roofing							
Joint Sealant Tubes							
Gypsum Board (scraps)							
Carpet and Pad (scraps)							
Piping							
Electrical Conduit							
Other:							

* Insert units of measure.

FORM CWM-2: DEMOLITION WASTE IDENTIFICATION

MATERIAL DESCRIPTION	EST. QUANTITY	EST. VOLUME CY (CM)	EST. WEIGHT TONS (TONNES)	REMARKS AND ASSUMPTIONS
Asphaltic Concrete Paving				
Concrete				
Brick				
CMU				
Lumber				
Plywood and OSB				
Wood Paneling				
Wood Trim				
Miscellaneous Metals				
Structural Steel				
Rough Hardware				
Insulation				
Roofing				
Doors and Frames				
Door Hardware				
Windows				
Glazing				
Acoustical Tile				
Carpet				
Carpet Pad				
Demountable Partitions				
Equipment				
Cabinets				
Plumbing Fixtures				
Piping				
Piping Supports and Hangers				
Valves				
Sprinklers				
Mechanical Equipment				
Electrical Conduit				
Copper Wiring				
Light Fixtures				
Lamps				
Lighting Ballasts				
Electrical Devices				
Switchgear and Panelboards				
Transformers				
Other:				

FORM CWM-3: CONSTRUCTION WASTE REDUCTION WORK PLAN

MATERIAL CATEGORY	GENERATION POINT	TOTAL EST. QUANTITY OF WASTE TONS (TONNES)	DISPOSAL METHOD AND QUANTITY			HANDLING AND TRANSPORTION PROCEDURES
			EST. AMOUNT SALVAGED TONS (TONNES)	EST. AMOUNT RECYCLED TONS (TONNES)	EST. AMOUNT DISPOSED TO LANDFILL TONS (TONNES)	
Packaging: Cardboard						
Packaging: Boxes						
Packaging: Plastic Sheet or Film						
Packaging: Polystyrene						
Packaging: Pallets or Skids						
Packaging: Crates						
Packaging: Paint Cans						
Packaging: Plastic Pails						
Site-Clearing Waste						
Masonry or CMU						
Lumber: Cut-Offs						
Lumber: Warped Pieces						
Plywood or OSB (scraps)						
Wood Forms						
Wood Waste Chutes						
Wood Trim (cut-offs)						
Metals						
Insulation						
Roofing						
Joint Sealant Tubes						
Gypsum Board (scraps)						
Carpet and Pad (scraps)						
Piping						
Electrical Conduit						
Other:						

FORM CWM-4: DEMOLITION WASTE REDUCTION WORK PLAN

MATERIAL CATEGORY	GENERATION POINT	TOTAL EST. QUANTITY OF WASTE TONS (TONNES)	DISPOSAL METHOD AND QUANTITY			HANDLING AND TRANSPORTION PROCEDURES
			EST. AMOUNT SALVAGED TONS (TONNES)	EST. AMOUNT RECYCLED TONS (TONNES)	EST. AMOUNT DISPOSED TO LANDFILL TONS (TONNES)	
Asphaltic Concrete Paving						
Concrete						
Brick						
CMU						
Lumber						
Plywood and OSB						
Wood Paneling						
Wood Trim						
Miscellaneous Metals						
Structural Steel						
Rough Hardware						
Insulation						
Roofing						
Doors and Frames						
Door Hardware						
Windows						
Glazing						
Acoustical Tile						
Carpet						
Carpet Pad						
Demountable Partitions						
Equipment						
Cabinets						
Plumbing Fixtures						
Piping						
Supports and Hangers						
Valves						
Sprinklers						
Mechanical Equipment						
Electrical Conduit						
Copper Wiring						
Light Fixtures						
Lamps						
Lighting Ballasts						
Electrical Devices						
Switchgear and Panelboards						
Transformers						
Other:						

FORM CWM-5: COST/REVENUE ANALYSIS OF CONSTRUCTION WASTE REDUCTION WORK PLAN

MATERIALS	TOTAL QUANTITY OF MATERIALS (VOL. OR WEIGHT) (A)	EST. COST OF DISPOSAL (B)	TOTAL EST. COST OF DISPOSAL (C = A x B)	REVENUE FROM SALVAGED MATERIALS (D)	REVENUE FROM RECYCLED MATERIALS (E)	LANDFILL TIPPING FEES AVOIDED (F)	HANDLING AND TRANSPORTATION COSTS AVOIDED (G)	NET COST SAVINGS OF WORK PLAN (H = D+E+F+G)
Packaging: Cardboard								
Packaging: Boxes								
Packaging: Plastic Sheet or Film								
Packaging: Polystyrene								
Packaging: Pallets or Skids								
Packaging: Crates								
Packaging: Paint Cans								
Packaging: Plastic Pails								
Site-Clearing Waste								
Masonry or CMU								
Lumber: Cut-Offs								
Lumber: Warped Pieces								
Plywood or OSB (scraps)								
Wood Forms								
Wood Waste Chutes								
Wood Trim (cut-offs)								
Metals								
Insulation								
Roofing								
Joint Sealant Tubes								
Gypsum Board (scraps)								
Carpet and Pad (scraps)								
Piping								
Electrical Conduit								
Other:								

FORM CWM-6: COST/REVENUE ANALYSIS OF DEMOLITION WASTE REDUCTION WORK PLAN

MATERIALS	TOTAL QUANTITY OF MATERIALS (VOL. OR WEIGHT) (A)	EST. COST OF DISPOSAL (B)	TOTAL EST. COST OF DISPOSAL (C = A x B)	REVENUE FROM SALVAGED MATERIALS (D)	REVENUE FROM RECYCLED MATERIALS (E)	LANDFILL TIPPING FEES AVOIDED (F)	HANDLING AND TRANSPORTATION COSTS AVOIDED (G)	NET COST SAVINGS OF WORK PLAN (H = D+E+F+G)
Asphaltic Concrete Paving								
Concrete								
Brick								
CMU								
Lumber								
Plywood and OSB								
Wood Paneling								
Wood Trim								
Miscellaneous Metals								
Structural Steel								
Rough Hardware								
Insulation								
Roofing								
Doors and Frames								
Door Hardware								
Windows								
Glazing								
Acoustical Tile								
Carpet								
Carpet Pad								
Demountable Partitions								
Equipment								
Cabinets								
Plumbing Fixtures								
Piping								
Supports and Hangers								
Valves								
Sprinklers								
Mech. Equipment								
Electrical Conduit								
Copper Wiring								
Light Fixtures								
Lamps								
Lighting Ballasts								
Electrical Devices								
Switchgear and Panelboards								
Transformers								
Other:								

FORM CWM-7: CONSTRUCTION WASTE REDUCTION PROGRESS REPORT

MATERIAL CATEGORY	GENERATION POINT	TOTAL QUANTITY OF WASTE TONS (TONNES) (A)	QUANTITY OF WASTE SALVAGED		QUANTITY OF WASTE RECYCLED		TOTAL QUANTITY OF WASTE RECOVERED TONS (TONNES) (D = B + C)	TOTAL QUANTITY OF WASTE RECOVERED % (D / A x 100)
			ESTIMATED TONS (TONNES)	ACTUAL TONS (TONNES) (B)	ESTIMATED TONS (TONNES)	ACTUAL TONS (TONNES) (C)		
Packaging: Cardboard								
Packaging: Boxes								
Packaging: Plastic Sheet or Film								
Packaging: Polystyrene								
Packaging: Pallets or Skids								
Packaging: Crates								
Packaging: Paint Cans								
Packaging: Plastic Pails								
Site-Clearing Waste								
Masonry or CMU								
Lumber: Cut-Offs								
Lumber: Warped Pieces								
Plywood or OSB (scraps)								
Wood Forms								
Wood Waste Chutes								
Wood Trim (cut-offs)								
Metals								
Insulation								
Roofing								
Joint Sealant Tubes								
Gypsum Board (scraps)								
Carpet and Pad (scraps)								
Piping								
Electrical Conduit								
Other:								

FORM CWM-8: DEMOLITION WASTE REDUCTION PROGRESS REPORT

MATERIAL CATEGORY	GENERATION POINT	TOTAL QUANTITY OF WASTE TONS (TONNES) (A)	QUANTITY OF WASTE SALVAGED		QUANTITY OF WASTE RECYCLED		TOTAL QUANTITY OF WASTE RECOVERED TONS (TONNES) (D = B + C)	TOTAL QUANTITY OF WASTE RECOVERED % (D / A x 100)
			ESTIMATED TONS (TONNES)	ACTUAL TONS (TONNES) (B)	ESTIMATED TONS (TONNES)	ACTUAL TONS (TONNES) (C)		
Asphaltic Concrete Paving								
Concrete								
Brick								
CMU								
Lumber								
Plywood and OSB								
Wood Paneling								
Wood Trim								
Miscellaneous Metals								
Structural Steel								
Rough Hardware								
Insulation								
Roofing								
Doors and Frames								
Door Hardware								
Windows								
Glazing								
Acoustical Tile								
Carpet								
Carpet Pad								
Demountable Partitions								
Equipment								
Cabinets								
Plumbing Fixtures								
Piping								
Supports and Hangers								
Valves								
Sprinklers								
Mechanical Equipment								
Electrical Conduit								
Copper Wiring								
Light Fixtures								
Lamps								
Lighting Ballasts								
Electrical Devices								
Switchgear and Panelboards								
Transformers								
Other:								

SECTION 01 77 00 - CLOSEOUT PROCEDURES**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 017300 "Execution" for progress cleaning of Project site.
 - 2. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.
- D. Certificate Of Occupancy from the authorities having jurisdiction.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 21 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Submit maintenance material submittals specified in individual Divisions 02 through 33 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
 5. Submit test/adjust/balance records.
 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 21 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 21 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after

inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

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

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 14 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect will return annotated file.
 - b. PDF electronic file. This file is for record purposes.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

1.10 RE-INSPECTION FEES

- A. Should Architect perform re-inspections due to failure of the work to comply with the claims or status of completion made by the Contractor:
 - 1. Owner will compensate the Architect for such additional services.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - i. Remove labels that are not permanent.
 - j. Wipe surfaces of electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - k. Clean exposed surfaces of diffusers, registers, and grills.
 - l. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - m. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Division 01 Section "Temporary Facilities and Controls." Prepare written report.
- D. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

- a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

END OF SECTION 01 77 00

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Section 260000 "Fire Alarm System Testing and Adjusting" for operation and maintenance requirements.
 - 2. Sections 01 through 26 for specific requirements for project record documents of the Work in those Sections.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit PDF electronic files of scanned record prints and one set of file prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit PDF electronic files of scanned record prints and two set(s) of prints.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one paper copy of each submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised Drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it.
 - c. Record and check the markup before enclosing concealed installations.
 2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Format: Annotated PDF electronic file with comment function enabled.
 3. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
- B. Format: Submit record Specifications as annotated PDF electronic file.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
- B. Format: Submit record Product Data as annotated PDF electronic file.

2.4 MISCELLANEOUS RECORD SUBMITTALS

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

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

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

END OF SECTION 01 78 39

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

- 1. Demolition and removal of existing building membrane roof system.

B. Related Requirements:

- 1. Section 011000 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
- 2. Section 017300 "Execution" for cutting and patching procedures.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

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

1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

4. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Schedule of Selective Demolition Activities: Indicate the following:
 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 3. Coordination for shutoff, capping, and continuation of utility services.
- B. Pre-demolition Photographs or Video: Submit before Work begins.

1.7 CLOSEOUT SUBMITTALS

- A. Landfill Records: Provide documentation as requested by Construction Manager.

1.8 FIELD CONDITIONS

- A. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Storage or sale of removed items or materials on-site is not permitted.
- C. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 1. Maintain fire-protection facilities in service during selective demolition operations.

1.9 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
 - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with utility companies.
 - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 8. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area.
 5. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.

3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Roofing: Remove no more existing roofing than necessary to accommodate new penetrations. Provide temporary protection for penetrations to maintain watertight and weather tight integrity until permanent patches are completed.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill or as otherwise directed by the Construction Manager.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

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

END OF SECTION 024119

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Wood blocking, cants, and nailers.
3. Wood furring.
4. Wood sleepers.

B. Related Requirements:

1. Section 075323 "Wood blocking and nailers for EPDM membrane roof system installations.

1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:

1. NeLMA: Northeastern Lumber Manufacturers' Association.
2. NHLA: National Hardwood Lumber Association.
3. NLGA: National Lumber Grades Authority.
4. SPIB: The Southern Pine Inspection Bureau.
5. WCLIB: West Coast Lumber Inspection Bureau.
6. WWPA: Western Wood Products Association.
7. ALSC: American Lumber Standard Committee, Inc.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
1. Preservative-treated wood.
 2. Fire-retardant-treated wood.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 19 percent for 2-inch nominal (38-mm actual) thickness or less, no limit for more than 2-inch nominal (38-mm actual) thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
1. Preservative Chemicals: Alkaline copper quaternary (ACQ) similar to Preserve as manufactured by Chemical Specialties, Inc. or equal. Materials shall contain no arsenic or chromium.
- B. Retention Rates:
1. Above Ground: 0.25 – 0.40 pcf.
 2. Below Ground: 0.40 pcf.

- C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- D. Quality Mark: All copper quaternary preservative-treated wood members shall bear an end tag or permanent ink stamp indicating the following:
 - 1. Name of wood treating company.
 - 2. Treatment plant city and state.
 - 3. Symbol for alkaline copper quaternary (ACQ).
 - 4. Preservative retention level.
 - 5. Approved use.
 - 6. Code report number.
- E. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
 - 4. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test. Material shall have an Underwriters Laboratories FRS rating or a flame spread and smoke index rating denoting a surface-burning characteristic rating of 25 or less for flame spread and smoke developed.
 - 1. Use treatment that does not promote corrosion of metal fasteners.
 - 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
- C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with the Underwriters Laboratories label or stamp attesting to the FRS rating or flame spread and smoke index rating, or the ESR Building Code Approval, and to the fact that it also meets the American Wood Protection Association, (AWPA):P50, U1, UCFA for Interior Type A (HT) use.
- E. Application: Treat items indicated on Drawings, and the following:

1. Framing for raised platforms.
2. Concealed blocking in fire rated construction.
3. Wood cants, nailers, curbs, equipment support bases, blocking, and similar members in connection with roofing.
4. Plywood backing panels.

2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
 2. Nailers.
 3. Rooftop equipment bases and support curbs.
 4. Cants.
 5. Furring.
 6. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber of any species.
1. Hem-fir (north); NLGA.
 2. Mixed southern pine; SPIB.
 3. Spruce-pine-fir; NLGA.
 4. Hem-fir; WCLIB or WWPA.
 5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
 6. Western woods; WCLIB or WWPA.
 7. Northern species; NLGA.
 8. Eastern softwoods; NeLMA.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content Construction or No. 2 grade of any species.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.5 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.

- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Metal Framing: ASTM C 1002, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.
- D. Do not splice structural members between supports unless otherwise indicated.
- E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- F. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
 - 1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
 - 2. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.
 - 3. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet (6 m) o.c.
- G. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

- H. Comply with AWWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber. Use materials acceptable to preservative manufacturer.
- I. Securely attach carpentry work to substrate by anchoring and fastening as indicated.
- J. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WOOD SLEEPER, BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

END OF SECTION 06 10 53

SECTION 07 53 23 – EPDM ROOF SYSTEM**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY**A. Section Includes:**

1. Self-Adhered EPDM membrane roofing system.
2. Vapor barrier membrane.
3. Roof insulation.
4. Protection / cover boards

B. Related Sections:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 076200 "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
3. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

- A. EPDM: Ethylene Propylene Diene Monomer.
- B. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7. The risk factor for this project is 3 / 4, The wind zone for this project 137 mph.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Base flashings and membrane terminations.
 - 2. Tapered insulation, including slopes.
 - 3. Roof plan showing orientation of concrete roof deck and orientation of membrane roofing.
 - 4. Tapered insulation and cricket insulation layouts.
- C. Samples for Verification: For the following products:
 - 1. Sheet roofing, including T-shaped side and end lap seam.
 - 2. Roof insulation.
 - 3. Walkway pads or rolls.
- D. Qualification Data: For qualified Installer and manufacturer.
- E. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - 1. Submit evidence of compliance with performance requirements.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.
- G. Field quality-control reports.
- H. Insulation Certification: Provide certification letter from roofing manufacturer that insulation is compatible with the membrane roofing system.
- I. Maintenance Data: For roofing system to include in maintenance manuals.
- J. Warranties: Sample of special warranties.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For membrane roofing system to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is FM Approvals approved for membrane roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

- C. Source Limitations: Obtain components including roof insulation, fasteners, adhesives for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer].
- D. Exterior Fire-Test Exposure: ASTM E 108, Class A for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- E. Fire-Resistance Ratings: Where indicated, provide fire-resistance-rated roof assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.9 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.10 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.
 - 1. Special warranty includes edge metal, membrane roofing, base flashings, roof insulation, fasteners, cover boards, vapor retarders, and other components of membrane roofing system.
 - 2. Warranty Period: 25 years from date of Substantial Completion.
 - 3. Wind speed warranty shall be for 90 mph by the roofing manufacturer as measured 12 meters above grade

PART 2 - PRODUCTS**2.1 EPDM MEMBRANE ROOFING**

- A. EPDM: ASTM D 4637, Type II, scrim or fabric internally reinforced, uniform, flexible EPDM sheet.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Firestone Building Products Company – RubberGard.
 - b. Carlisle SynTec Incorporated.
 - c. Approved Equal.
 2. Thickness: 60 mils, nominal.
 3. Exposed Face Color: Black.

2.2 AUXILIARY MEMBRANE ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. Plastic Foam Adhesives: 50 g/L.
 - b. Insulation and Panel Adhesives: 50 g/L.
 - c. Multipurpose Construction Adhesives: 70 g/L.
 - d. Fiberglass Adhesives: 80 g/L.
 - e. Contact Adhesive: 80 g/L.
 - f. Other Adhesives: 250 g/L.
 - g. Single-Ply Roof Membrane Sealants: 450 g/L.
 - h. Nonmembrane Roof Sealants: 300 g/L.
 - i. Sealant Primers for Nonporous Substrates: 250 g/L.
 - j. Sealant Primers for Porous Substrates: 775 g/L.
- B. Sheet Flashing: Manufacturer's standard 60-mil- (1.5-mm-) thick EPDM, partially cured or cured, according to application.
- C. Bonding Adhesive: Manufacturer's low VOC adhesive where necessary.
- D. Seaming Material: Single-component, butyl splicing primer or manufacturer's standard, synthetic-rubber polymer primer and 6-inch- (150-mm-) wide minimum, butyl splice tape with release film.
- E. Lap Sealant: Manufacturer's standard, single-component sealant, colored to match membrane roofing, as required.
- F. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.
- G. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.

- H. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick (25 mm wide by 1.3 mm thick), pre-punched.
- I. Fasteners: Factory-coated steel heavy duty fasteners and metal plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening reinforced perimeter fastening (RPF) strip to substrate, and acceptable to membrane roofing system manufacturer.
- J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.3 PROTECTION OR COVER BOARD

- A. Protection or Cover Board: ASTM C 1289, Type II, Class 4, Grade 2, high density, closed-cell, polyisocyanurate foam and coated glass facers, 1/2 inch thick (12.7 mm) with a compressive strength of 80 PSI, and a LTTR R-Value of 2.5.
 - 1. Products: Subject to compliance with requirements, provide the following include, but are not limited to, the following:
 - a. Firestone Building Products; ISOGARD HD Cover Board or an approved or equal.
- B. Foam Adhesive: Two-component low-rise polyurethane adhesive solvent free and VOC free insulation adhesive (I.S.O. Twin Pack Adhesive as manufactured by Firestone Building Products or equal) for installing insulation to concrete decks and cover boards to polyisocyanurate at designated areas.

2.4 VAPOR BARRIER MEMBRANE

- A. Self-Adhered Vapor Barrier: ASTM E 2178 and ASTM D 1970, 30 mils SBS modified bitumen adhesive, factory laminated to a tri-laminated woven, high density polyethylene top surface, class I vapor retarder (perm rating = .02) "V-Force" vapor barrier membrane as manufactured by Firestone Building Products or equal.
 - 1. Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
 - 2. All joints and terminations must be sealed with manufacturers tape.

2.5 ROOF INSULATION resistance per ASTM D3273.

- 1. Density shall be 20 psi.
 - 2. Provide 4.0" minimum tapered thickness at low points on designated roof areas that have existing insulation totally removed down to existing roof deck substrate as is indicated on the drawings.
- B. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) with a 4" minimum thickness at low points at locations indicated on drawings or unless otherwise indicated on the drawings.

- C. Provide preformed polyisocyanurate saddles, crickets, tapered edge strips, and other insulation shapes were indicated for sloping to drain. Fabricate to 1/2 inch per 12 inches (1:24) slopes unless otherwise indicated on the drawings.

2.6 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.
- B. Foam Adhesive: Two-component low-rise polyurethane adhesive solvent free and VOC free insulation adhesive (I.S.O. Twin Pack Adhesive as manufactured by Firestone Building Products or equal) for installing insulation to concrete decks and cover boards to polyisocyanurate at designated areas.

2.7 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads, approximately 3/16 inch (5 mm) thick, and acceptable to membrane roofing system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 3. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
 4. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
 5. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. At designated areas remove existing roof system down to existing roof system substrates located on concrete deck as indicated on the roof system types on the drawings.
- B. Clean substrate of gravel, dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

- C. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- D. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.3 PROTECTION BOARD INSTALLATION

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Loosely butt substrate boards together.
 - 1. Adhere protection board to top layer of insulation to resist uplift pressure at corners, perimeter, and field of roof according to roofing system manufacturers' requirement to meet uplift pressures.

3.4 VAPOR BARRIER MEMBRANE INSTALLATION

- A. Self-Adhering-Sheet Vapor Barrier Membrane: Prime substrate. Install self-adhering-sheet vapor retarder over area to receive vapor retarder, side and end lapping each sheet a minimum of 3-1/2 inches (90 mm) and 6 inches (150 mm), respectively. Seal laps by rolling.
- B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into membrane roofing system.

3.5 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 3.0 inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
 - 1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
- G. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
 - 1. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

- H. Install protection boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction.
1. Adhere protection boards according to requirements of ASCE-7 requirements and 25 year/90 MPH warranty.
 2. All perimeter edge securement of membrane with RPS strip shall be 9" o.c. with heavy duty fasteners.

3.6 SELF-ADHERED MEMBRANE ROOFING INSTALLATION

- A. Self-adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions. Unroll membrane roofing and allow to relax before installing.
- B. Start installation of roofing in presence of roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. In addition to self-adhering, mechanically fasten membrane roofing securely at terminations, penetrations, corners and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- F. Seams: Tape Seam Installation: Clean and prime both faces of splice areas, apply 6" splice tape, and firmly roll side and end laps of overlapping membrane roofing according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of membrane roofing terminations.
- G. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant or mastic bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow too partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.

- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- A. Testing Agency: Owner may engage a qualified testing agency to perform tests and inspections.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements. Contractor shall provide job in progress (JIP) reports by the roofing manufacturer to the Architect.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.11 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS <Insert name of installer> of <insert address of installer>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: <Insert name of Owner>.
 - 2. Address: <Insert address>.
 - 3. Building Name/Type: <Insert information>.
 - 4. Address: <Insert address>.
 - 5. Area of Work: <Insert information>.
 - 6. Acceptance Date: <Insert date>.
 - 7. Warranty Period: <Insert time>.
 - 8. Expiration Date: <Insert date>.

- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. Lightning;
 - b. Peak gust wind speed exceeding 90 mph (m/sec);
 - c. Fire;
 - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. Vapor condensation on bottom of roofing; and
 - g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
 2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
 4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
 5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
 6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
 7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

- E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.
1. Authorized Signature: <Insert signature>.
 2. Name: <Insert name>.
 3. Title: <Insert title>.

END OF 07 53 23

SECTION 076200 - SHEET METAL FLASHING AND TRIM**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY**A. Section Includes:****1. Manufactured Products:**

- a. Manufactured through-wall flashing and counterflashing.

2. Formed Products:

- a. Formed roof-drainage sheet metal fabrications.
- b. Formed low-slope roof sheet metal fabrications. Formed wall sheet metal fabrications.
- c. Formed equipment support flashing.
- d. Formed pan flashing and counterflashing.

B. Related Sections:

- 1. Section 061035 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
- 2. Section 075323 "EPDM Roof System" for sheet metal flashing and trim integral with EPDM membrane roof system.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Thermal Movements: Provide sheet metal flashing and trim that allows for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C)], material surfaces.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- B. Samples for Initial Selection: For each type of sheet metal flashing, trim, and accessory indicated with factory-applied color finishes involving color selection.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified fabricator.
- B. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sheet metal flashing, trim, and accessories to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.
- C. Copper Sheet Metal Standard: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

1.9 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading 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. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS**2.1 SHEET METALS**

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
- B. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 or H01 temper.
 - 1. Non-Patinated Exposed Finish: Mill.
- C. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.
 - 1. As-Milled Finish: Standard two-side bright finish.
 - 2. Exposed Coil-Coated Finishes:
 - a. Three-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 3. Color: As selected by Architect from manufacturer's full range.
 - 4. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

2.2 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
 - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
 - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 - 2. Fasteners for Copper Sheet: Copper, hardware bronze or Series 300 stainless steel.
 - 3. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Solder:
 - 1. For Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.

- D. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
- E. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.
- H. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.
- I. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.3 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
 - 1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 - 2. Obtain field measurements for accurate fit before shop fabrication.
 - 3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.
- C. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.
- D. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by SMACNA's "Architectural Sheet Metal Manual" for application, but not less than thickness of metal being secured.
- G. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

- H. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.
- I. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.
- J. Do not use graphite pencils to mark metal surfaces.

2.4 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof to Wall Transition: Fabricate from the following materials:
 - 1. Aluminum: 0.040 inch (1.02 mm) thick.
- B. Counterflashing: Fabricate from the following materials:
 - 1. Aluminum: 0.032 inch (0.81 mm) thick.
- C. Flashing Receivers: Fabricate from the following materials:
 - 1. Aluminum: 0.032 inch (0.81 mm) thick.

2.5 WALL SHEET METAL FABRICATIONS

- A. Opening Flashings in Frame Construction: Fabricate head, sill and similar flashings to extend 4 inches (100 mm) beyond wall openings. Form head and sill flashing with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:
 - 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
 - 2. Aluminum: 0.032 inch (0.81 mm) thick.

2.6 MISCELLANEOUS SHEET METAL FABRICATIONS

- A. Equipment Support Flashing: Fabricate from the following materials:
 - 1. Aluminum: 0.040 inch (1.02 mm thick).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 3. Space cleats not more than 12 inches (300 mm) apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
 4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
 5. Install sealant tape where indicated.
 6. Torch cutting of sheet metal flashing and trim is not permitted.
 7. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.
1. Coat back side of sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate wood sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
- E. Seal joints as shown and as required for watertight construction.
1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- F. Rivets: Rivet joints in uncoated aluminum where indicated and where necessary for strength.

3.3 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as

indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

- B. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending a minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.
- C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with sealant. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.
- D. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

3.4 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Opening Flashings in Frame Construction: Install continuous head, sill and similar flashings to extend 4 inches (100 mm) beyond wall openings.

3.5 MISCELLANEOUS FLASHING INSTALLATION

- A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.

3.6 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07 62 00

SECTION 077233 – ROOF HATCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Work Included: Provide factory-fabricated roof hatches for ladder access.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.
- C. Warranty: Submit executed copy of manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

- A. Manufacturer: A minimum of 5 years experience manufacturing similar products.
- B. Installer: A minimum of 2 years experience installing similar products.
- C. Manufacturer's Quality System: Registered to ISO 9001:2008 Quality Standards including in-house engineering for product design activities.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original packaging. Store materials in a dry, protected, well-vented area. Inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.

1.6 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge.

PART 2 - PRODUCTS**2.1 MANUFACTURER**

- A. Basis-of-Design Manufacturer: Type E Roof Hatch by The Bilco Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-933-8478, Web: www.bilco.com.

2.2 ROOF HATCH

- A. Furnish and install where indicated on plans metal roof hatch Type S-40, size width: 30" (762 mm) x length: 36" (914mm). Length denotes hinge side. The roof hatch shall be single leaf. The roof hatch shall be pre-assembled from the manufacturer.
- B. Performance characteristics:
1. Cover shall be reinforced to support a minimum live load of 40 psf (195kg/m²) with a maximum deflection of 1/150th of the span or 20 psf (97 kg/m²) wind uplift.
 2. Operation of the cover shall be smooth and easy with controlled operation throughout the entire arc of opening and closing.
 3. Operation of the cover shall not be affected by temperature.
 4. Entire hatch shall be weather tight with fully welded corner joints on cover and curb.
- C. Cover: Shall be 11 gauge (2.3mm) aluminum with a 3" (76mm) beaded flange with formed reinforcing members. Cover shall have a heavy extruded EPDM rubber gasket that is bonded to the cover interior to assure a continuous seal when compressed to the top surface of the curb.
- D. Cover insulation: Shall be fiberglass of 1" (25mm) thickness, fully covered and protected by a metal liner [select: 22 gauge (.8mm) paint bond G-90 galvanized steel or 18 gauge (1mm) aluminum].
- E. Curb: Shall be 12" (305mm) in height and of 11 gauge (2.3mm) aluminum. The curb shall be formed with a 3-1/2" (89mm) flange with 7/16" (11.1mm) holes provided for securing to the roof deck. The curb shall be equipped with an integral metal cap flashing of the same gauge and material as the curb, fully welded at the corners, that features the Bil-Clip® flashing system, including stamped tabs, 6" (153mm) on center, to be bent inward to hold single ply roofing membrane securely in place.
- F. Curb insulation: Shall be rigid, high-density fiberboard of 1" (25mm) thickness on outside of curb.
- G. Lifting mechanisms: Manufacturer shall provide compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe for aluminum construction welded to the curb assembly.
- H. Hardware
1. Heavy pintle hinges shall be provided.
 2. Cover shall be equipped with a spring latch with interior and exterior turn handles.
 3. Roof hatch shall be equipped with interior and exterior padlock hasps.
 4. The latch strike shall be a stamped component bolted to the curb assembly.
 5. Cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1" (25mm) diameter red vinyl grip handle to permit easy release for closing.
 6. Compression spring tubes shall be an anti-corrosive composite material and all other hardware shall be zinc plated and chromate sealed. [For installation in highly corrosive environments or when prolonged exposure to hot water or steam is anticipated, specify Type 316 stainless steel hardware].
 7. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.

- I. Finishes: Factory finish shall be mill finish aluminum.

2.3 LADDER SAFETY POST

- A. Basis-of-Design Manufacturer: Type LU Ladder Safety Post by The Bilco Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-933-8478, Web: www.bilco.com. Comply with the following:
- B. Furnish and install where indicated on plans ladder safety post Model LU-1. The ladder safety post shall be pre-assembled from the manufacturer.
- C. Performance characteristics:
 - 1. Tubular post shall lock automatically when fully extended.
 - 2. Safety post shall have controlled upward and downward movement.
 - 3. Release lever shall disengage the post to allow it to be returned to its lowered position.
 - 4. Post shall have adjustable mounting brackets to fit ladder rung spacing up to 14" (356mm) on center and clamp brackets to accommodate ladder rungs up to 1-3/4" (44mm) in diameter.
- D. Post: Shall be manufactured of high strength square tubing. A pull up loop shall be provided at the upper end of the post to facilitate raising the post.
- E. Material of construction: Shall be steel (Model LU-1).
- F. Balancing spring: A stainless steel spring balancing mechanism shall be provided to provide smooth, easy, controlled operation when raising and lowering the safety post.
- G. Hardware: All mounting hardware shall be Type 316 stainless steel.
- H. Finishes: Factory finish shall be yellow powder coat steel (Model LU-1).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
 - 1. Test units for proper function and adjust until proper operation is achieved.
 - 2. Repair finishes damaged during installation.
 - 3. Restore finishes so no evidence remains of corrective work.

3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION 07 72 33

SECTION 078413 - PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Penetrations in horizontal assemblies – rated and non-rated.
- B. Related Requirements:
 - 1. Section 017419 “Construction Waste Management Plan” for provision of waste management.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Simultaneous with the submission of the firestop system submittals, the Contractor shall schedule a pre-installation conference with the firestopping system contractor and manufacturer’s technical representative. At a minimum, the conference shall be attended by the on-site foreman of each trade whose work requires firestop systems. The purpose of the meeting shall be to answer questions, review application procedures and review the requirements for annular spaces, sleeves, etc. to ensure that they are properly installed in the walls and floors in accordance with manufacturer’s tested systems.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Product Schedule: For each through-penetration firestop system, show each type of construction condition penetrated, relationships to adjoining construction and type of penetrating item. Include firestop design designation of qualified testing and inspecting agency that evidences compliance with requirements for each condition indicated.
 - 1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each through-penetration firestop system configuration for construction and penetrating items.
 - 2. Where Project conditions require modification to a qualified testing and inspecting agency's illustration for a particular penetration firestopping condition, submit illustration, with modifications marked, approved by penetration firestopping manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly.
 - 3. A copy of the approved schedule and manufacturer’s drawings shall be maintained in the field as a guide for installation.
 - 4. For penetrations involving insulated piping, provide firestopping system that includes insulation passing through the penetration.

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- C. Product Schedule: For each penetration firestopping system. Include location, illustration of firestopping system, and design designation of qualified testing and inspecting agency.
1. Engineering Judgments: Where Project conditions require modification to a qualified testing and inspecting agency's illustration for a particular penetration firestopping system, submit illustration, with modifications marked, approved by penetration firestopping system manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly. Obtain approval of authorities having jurisdiction prior to submittal.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each penetration firestopping system, for tests performed by a qualified testing agency.

1.6 CLOSEOUT SUBMITTALS

- A. Installer Certificates: From Installer indicating that penetration firestopping systems have been installed in compliance with requirements and manufacturer's written instructions.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A firm that has been approved by FM Global according to FM Global 4991, "Approval of Firestop Contractors," or been evaluated by UL and found to comply with its "Qualified Firestop Contractor Program Requirements."

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install penetration firestopping system when ambient or substrate temperatures are outside limits permitted by penetration firestopping system manufacturers or when substrates are wet because of rain, frost, condensation, or other causes.
- B. Install and cure penetration firestopping materials per manufacturer's written instructions using natural means of ventilations or, where this is inadequate, forced-air circulation.

1.9 COORDINATION

- A. Coordinate construction of openings and penetrating items to ensure that penetration firestopping systems can be installed according to specified firestopping system design.
- B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate penetration firestopping systems.
- C. Do not cover up through-penetration firestop system installations that will become concealed behind other construction until each installation has been examined by inspecting agency, Architect, Contractor and building inspector, if required by authorities having jurisdiction.

PART 2 - PRODUCTS**2.1 PERFORMANCE REQUIREMENTS****A. Fire-Test-Response Characteristics:**

1. Perform penetration firestopping system tests by a qualified testing agency acceptable to authorities having jurisdiction.
2. Test per testing standards referenced in "Penetration Firestopping Systems" Article. Provide rated systems complying with the following requirements:
 - a. Penetration firestopping systems shall bear classification marking of a qualified testing agency.
 - 1) UL in its "Fire Resistance Directory."

2.2 PENETRATION FIRESTOPPING SYSTEMS

- A. Penetration Firestopping Systems: Systems that resist spread of fire, passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated. Penetration firestopping systems shall be compatible with one another, with the substrates forming openings, and with penetrating items if any.
- B. Penetrations in Horizontal Assemblies: Penetration firestopping systems with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg (2.49 Pa).
 1. F-Rating: At least one hour, but not less than the fire-resistance rating of constructions penetrated.
 2. T-Rating: At least one hour, but not less than the fire-resistance rating of constructions penetrated except for floor penetrations within the cavity of a wall.
 3. Non-rated Horizontal Assembly: At least one hour.
- C. Exposed Penetration Firestopping Systems: Flame-spread and smoke-developed indexes of less than 25 and 450, respectively, per ASTM E 84.
- D. VOC Content: Penetration firestopping sealants and sealant primers shall comply with the following limits for VOC content:
 1. Sealants: 250 g/L.
 2. Sealant Primers for Nonporous Substrates: 250 g/L.
 3. Sealant Primers for Porous Substrates: 775 g/L.
- E. Accessories: Provide components for each penetration firestopping system that are needed to install fill materials and to maintain ratings required. Use only those components specified by penetration firestopping system manufacturer and approved by qualified testing and inspecting agency for conditions indicated.
 1. Permanent forming/damming/backing materials.
 2. Substrate primers.
 3. Collars.
 4. Steel sleeves.

2.3 FILL MATERIALS

- A. Cast-in-Place Firestop Devices: Factory-assembled devices for use in cast-in-place concrete floors and consisting of an outer sleeve lined with an intumescent strip, a flange attached to one end of the sleeve for fastening to concrete formwork, and a neoprene gasket.
- B. Latex Sealants: Single-component latex formulations that do not re-emulsify after cure during exposure to moisture.
- C. Firestop Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.
- D. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced intumescent elastomeric sheet bonded to galvanized-steel sheet.
- E. Intumescent Putties: Nonhardening, water-resistant, intumescent putties containing no solvents or inorganic fibers.
- F. Intumescent Wrap Strips: Single-component intumescent elastomeric sheets with aluminum foil on one side.
- G. Mortars: Prepackaged dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers and lightweight aggregate formulated for mixing with water at Project site to form a nonshrinking, homogeneous mortar.
- H. Pillows/Bags: Reusable heat-expanding pillows/bags consisting of glass-fiber cloth cases filled with a combination of mineral-fiber, water-insoluble expansion agents, and fire-retardant additives. Where exposed, cover openings with steel-reinforcing wire mesh to protect pillows/bags from being easily removed.
- I. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.
- J. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants.

2.4 MIXING

- A. Penetration Firestopping Materials: For those products requiring mixing before application, comply with penetration firestopping system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning: Before installing penetration firestopping systems, clean out openings immediately to comply with manufacturer's written instructions and with the following requirements:
 - 1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of penetration firestopping materials.
 - 2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with penetration firestopping materials. Remove loose particles remaining from cleaning operation.
 - 3. Remove laitance and form-release agents from concrete.
- B. Prime substrates where recommended in writing by manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

3.3 INSTALLATION

- A. General: Install penetration firestopping systems to comply with manufacturer's written installation instructions and published drawings for products and applications.
- B. Install forming materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings.
 - 1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not forming permanent components of firestopping.
- C. Install fill materials by proven techniques to produce the following results:
 - 1. Fill voids and cavities formed by openings, forming materials, accessories and penetrating items to achieve required fire-resistance ratings.
 - 2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
 - 3. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

- A. Wall Identification: Permanently label walls containing penetration firestopping systems with the words "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS," using lettering not less than 3 inches (76 mm) high and with minimum 0.375-inch (9.5-mm) strokes.
 - 1. Locate in accessible concealed floor, floor-ceiling, or attic space at 15 feet (4.57 m) from end of wall and at intervals not exceeding 30 feet (9.14 m).

3.5 FIELD QUALITY CONTROL

- A. Owner will engage a qualified testing agency to perform tests and inspections according to ASTM E 2174.

- B. Where deficiencies are found or penetration firestopping system is damaged or removed because of testing, repair or replace penetration firestopping system to comply with requirements.
- C. Proceed with enclosing penetration firestopping systems with other construction only after inspection reports are issued and installations comply with requirements.

3.6 CLEANING AND PROTECTION

- A. Clean off excess fill materials adjacent to openings as the Work progresses by methods and with cleaning materials that are approved in writing by penetration firestopping system manufacturers and that do not damage materials in which openings occur.
- B. Provide final protection and maintain conditions during and after installation that ensure that penetration firestopping systems are without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, immediately cut out and remove damaged or deteriorated penetration firestopping material and install new materials to produce systems complying with specified requirements.

END OF SECTION 07 84 13

SECTION 07 92 00 - JOINT SEALANTS

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

- 1. Urethane joint sealants.
- 2. Latex joint sealants.

B. Related Sections:

- 1. Section 07 62 00 "Sheet Metal Flashing & Trim control and expansion joint fillers and gaskets.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
 - 1. Joint-sealant application, joint location, and designation.
 - 2. Joint-sealant manufacturer and product name.
 - 3. Joint-sealant formulation.
 - 4. Joint-sealant color.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- D. Warranties: Sample of special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Three years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Three years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
 - 1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
 - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS**2.1 MATERIALS, GENERAL**

- A. **Compatibility:** Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. **Liquid-Applied Joint Sealants:** Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- C. **Stain-Test-Response Characteristics:** Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- D. **Suitability for Contact with Food:** Where sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.
- E. **Colors of Exposed Joint Sealants:** As selected by Architect from manufacturer's full range.

2.2 URETHANE JOINT SEALANTS

- A. **Single-Component, Nonsag, Urethane Joint Sealant:** ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
 - 1. **Products:** Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. [BASF Building Systems](#); Sonolastic NP1, Sonolastic TX1, Sonolastic Ultra.
 - b. [Bostik, Inc.](#); Chem-Calk 900, 915.
 - c. [Pecora Corporation](#); Dynatrol I-XL.
 - d. [Polymeric Systems, Inc.](#); Flexiprene 1000.
 - e. [Sika Corporation, Construction Products Division](#); Sikaflex - 1a.
 - f. [Tremco Incorporated](#); Dymonic, Vulkem 116.
- B. **Single-Component, Pourable, Traffic-Grade, Urethane Joint Sealant:** ASTM C 920, Type S, Grade P, Class 25, for Use T.
 - 1. **Products:** Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. [BASF Building Systems](#); Sonolastic SL 1.
 - b. [Bostik, Inc.](#); Chem-Calk 950.
 - c. [Pecora Corporation](#); Urexpan NR-201.
 - d. [Polymeric Systems, Inc.](#); Flexiprene 952.
 - e. [Sika Corporation, Construction Products Division](#); Sikaflex - 1CSL.
 - f. [Tremco Incorporated](#); Vulkem 45.

2.3 LATEX JOINT SEALANTS

- A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF, paintable (Clear Acrylic to be used at counter to wall connections).
1. **Products:** Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. [BASF Building Systems](#); Sonolac.
 - b. [Bostik, Inc.](#); Chem-Calk 600.
 - c. [Pecora Corporation](#); AC-20+.
 - d. [Tremco Incorporated](#); Tremflex 834.

2.4 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
 - 4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
 - 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.
 - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.
1. Joint Locations:
 - a. Isolation and contraction joints in cast-in-place concrete slabs.
 - b. Other joints as indicated.
 2. Urethane Joint Sealant: Single component, pourable, traffic grade.
- B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
 - a. Construction joints in cast-in-place concrete.
 - b. Joints between plant-precast architectural concrete units.
 - c. Control and expansion joints in unit masonry.
 - d. Joints between different materials listed above.
 - e. Perimeter joints between materials listed above and frames of doors, windows and louvers.
 - f. Control and expansion joints in ceilings and other overhead surfaces.
 - g. Other joints as indicated.
 2. Urethane Joint Sealant: Single component, nonsag, Class 25.
- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints of exterior openings where indicated.
 - c. Vertical joints on exposed surfaces of interior unit masonry walls and partitions.
 - d. Perimeter joints between interior wall surfaces and frames of interior doors, windows and elevator entrances.
 - e. Perimeter joints of plumbing fixtures at walls, floors and counters.
 - f. Perimeter of countertops and backsplashes at adjacent walls.
 - g. Other joints as indicated.
 2. Joint Sealant: Latex.

END OF SECTION 07 92 00

SECTION 22 14 00 – FACILITY STORM DRAINAGE**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 WORK INCLUDED

- A. The intention of this specification and drawing plans is to provide for furnished systems, properly tested, balanced and ready for operation, including necessary minor details and accessories required to make the work complete, even though such items may not be expressly shown or specified.
- B. The work covered by this section of the specification includes the furnishing of all labor and materials and in performing all operations in connection with the installation of the plumbing work shown on the drawings and as described herein and shall be interpreted as work to be done by this contractor. Work to be performed by other trades will always be specifically referenced to a particular contractor and/or section.
- C. Without limiting generality, provided all labor, materials, and equipment for a complete plumbing system as described below:
 - 1. Storm (roof) drainage systems.
 - 2. pipe insulation, sleeving and firestopping.
 - 3. Hangers, supports, access panels.
 - 4. Core drilling, cutting and patching.
 - 5. Flushing and testing.
 - 6. Furnishing of access panels.
 - 7. Permits and fees.

1.3 REGULATORY REQUIREMENTS, CODES, ORDINANCES AND PERMITS

- A. All plumbing work shall be performed by State licensed plumber in strict accordance with authority having jurisdiction (AHJ), State & Local Codes, laws and Ordinances.
- B. This contractor shall be responsible for providing and filing all plans, specifications and other documents, pay all requisite fees and secure all permits, inspections and approvals necessary for the legal installation and operation of the system and/or equipment furnished under this section of the specifications.

1.4 INSTALLATION REQUIREMENTS

- A. The arrangement of all plumbing work shown on the drawings is diagrammatic only and indicates the minimum requirements of the work. Conditions at the building including actual measurements shall determine the details of the installation.

- B. Install all materials, accessories and equipment according to manufacturer's installation instructions for a complete and operable systems as indicated on the drawings and manufacturer's instructions.
- C. All miscellaneous structural supports required for plumbing equipment installation shall be provided by plumbing contractor. Install all piping below ductwork unless clearance condition requires piping to be above.
- D. Contractor shall drain existing system as required to perform new work and connections. Once work is complete, the contractor shall flush, fill, test and balance all systems.
- E. Piping and Equipment Identification: Provide and install identification manufactured by Seton, Brady or Brimar. For piping, use black laminated phenolic tags 2 inches in diameter with incised letters 3/8 inch high, use brass "S" hooks and/or brass chain to attach to valve, use printing 1/8 inch high for charts, place charts in metal frame with non-glare glass. Use black laminated phenolic name plates 6 inches long X 3 inches high with white incised lettering; ½ inch high for equipment. Attach to equipment with stainless steel or brass screws or rivets.

PART 2 – PRODUCTS

2.1 PIPING:

- A. New storm drainage piping shall be solid core PVC DWV pipe, ASTM D 2665, Socket Type, made to ASTM D 3311, Drain, Waste, and Vent patterns. Cellular "Foam" core PVC piping shall not be installed.
- B. Include the wrapping of PVC piping within existing plenums with blanket type insulation, similar to "Fyrewrap". Verify locations of existing plenums in field.
- C. Provide all necessary supports, hangers, braces, anchors, pads, and all else necessary for the entire installation and to meet the intent of the systems for proper operation.
- D. Pipe and equipment suspension shall be such as to prevent excessive stress, excessive variation in supporting force, possible resonance with imposed vibration while the system is in operation, creeping, sagging, buckling, or misalignment.
- E. Systems shall operate under all conditions of load without any objectional sound or vibration.
- F. Openings in exterior walls or roof shall be kept properly plugged and caulked at all times, except when being worked on to preclude the possibility of flooding due to storm or other causes. After completion of work, openings shall be permanently sealed and caulked in a manner approved by the Engineer or Architect.
- G. Provide D-Electric fittings between dissimilar metals.

2.2 INSULATION:

- A. All insulation when installed shall have composite fire and smoke hazard ratings as tested by procedure ASTM-E-84, NFPA – 255, and UL – 723, not exceeding a flame spread of 25 and smoked developed of 50 when compared with red oak as 100, as approved under NFPA and NBFU pamphlet No. 90A and No.90B standards.

- B. All horizontal roof drainage pipe, roof drain bodies and the bend into vertical position shall be insulated in the manner described for cold and hot water.
- C. Piping insulation materials as manufactured by Gustin-Bacon, Johns Manville, Owens-Corning, Knauf, or Certainteed are acceptable.
- D. Above Ground Piping Insulation Thickness:
 - 1. Horizontal Roof Drainage: ½ inch thick.

2.3 IDENTIFICATION, MARKING AND TAGGING:

A. PIPING SYSTEM IDENTIFICATION:

- 1. Piping systems shall be identified as indicated herein or as required by applicable codes and/or officials having jurisdiction.
- 2. Pipe markers shall be color coded according to "Table 2: Classification of materials and designations to colors" – ANSI A13.1 – 1981.
- 3. Pipe markers shall indicate direction of flow, system, operating pressure and temperature.
- 4. Pipe markers shall be of the pressure sensitive type as manufactured by the Seton Nameplate Corp. (F10 -Code).
- 5. Pipe markers shall be installed at every point of entry and exit through floors, walls, ceilings or other cealment, on each riser, take-off and branch and at each piece of equipment.
- 6. Install pipe markers at a distance of not less than 25 feet apart in continuous lengths of pipe lines and oriented so that markers are clearly visible. When pipe lines are located above the normal line of vision, the marker shall be placed below the horizontal centerline of the pipe.

2.4 SLEEVES, INSERTS AND ESCUTCHEONS:

- A. Provide sleeves for all work passing through floor, wall, and ceiling construction. Maintain all ratings.
- B. Where pipe motion due to expansion and contraction will occur, make sleeves of sufficient diameter to permit free movement of pipe. Where all sleeves pass insulated pipes, the sleeves shall be large enough to pass the pipe and the insulation. Check floor and wall construction finishes to determine proper length of sleeves for various locations.
- C. Escutcheon plates shall be provided for all exposed to view uninsulated pipes passing through walls, floors, and ceilings. Plates shall be nickel plated, or the split ring type, of size to match the pipe. Where plates are provided for pipes passing through sleeves which extend above the floor surface, provide deep recessed plates to conceal pipe sleeves.

PART 3 – EXECUTION

3.1 DRAINAGE:

- A. The interior drainage systems shall be constructed using materials and methods as specified and/or indicated.
- B. Drain piping shall be uniformly pitched to conform with State and local plumbing code.
- C. Carefully inspect for damaged materials. Run piping as shown on the drawings, make changes in direction with long sweep 1/8 or 1/16 bends. Connections to stacks may be with sanitary T-Fittings.

3.2 CUTTING AND PATCHING:

- A. Provide all cutting and patching necessary to install the work specified in this division. Patching shall match adjacent surfaces.
- B. Saw cut, channel, chase, and core-drill floors, walls, partitions, ceilings, and other surfaces necessary for plumbing installation. Perform cutting by skilled mechanics of the trade involved. Repair cut surfaces to match adjacent surfaces.
- C. Firestop all penetrations between floors and fire rated walls.

3.3 TESTING:

- A. All plumbing systems located in the scope of the project shall be tested and repaired by this contractor. Testing of all systems shall be done at the expense of the plumbing contractor, and with equipment furnished by them. Testing shall be in the presence of duly authorized inspectors and the Owner's representative with 48-hour notice given to these authorities. All systems shall be repaired and retested until requirements are met, without additional expense to the Owner.
- B. New drainage piping shall be hydrostatically tested in accordance with local plumbing inspector requirements and as per the state plumbing code.

END OF SECTION 22 14 00

SECTION 22 14 26 – RETROFIT ROOF DRAINS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Retrofit roof drains.

1.3 RELATED REQUIREMENTS

- A. Section 22 14 00 – Facility Storm Drainage.

1.4 REFERENCE STANDARDS

- A. Single Ply Roofing Industry (SPRI):
 - 1. ANSI/SPRI RD-1 – Performance Standard for Retrofit Drains.

1.5 SUBMITTALS

- A. Comply with Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including installation instructions.
- C. Shop Drawings: Submit manufacturer's shop drawings, including plans, elevations, sections, and details, indicating dimensions, materials, hardware, and installation layout including sizes and spacing.
- D. Samples: Submit manufacturer's sample of retrofit roof drains.
- E. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- F. Warranty Documentation: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 5 years, in manufacture of retrofit roof drains of similar type to that specified.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:

1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
3. Store materials in clean, dry area indoors.
4. Protect materials during storage, handling, and installation to prevent damage.

PART 2 - PRODUCTS

2.1 RETROFIT ROOF DRAINS

A. One-piece spun aluminum body and heavy duty cast aluminum strainer dome and clamping ring with drain flange assembly and watertight backflow compression mechanical seal assembly.

1. Manufacturer: Subject to compliance with requirements, provide "Hercules EPDM RetrofitDrain" as manufactured by OMG, Inc., 153 Bowles Road, Agawam, Massachusetts 01001, 1-800-633-3800, www.olyfast.com or equal.
 - a. Size: 3 inches; field verify and confirm this size in field.
 - b. Compliance: ANSI/SPRI RD-1.
 - c. Drain Body:
 1. Material: 1-piece, 11-gauge (0.125-inch) spun aluminum.
 2. Flange: 17-1/2-inch diameter
 3. Drain Stem Length: 12 inches minimum; field verify and confirm required stem length.
 4. Flange Includes:
 - a. Three 1-1/2-inch high strainer retaining clips.
 5. sump Area: Depressed.
 - d. Strainer Dome:
 1. Material: Cast Aluminum.
 2. Height: 7.25 inches.
 3. Outside Base Diameter: 9.77 inches.
 4. Inlet Area: 72 square inches.
 - e. Backflow Seal:
 1. Compression Seal: Watertight, "U-Flow" mechanical seal.
 2. Material: Polyamide and EPDM rubber.
 3. Required for Activation: "U-Flow" screwdriver.
 - f. Hardware:
 1. Fasteners: 3, push-in fasteners to attach strainer to retaining clips.

B. Accessories:

1. Screwdriver: "U-Flow".
 - a. Shaft: 12-1/2 inches long.
 - b. Socket Tip: #2 square.
 - c. Reach base of drain stem to activate backflow seal.
2. Flow Control: "FlowControl".
 - a. Aluminum attachment to reduce flow capacity of retrofit drains to 10 gpm under 4-inch head of water.
 - b. Welded to flange by manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine existing roof drains to receive retrofit roof drains.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until all unacceptable conditions are corrected.

3.2 PREPARATION

- A. Remove clamping ring, strainer dome, and bolts from existing roof drain assembly and discard in accordance with local and State regulations.
- B. Clean existing drain leader pipe of bitumen, dirt, and debris in accordance with retrofit roof drain written instructions.
- C. Field verify that all the existing roof drains scheduled to receive the retrofit roof drain assemblies are free flowing and are unobstructed. Report findings to the Architect prior to installing any of the new retrofit roof drains.

3.3 INSTALLATION

- A. Install retrofit roof drains in accordance with manufacturer's written instructions at locations indicated on the Drawings.
- B. Install retrofit roof drains into existing drain leaders in accordance with manufacturer's written instructions,
- C. Install roof system flashings in accordance with membrane roofing manufacturer's written instructions.
- D. Install retrofit roof drains to provide watertight connection to existing plumbing and membrane roofing systems.

3.4 PROTECTION

- A. Protect installed retrofit roof drains to ensure that, except for normal weathering, retrofit roof drains will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 22 14 26

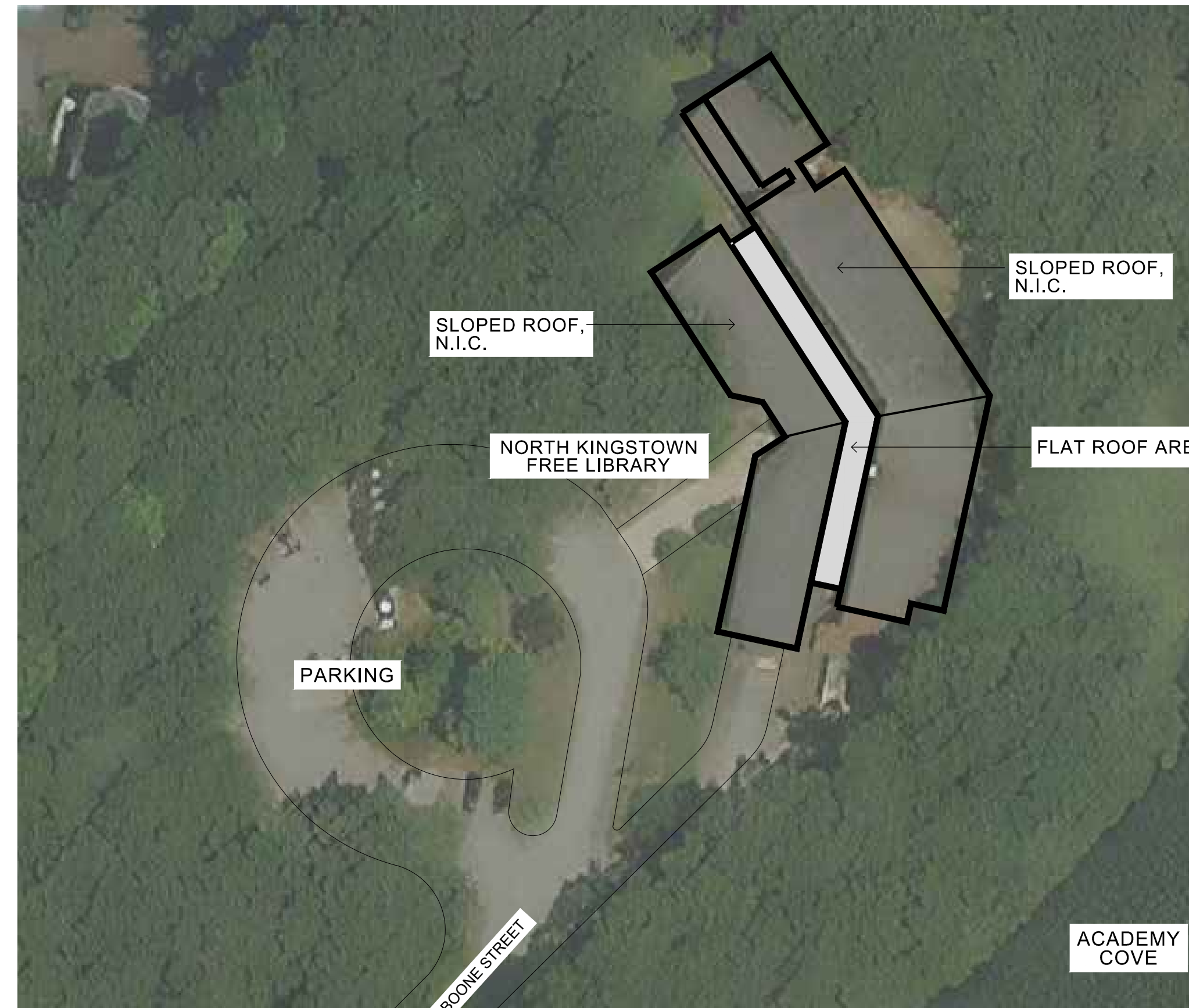
Membrane Roof Replacement for North Kingstown Free Library

100 Boone Street, North Kingstown, Rhode Island

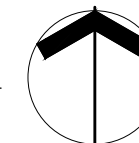
JUNE 18, 2021



Edward Rowse
ARCHITECTS
■ East Providence Rhode Island ■



VICINITY MAP
NOT TO SCALE



LIST OF DRAWINGS

T1	TITLE SHEET	1 OF 8
ARCHITECTURAL		
A0.0	ABBREVIATIONS, LEGEND, NOTES & ROOF TYPE	2 OF 8
A1.0	OVERALL EXISTING ROOF PLAN	3 OF 8
A1.1	DEMOLITION ROOF PLAN	4 OF 8
A1.2	ROOF PLAN & DETAILS	5 OF 8
A1.3	OVERALL MAIN LEVEL FLOOR PLAN & PARTIAL LARGE SCALE PLAN	6 OF 8
A1.4	OVERALL MAIN LEVEL CEILING PLAN & PARTIAL LARGE SCALE CEILING PLAN	7 OF 8
A2.0	ROOF DETAILS	8 OF 8

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Membrane Roof Replacement for
North Kingstown Free Library
100 Boone Street, North Kingstown, Rhode Island

SET NUMBER
5
JUNE 18, 2021

Abbreviations

A/C	AIR CONDITIONING	ELEV	ELEVATOR	MAS	MASONRY	RH	RIGHT HAND
ACT	ACOUSTICAL TILE	EMER	EMERGENCY	MAX	MAXIMUM	RISBC	RHODE ISLAND STATE BUILDING CODE
ADDTL	ADDITIONAL	ENGL	ENCLOSURE	MB	MARKER BOARD	RL	ROOF LEADER
AFP	ABOVE FINISH FLOOR	EP	ELECTRICAL PANEL	MBL	MARBLE TILE	RM	ROOM
ALT	ALTERNATE	EPXY	EPOXY SEALING SYSTEM	MC	MEDICINE CABINET	RO	ROUGH OPENING
ALUM	ALUMINUM	EQ	EQUAL	MDF	MEDIUM DENSITY FIBERBOARD	RT	RUBBER TILE
ANG BLT	ANCHOR BOLT	EQUIP	EQUIPMENT	MDO	MEDIUM DENSITY OVERLAY	RTU	ROOF TOP UNIT
APPROX	APPROXIMATE	ER	EXISTING TO REMAIN	MEGH	MECHANICAL MANUFACTURER	S	SEALANT
ARCH	ARCHITECT	EXH	EXHAUST	MFR	MANUFACTURER	SCH	SCHEDULE
ARGB	ABUSE RESISTANT GB	EXIST	EXISTING	MH	MANHOLE	SCR	SHOWER CURTAIN ROD
ASPH	ASPHALT	EXP	EXPANSION	MN	MIRROR	SCA	SOLID CORE WOOD
		EXT	EXTERIOR	MISC	MISCELLANEOUS	SD	SOAP DISPENSER
BC	BRICK COURSE	EXPT	EPOXY PAINT	ML	MATCH LINE	SECT	SECTION
B.O.	BOTTOM OF	EXT	EXTERIOR	MO	MASONRY OPENING	SF	SQUARE FEET
BD	BOARD	EN	EACH WAY	MRGB	MOISTURE RESISTANT GB	SM	SIMILAR
BITUM	BITUMINOUS	ENX	ELECTRIC WATER COOLER	MS	METAL STUD	SND	SANITARY NAPKIN DISPENSER
BLDG	BUILDING	ENX	ELECTRIC WATER COOLER	MTD	MOUNTED	SNV	SANITARY NAPKIN VENDOR
BLK	BLOCK	FACP	FIRE ALARM CONTROL PANEL	MTL	METAL	SPEC	SPECIFICATION
BLKG	BLOCKING	FB	FIRE BLANKET	MTP	METAL TOILET PARTITION	SG	SQUARE
BM	BENCH MARK	FD	FLOOR DRAIN	MW	MOLDED WOOD FIBERBOARD	SS	STAINLESS STEEL
BOF	BOTTOM OF FOOTING	FE	FIRE EXTINGUISHER	MNF	MULTI-COLOR WALL PAINT	STD	STANDARD
BOTT	BOTTOM	FF	FIRE FLOOR ELEVATION	NA	NOT APPLICABLE	STL	STEEL
BRG	BRICK	FRP	FIBER/GLASS REINFORCED POLYESTER FLASHING	NC	NOT IN CONTRACT	STOR	STORAGE
BRK	BRICK	FLR	FLOOR	NG	NOT IN CONTRACT	STRUCT	STRUCTURE or STRUCTURAL
BS	BRICK SHELF	FLR	FLOOR	NOM	NOMINAL	SUSP	SUSPENDED or SUSPENSION
BSMT	BASEMENT	FLR	FLOOR	NTS	NOT TO SCALE	SV	SHEET VINYL
		FLJCR	FLUORESCENT MATERIAL	NUM	NUMBER	T	TREAD
CAB	CABINET	FLND	FOUNDATION	NAV	NEW	TB	TO BE ABANDONED
CB	CEMENT BOARD	FOC	FACE OF CONCRETE	OA	OVERALL	TBA	TO BE ABANDONED
CDM	CAVITY DRAINAGE MATERIAL	FOF	FACE OF FINISH	OC	ON CENTER	TBB	TILE BACKER BOARD
		FOG	FACE OF GYPSUM BOARD	OD	OUTSIDE DIAMETER	TBD	TO BE DETERMINED
CH	CEILING HEIGHT	FOJ	FACE OF JOIST	OH	OPPOSITE HAND	TEL	TELEPHONE
CF	CAST IN PLACE	FR	FIRE RETARDANT	OPNG	OPENING	THK	THICK or THICKNESS
CJ	CONTROL JOINT	FR	FIRE RETARDANT	OPPHND	OPPOSITE HAND	THOLD	THRESHOLD
C	CENTER LINE	FTS	FOOTING	OPP	OPPOSITE	TOC	TOP OF CURB
CL	CLOSET or CHAIN LINK	FUR	FURRING	OSB	ORIENTED STRAND BOARD	TOL	TOP OF LANDING
CLG	CELLING	GA	GAUGE	ON	OPERABLE WALL	TOP	TOP OF PLATE
CLG	CELLING	GB	GYPSUM BOARD	PART BD	PARTICLE BOARD	TOE	TOP OF TOE
CLR	CLEAR	GC	GENERAL CONTRACTOR	PCP	PREFABRICATED CONCRETE PLANK	TON	TOP OF WALL
CMU	CONCRETE MASONRY UNIT	GALV	GALVANIZED	PERM	PERIMETER	TS	TUBULAR STEEL
CNTR	COUNTER	GL	GLASS	PL	PLASTER or PROPERTY LINE	TTD	TOILET TISSUE DISPENSER
CO	CASED OPENING	GLZ	GLAZED BLOCK	PLAM	PLASTIC LAMINATE	TY	TO WEATHER
COL	COLUMN	GLB	GLASS BLOCK	PLAS	PLASTIC	TYP	TYPICAL
COMP	COMPOSITION	GN	GOOSENECK	PLND	PLYWOOD	UC	UNDERCUT
CONC	CONCRETE	GWB	GYPSUM WALL BOARD	PLJF	PREFABRICATED JOINT FILLER	UNO	UNLESS NOTED OTHERWISE
CONST	CONSTRUCTION	GYP	GYPSUM WALL BOARD	PNT	PAINT	UV	UNIT VENTILATOR
CONT	CONTINUOUS	HC	HANDICAP	PNTD	PAINTED	VB	VINYL WALL BASE
CONV	CONVEYOR	HD	HEAVY DUTY	PR	PAIR	VGT	VINYL COMPOSITION TILE
CORR	CORRIDOR	HDNR	HARDWARE	PREFIN	PREFINISHED	VERT	VERTICAL
COORD	COORDINATE	HM	HOLLOW METAL	PSF	POUNDS PER SQUARE FOOT	VEST	VESTIBULE
		HOR	HORIZONTAL	PT	PRESSURE TREATED	VIF	VERIFY IN FIELD
CPT	CARPET	HP	HIGH POINT	PTD	PAPER TOYEL DISPENSER	VPB	VENEER PLASTER BASE
CT	CERAMIC TILE	HTR	HEATER	PTN	PARTITION	VS	VENT STACK
CD	CLOTHES DRYER	HVAC	HEATING, VENTILATING, AIR CONDITIONING	PVC	POLYVINYL CHLORIDE	VT	VENT TREAD
CN	CLOTHES WASHER	ID	INSIDE DIAMETER	PVMT	PAVEMENT	VTS	VINYL TRANSITION STRIP
		INFO	INFORMATION	QT	QUARTY TILE	VWB	VINYL WALL BASE
D	DRYER	INSUL	INSULATION / INSULATED	R 4 D	REMOVE & DISPOSE	VWC	VINYL WALL COVERING
DBL	DOUBLE	INT	INTERIOR	R 4 R	REMOVE & REPLACE	W	WASHER
DEMO	DEMOLITION	INV	INVERT	R 4 S	REMOVE & SALVAGE	W/	WITH
D1	DRAIN INLET	JST	JOIST	R	RADIUS/RISER	W/O	WITHOUT
DIAG	DIAGONAL	JT	JOINT	RB	RUBBER MAT	W/	WITH (WHITE) BOARD
DIAM	DIAMETER	REF	REFURBISH	RD	ROOF DRAIN	W/	WITH WATER CLOSET
DIAM	DIAMETER	REFURB	REFURBISH	REF	REFRIGERATOR	W/	WITH WOOD
DM	DIMENSION	REFURB	REFURBISH	REFURB	REFURBISH	WF	WIRE FABRIC
DL	DRAIN LEADER	REINFC	REINFORCEMENT	RES	RESILIENT	WG	WIRE GLASS
DN	DOWN	REQD	REQUIRED	REQD	REQUIRED	WP	WORK POINT
D-PART	DEMOUNTABLE PARTITION	(CONTINUED...)		R 4 D	REMOVE & DISPOSE	WP6	WATERPROOFING
DR	DOOR			R 4 R	REMOVE & REPLACE	WST	WOOD STUD
DS	DOWNSPOUT			R 4 S	REMOVE & SALVAGE	WT	WEIGHT
DTL	DETAIL			R	RADIUS/RISER	WVF	WELDED WIRE FABRIC
DWG	DRAWING			RB	RUBBER MAT		
DW	DISHWASHER			RD	ROOF DRAIN		
				REF	REFRIGERATOR		
EA	EACH			REFURB	REFURBISH		
EAF	EACH FACE			REINFC	REINFORCEMENT		
EIFS	EXTERIOR INSULATED FINISH SYSTEM			RES	RESILIENT		
EJ	EXPANSION JOINT			REQD	REQUIRED		
ELEC	ELECTRIC			(CONTINUED...)			
EL	ELEVATION						
	(CONTINUED...)						

GENERAL DEMOLITION NOTES:

- CONTRACTOR SHALL VISIT THE SITE TO VERIFY AND BE FULLY AWARE OF EXISTING CONDITIONS PRIOR TO BID. CONTRACTOR SHALL IDENTIFY ALL EXISTING ITEMS OF WORK SCHEDULED TO REMAIN OR SALVAGED FOR REUSE.
- ALL DEMOLITION WORK AND DISPOSAL OF ALL DEMOLISHED MATERIALS SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED DEMOLITION PERMITS.
- COORDINATE ALL DEMOLITION OPERATIONS WITH OWNER FOR SHUTDOWN PERIODS AND SEQUENCE OF WORK. ARRANGE WITH OWNER AND / OR APPROPRIATE UTILITIES FOR SERVICE SHUT-OFFS BEFORE BEGINNING DEMOLITION OPERATIONS. PROVIDE TEMPORARY DUST PARTITIONS, WEATHER BARRICADES AT EXTERIOR BUILDING OPENINGS DUE TO DEMOLITION WORK TO PROTECT BUILDING INTERIORS AND PROTECTIVE ENCLOSURES REQUIRED TO PROPERLY SECURE, ISOLATE AND WEATHERPROOF AREAS OF WORK AND EXISTING AREAS AND ELEMENTS TO REMAIN. CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT CAUSES NO DISRUPTION TO THE CONTINUOUS OCCUPATION OF THE BUILDING AND SITE FOR ITS INTENDED PURPOSE. PROVIDE ADDITIONAL MEASURES TO PREVENT THE MIGRATION OF DUST INTO ADJACENT SPACES.
- THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING WILL BE OCCUPIED. FIRE ALARM SYSTEM SHALL REMAIN OPERATIONAL DURING CONSTRUCTION TO PROVIDE PROTECTION AND NOTIFICATION TO THE BUILDING OCCUPANTS. CONTRACTOR SHALL PROVIDE ALL COSTS TO SHUT-OFF AND RE-ACTIVATE FIRE ALARM SYSTEM ON A DAILY BASIS DURING CONSTRUCTION IF NECESSARY.
- ALL ITEMS SCHEDULED TO BE SALVAGED FOR REUSE SHALL BE REMOVED WITH CARE, STORED AND PROTECTED FROM DAMAGE UNTIL INCORPORATED INTO THE NEW WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPLACE AND / OR RESTORE ANY ITEMS SCHEDULED FOR SALVAGE AND REUSE THAT ARE DAMAGED DURING THE COURSE OF CONTRACT OPERATIONS. THE OWNER SHALL BE THE SOLE JUDGE OF SUITABILITY OF ITEMS SALVAGED FOR REUSE IN THE WORK.
- IT IS NOT THE INTENT TO SHOW EVERY PIECE OR ITEM TO BE REMOVED IN DEMOLITION WORK. MECHANICAL, ELECTRICAL, PLUMBING AND OTHER WORK RELATED TO A WALL OR OTHER DEMOLITION ITEM SHALL BE REMOVED WHETHER INDICATED OR NOT.
- ALL EXISTING ITEMS SCHEDULED TO REMAIN DURING CONSTRUCTION SHALL BE TEMPORARILY SUPPORTED AND PROTECTED.
- THE EXTENT OF ALL SPECIFIC DEMOLITION WORK SHALL BE COORDINATED WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR TO PATCH, REPAIR AND REFINISH ALL SURFACES EXPOSED BY DEMOLITION WORK WITH MATERIALS AND METHODS TO MATCH THE EXISTING FINISH AND MAKE FLUSH WITH THE EXISTING ADJACENT SURFACES. WORK SHALL INCLUDE ALL LABOR AND MATERIALS ON ALL SURFACES REQUIRED TO RENDER SUBSTRATES ACCEPTABLE TO RECEIVE NEW FINISHES SPECIFIED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- WHERE EXISTING FINISHES ARE INDICATED TO REMAIN AS BASE MATERIALS, REMOVE ALL PROJECTIONS AND FILL ALL VOIDS; SECURE OR REMOVE AND REPLACE ANY EXISTING LOOSE OR OTHERWISE UNSUITABLE SUBSTRATE MATERIALS AS OCCURS.
- TERMINATE, CAP, REMOVE AND MAKE SAFE ALL ABANDONED MECHANICAL, ELECTRICAL AND PLUMBING ITEMS BACK TO THEIR SOURCE.
- CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE EXECUTION OF THE DEMOLITION WORK INDICATED.
- ALL EXISTING SURFACES NOT SCHEDULED FOR DEMOLITION OR REFINISHING WHICH BECAME DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO MATCH THE ORIGINAL EXISTING CONDITION TO THE SATISFACTION OF THE OWNER.
- REMOVE ALL DEMOLISHED MATERIALS NOT SCHEDULED FOR SALVAGE OR REUSE IN ACCORDANCE WITH LOCAL REGULATIONS. ALL SCHEDULED ITEMS TO BE TURNED OVER TO THE OWNER, SHALL BE PROTECTED DURING DEMOLITION OPERATIONS AND DELIVERED TO THE APPROPRIATE PARTY IN UNDAMAGED CONDITION.

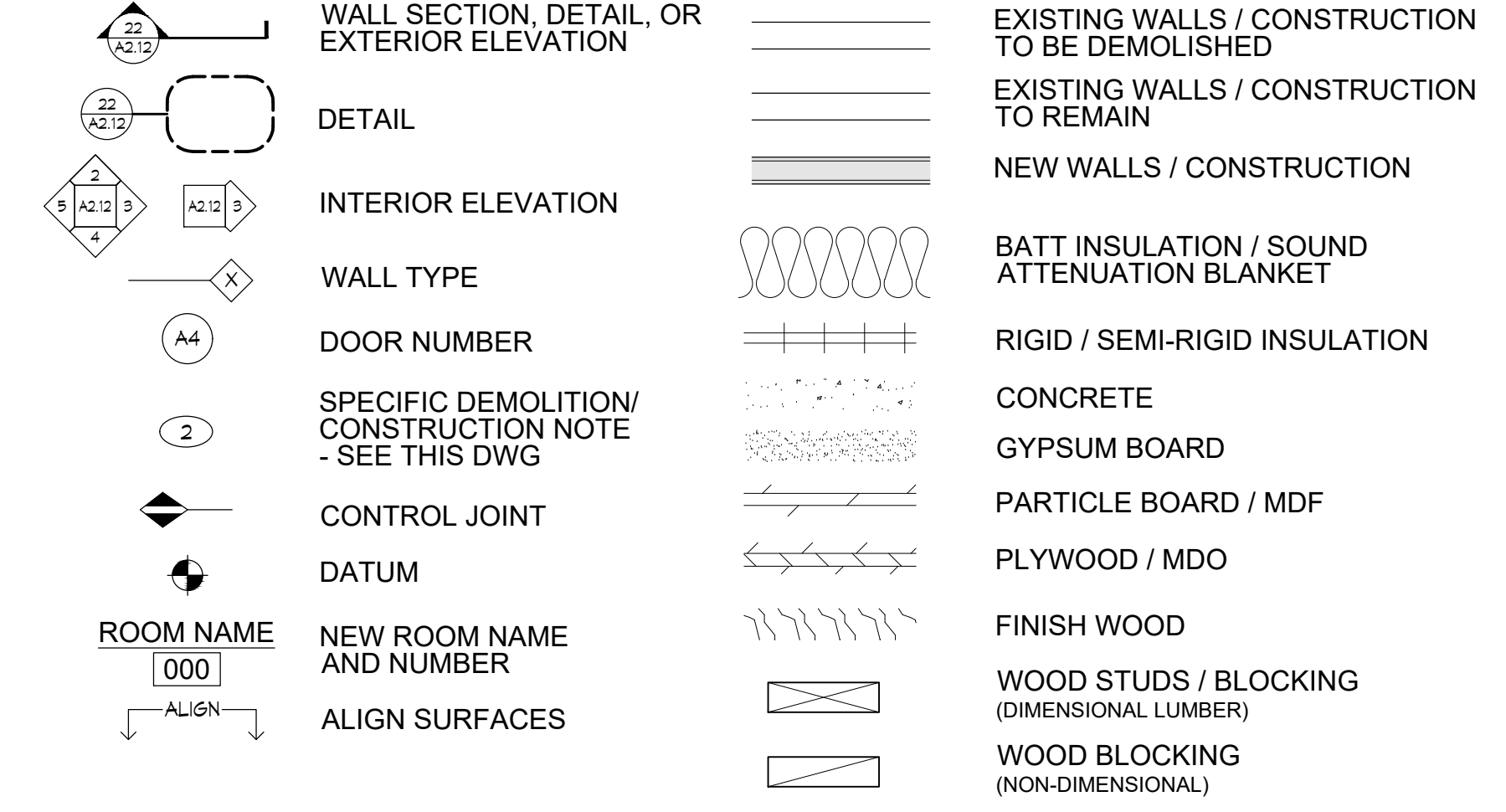
GENERAL CONSTRUCTION NOTES:

- LANDSCAPE AREA DAMAGED BY CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION UPON COMPLETION OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR LEVELING, LOAM, SEED, SOG ETC. AS REQUIRED TO ACHIEVE A CONDITION APPROVED BY OWNER'S ARCHITECT.

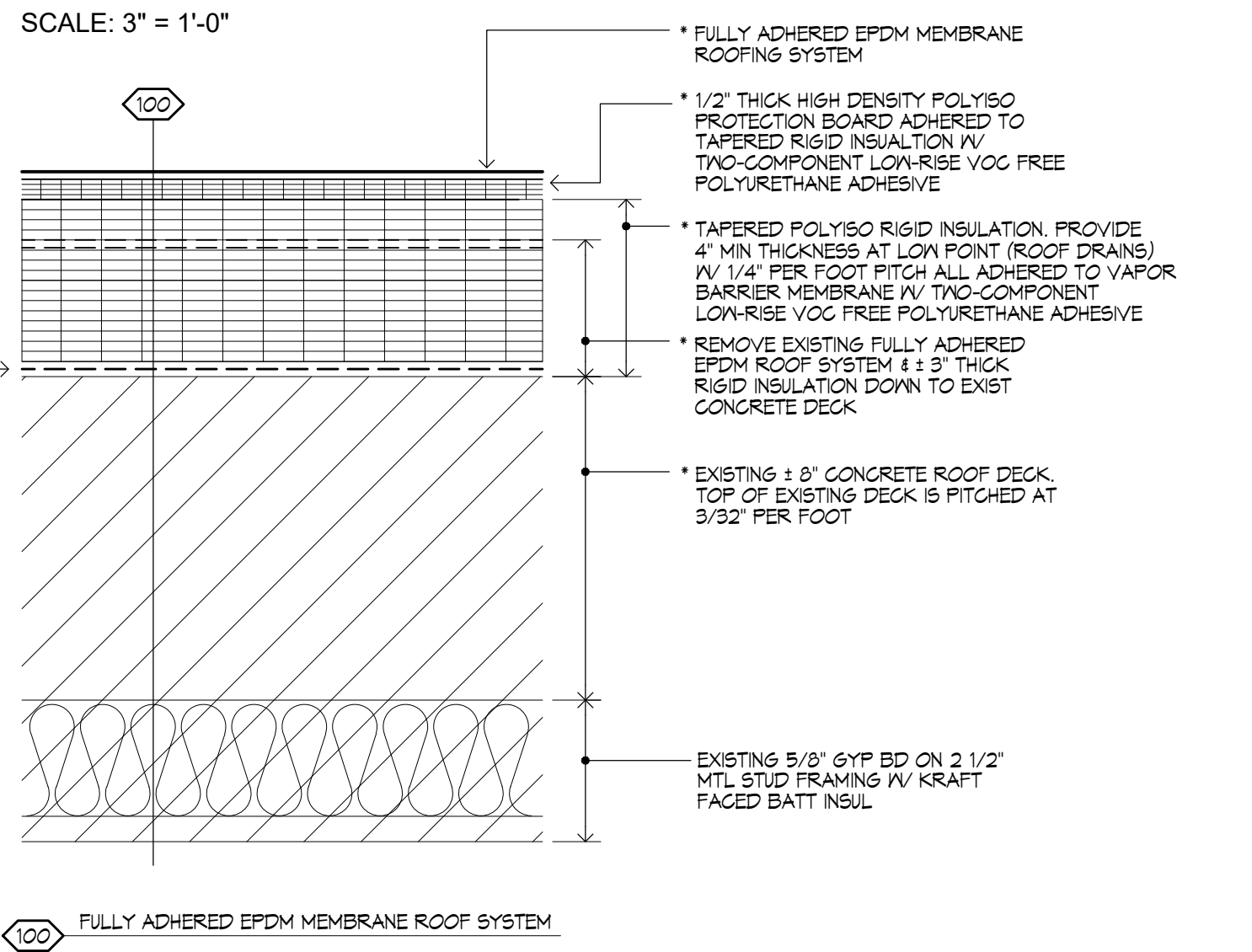
SPECIFIC DEMOLITION / CONSTRUCTION NOTES:

- REMOVE ROOF DRAIN STRAINER ASSEMBLY AS REQUIRED FOR NEW RETRO-FIT DRAIN ASSEMBLY. MODIFY / REPAIR EXISTING STORM DRAIN PIPING AS REQUIRED FOR INSTALLATION OF NEW DRAIN - REFER TO DETAIL 2/A2.0 FOR ADDITIONAL INFORMATION.
- TEMPORARILY REMOVE AND REINSTALL EXISTING EXHAUST FAN AND CURB IN ORDER TO INSTALL NEW PRESSURE TREATED WOOD BLOCKING TO RECEIVE NEW ROOF SYSTEM. REMOVE ALL EXISTING WOOD BLOCKING UNDER EACH EXHAUST FAN CURB LOCATION. EXTEND DUCT WORK AND ELECTRICAL POWER WIRING AS NECESSARY TO ACCOMMODATE EXISTING CURB HEIGHT INSTALLED ON NEW ROOF BLOCKING. REFER TO DETAIL 1/A2.0 FOR ADDITIONAL INFORMATION.
- TEMPORARILY REMOVE AND REINSTALL EXISTING CONDENSING UNIT ON WOOD SLEEPERS. REMOVE AND DISPOSE OF EXISTING WOOD SLEEPERS. TEMPORARILY DISCONNECT / EXTEND AS NECESSARY / RECONNECT EXISTING ELECTRICAL POWER WIRING AND REFRIGERANT PIPING TO ACCOMMODATE CONDENSING UNIT INSTALLED ON NEW SLEEPER ASSEMBLY. REFER TO DETAIL 3/A2.0 FOR ADDITIONAL INFORMATION.
- RIGID INSULATION CRICKET CONSISTS OF POLYISO AT 1/2" PER FOOT SLOPE BUILT ON TOP OF MAIN ROOF TAPERED POLYISO RIGID INSULATION.
- PROVIDE NEW ROOF DRAIN (RD-1) WITH 3" DIAMETER PVC ROOF LEADER (RL) UP TO ROOF DRAIN AND CONNECTED TO EXISTING 3"Ø ROOF LEADER AT EXISTING CHASE LOCATED JUST NORTH OF THE ELEVATOR AS SHOWN ON DRAWING A1.3 - CORE DRILL EXISTING 8" THICK CONCRETE DECK WITH 5/8" GYPSUM BOARD ON 2 1/2" STEEL STUD FRAMING INSTALLED AT UNDERSIDE OF CONCRETE DECK TO RECEIVE NEW ROOF LEADER. LOCATE NEW RL RISER TO ROOF DRAIN ABOVE BETWEEN EXISTING DUCTS AS SHOWN ON DRAWING A1.3, THEN INSTALL 3"Ø PVC RL HORIZONTALLY BELOW UNDERSIDE OF EXISTING DUCTWORK AS TIGHT AS POSSIBLE AND INSTALL HORIZONTAL 3"Ø PVC RL PIPING BETWEEN EXISTING INSULATED SUPPLY AND RETURN HEATING LINES BACK TO EXISTING 3"Ø PVC RL AT EXISTING CHASE AND MAKE CONNECTION. THE EXISTING 2 HOUR FIRE RATED CHASE WALL CONSTRUCTION CONSISTS OF 2 LAYERS OF 5/8" GYPSUM BOARD EACH SIDE OF 2 1/2" STEEL STUD FRAMING AT 16" O.C. - CUT OPEN EXISTING 2 HOUR FIRE RATED GYPSUM BOARD CHASE WALL ABOVE CEILING TO MAKE NEW PVC RL PIPING CONNECTION TO EXISTING 3"Ø PVC RL RISER LOCATED IN CHASE. ONCE THE RL PIPING CONNECTION AT THE EXISTING RL RISER HAS BEEN MADE AND HAS BEEN INSPECTED BY THE NORTH KINGSTOWN PLUMBING INSPECTOR, PATCH THE EXISTING CHASE NEW WALL OPENING WITH EITHER TWO LAYERS OF 1/2" THICK GYPSUM BOARD EACH SIDE OF 1" THICK GYPSUM LINER PANEL WITH THE FIRST LAYER OF 1/2" THICK GYPSUM BOARD SECURED TO PERIMETER 1" x 2", 25 M6 GALV STEEL SUPPORT ANGLES THAT WILL BE SECURED TO NEW 2 1/2" 20GA STEEL STUD FRAMING INSTALLED AT CAVITY OF EXISTING CHASE WALL OPENING TO SUPPORT PERIMETER 1" x 2", 25 M6 GALV STEEL SUPPORT ANGLES IN ACCORDANCE WITH 2 HOUR FIRE RATED UL NO. U524 OR PROVIDE 2 HOUR FIRE RATED GYPSUM BOARD SHIRT WALL IN ACCORDANCE WITH 2 HOUR FIRE RATED UL NO. U428; PROVIDE NEW 2 1/2", 20 GA STEEL STUD FRAMING INSTALLED AT CAVITY OF EXISTING CHASE WALL TO SUPPORT "J" RUNNERS AT WALL OPENING PATCH JAMBS. (CONTRACTOR OPTION TO INSTALL EITHER OF THE TWO HOUR FIRE RATED WALL OPENING UL ASSEMBLY PATCH OPTIONS). PROVIDE 2 HOUR FIRE RATED UL NO. W-1-2018 FIRE STOP ASSEMBLY AT THE 3"Ø HORIZONTAL CHASE WALL PENETRATION. INSTALL UL NO. W-1-2018 FIRE STOP ASSEMBLY FIRST, FOLLOWED BY UL NO. U524 OR UL NO. U428 SECOND.
- REMOVE & REINSTALL EXISTING SUSPENDED ACOUSTICAL CEILING TILES AND GRID SYSTEM AT LOCATIONS IDENTIFIED ON DRAWING A1.4 AS NECESSARY TO ACCOMMODATE INSTALLATION OF ABOVE CEILING PLUMBING WORK. SALVAGE ALL CEILING TILES AND GRID FOR REINSTALLATION. EXISTING CEILING AND / OR GRID THAT ARE DAMAGED SHALL BE REPLACED TO MATCH EXISTING AT NO COST TO THE OWNER. CONTRACTOR SHALL CARRY COST IN THEIR BID TO REPLACE UP TO 5% OF THE TOTAL ACOUSTICAL CEILING TILES AND GRID THAT WILL BE REMOVED & REINSTALLED AT LOCATIONS IDENTIFIED ON DRAWING A1.4
- PROVIDE TEMPORARY SUPPORT(S) AS NECESSARY FOR ALL EXISTING CEILING MOUNTED LIGHT FIXTURES INCLUDING BUT NOT LIMITED TO ALL ASSOCIATED WIRING, CONDUITS, PIPING ETC. WHICH SHALL BE TEMPORARILY SUPPORTED AND PROTECTED DURING CONSTRUCTION OPERATIONS AND SHALL BE OPERABLE AFTER PLUMBING WORK IS COMPLETED AS IDENTIFIED ON DRAWING A1.4
- PROVIDE TEMPORARY PROTECTION AT EXISTING CEILING, WALL AND FLOOR FINISHES AT ALL AREAS WHERE PLUMBING WORK WILL OCCUR ABOVE CEILING AS OCCURS TO PREVENT DAMAGE DUE TO CONSTRUCTION OPERATIONS. FINISHES THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AND OR REPLACED TO SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.

LEGEND



ROOF TYPE



GENERAL NOTES

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Edward Rowse ARCHITECTS

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Date: JUNE 18, 2021

Drawn by: FAB Proj. Mgr.: JMP

Revisions	No.	Date	Description

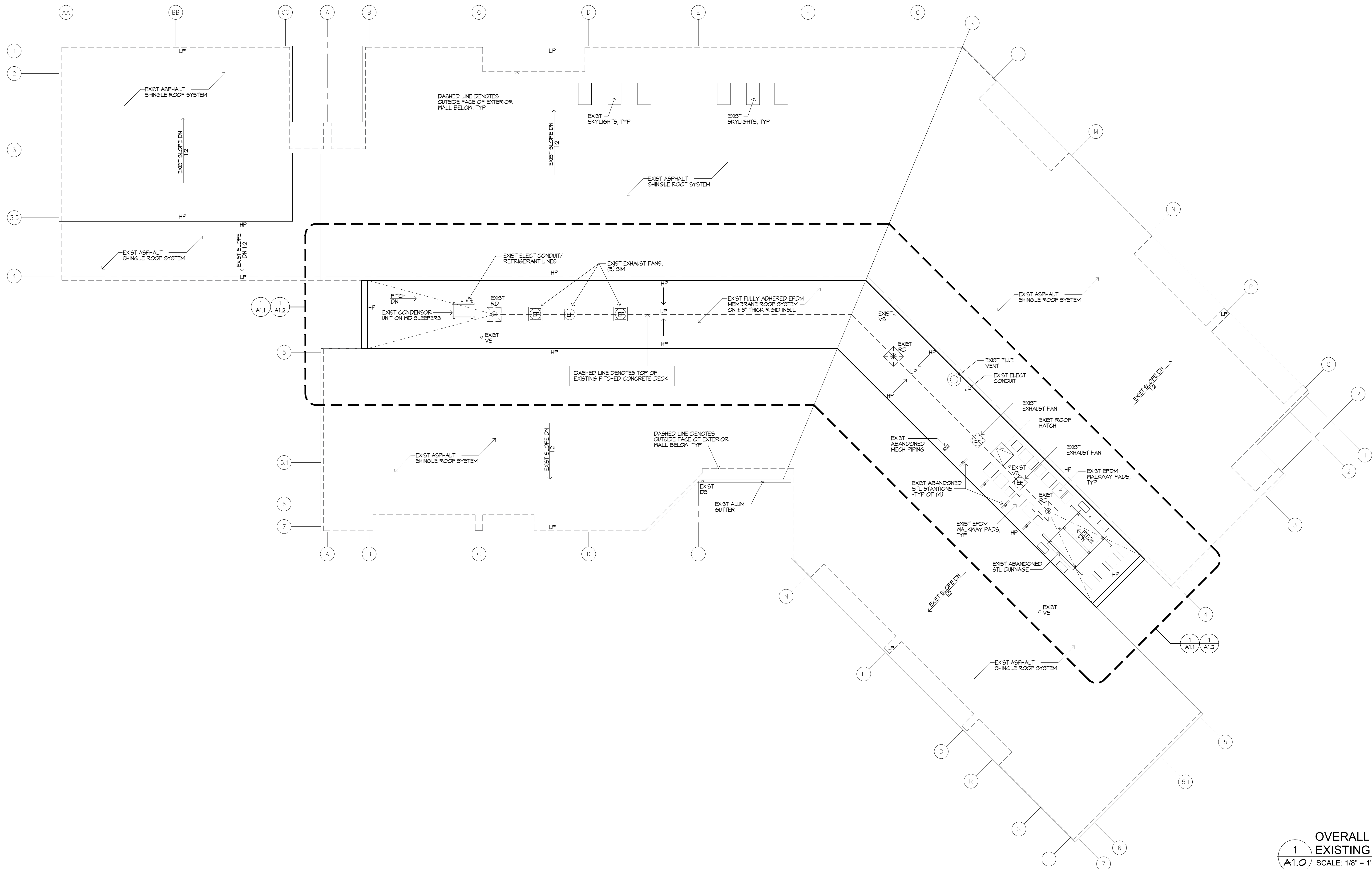
North Kingstown Free Library Membrane Roof Replacement

100 Boone Street North Kingstown, Rhode Island

ABBREVIATIONS, LEGEND, NOTES & ROOF TYPE

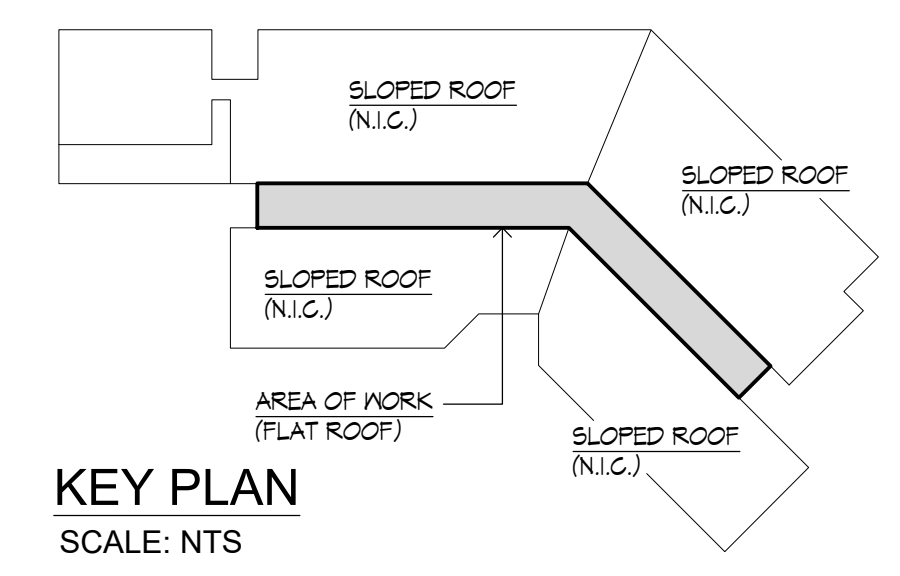
A0.0

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1 OVERALL EXISTING ROOF PLAN
SCALE: 1/8" = 1'-0"

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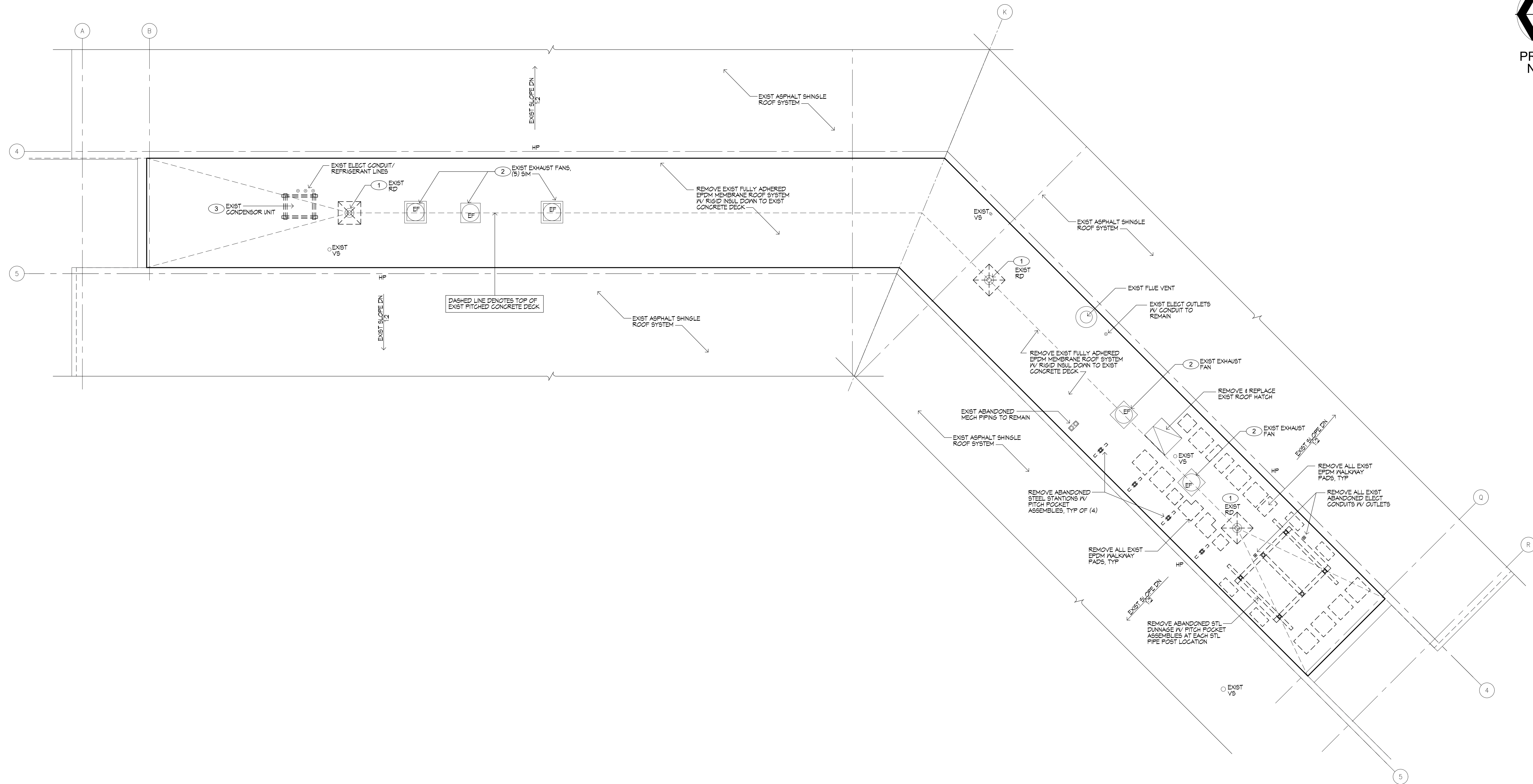
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Drawn by: FAB Proj. Mgr.: JMP

No.	Date	Description

North Kingstown Free Library Membrane Roof Replacement

100 Boone Street North Kingstown, Rhode Island

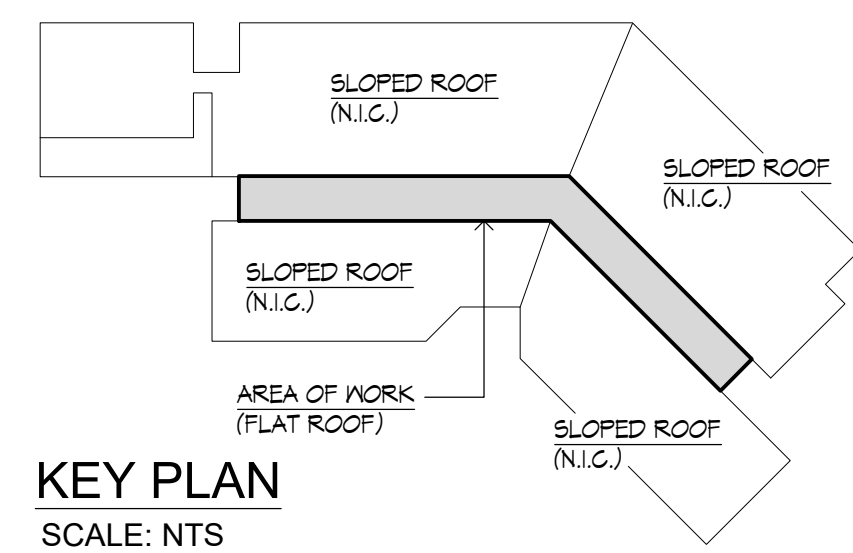
OVERALL EXISTING ROOF PLAN
A1.0
20230 - A1.0 3 of 6



1 DEMOLITION ROOF PLAN
A1.1 SCALE: 3/16" = 1'-0"

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Revisions

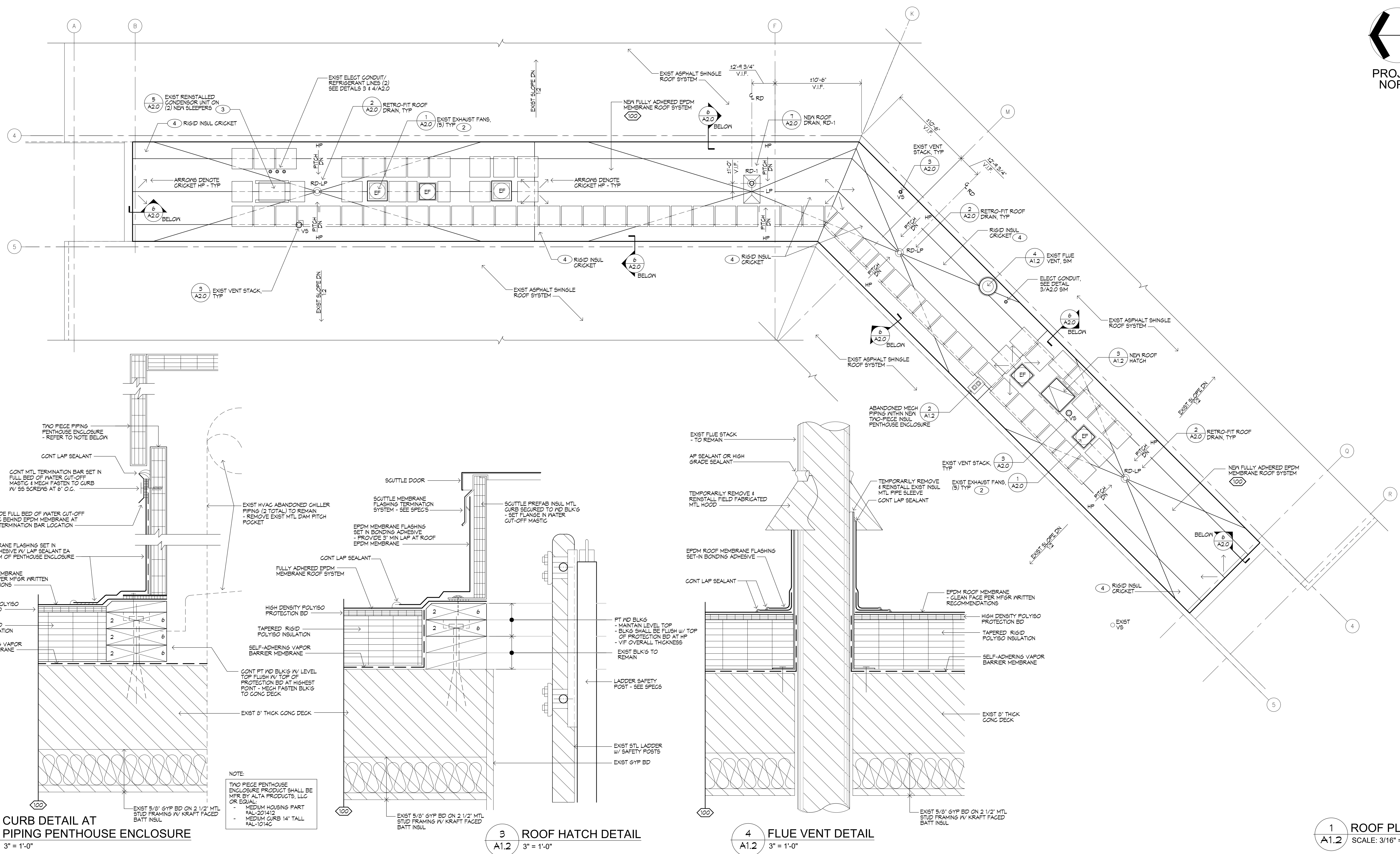
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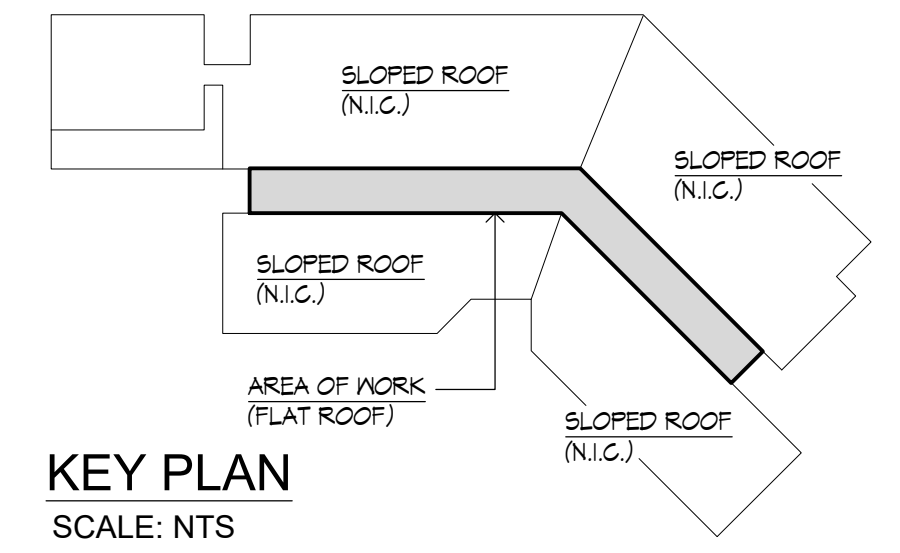
DEMOLITION ROOF PLAN

A1.1



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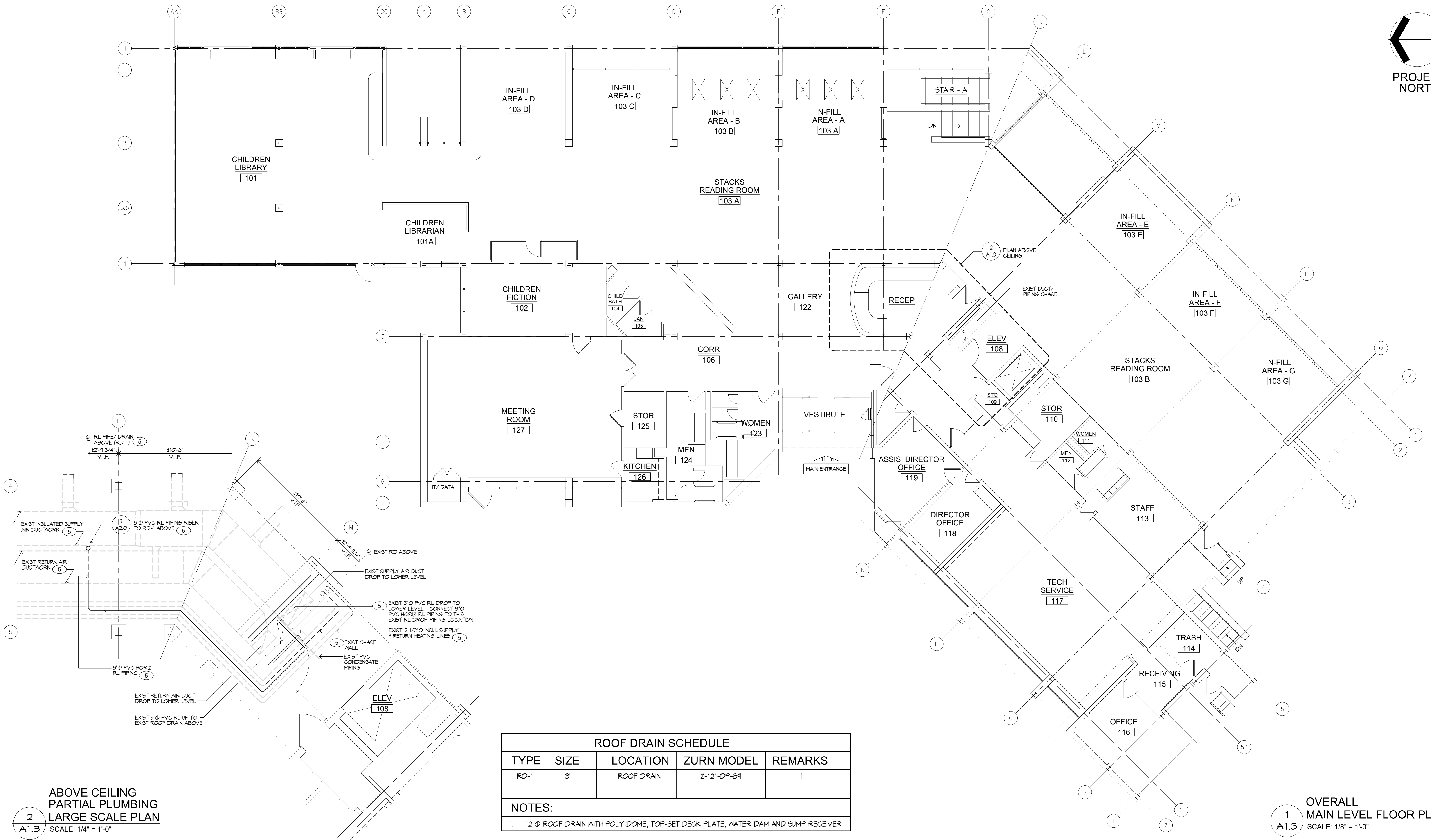
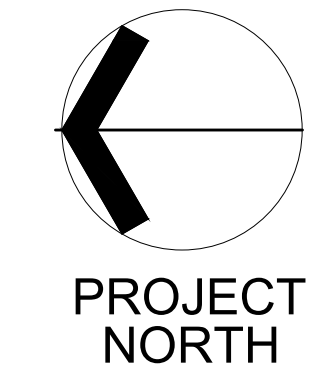
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North Kingstown Free Library Membrane Roof Replacement
 100 Boone Street North Kingstown, Rhode Island

ROOF PLAN & DETAILS
A1.2
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ROOF DRAIN SCHEDULE				
TYPE	SIZE	LOCATION	ZURN MODEL	REMARKS
RD-1	3"	ROOF DRAIN	Z-121-DP-89	1
NOTES:				
1. 12" Ø ROOF DRAIN WITH POLY DOME, TOP-SET DECK PLATE, WATER DAM AND SUMP RECEIVER				

2
A1.3
ABOVE CEILING
PARTIAL PLUMBING
LARGE SCALE PLAN
SCALE: 1/4" = 1'-0"

1
A1.3
OVERALL
MAIN LEVEL FLOOR PLAN
SCALE: 1/8" = 1'-0"

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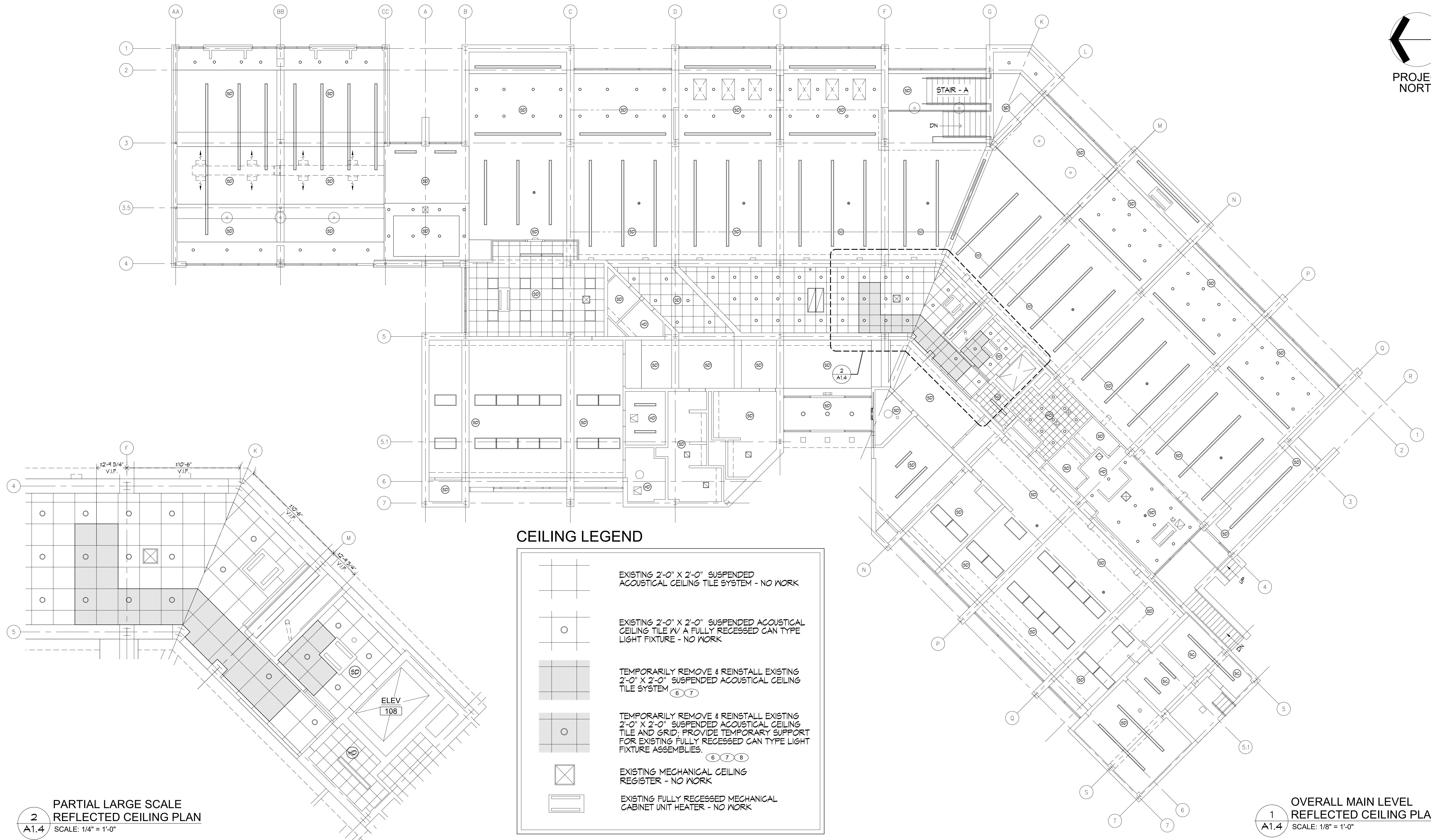
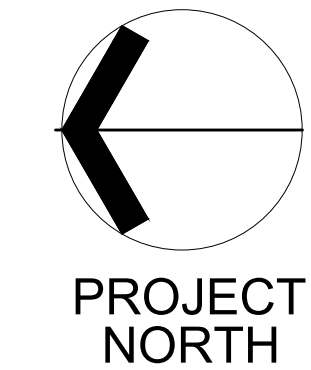
**North Kingstown
Free Library
Membrane Roof
Replacement**

100 Boone Street
North Kingstown,
Rhode Island

OVERALL
MAIN LEVEL FLOOR PLAN &
PARTIAL LARGE SCALE PLAN

A1.3

20230 - A1.3 6 of 6



2 PARTIAL LARGE SCALE REFLECTED CEILING PLAN
A1.4 SCALE: 1/4" = 1'-0"

1 OVERALL MAIN LEVEL REFLECTED CEILING PLAN
A1.4 SCALE: 1/8" = 1'-0"

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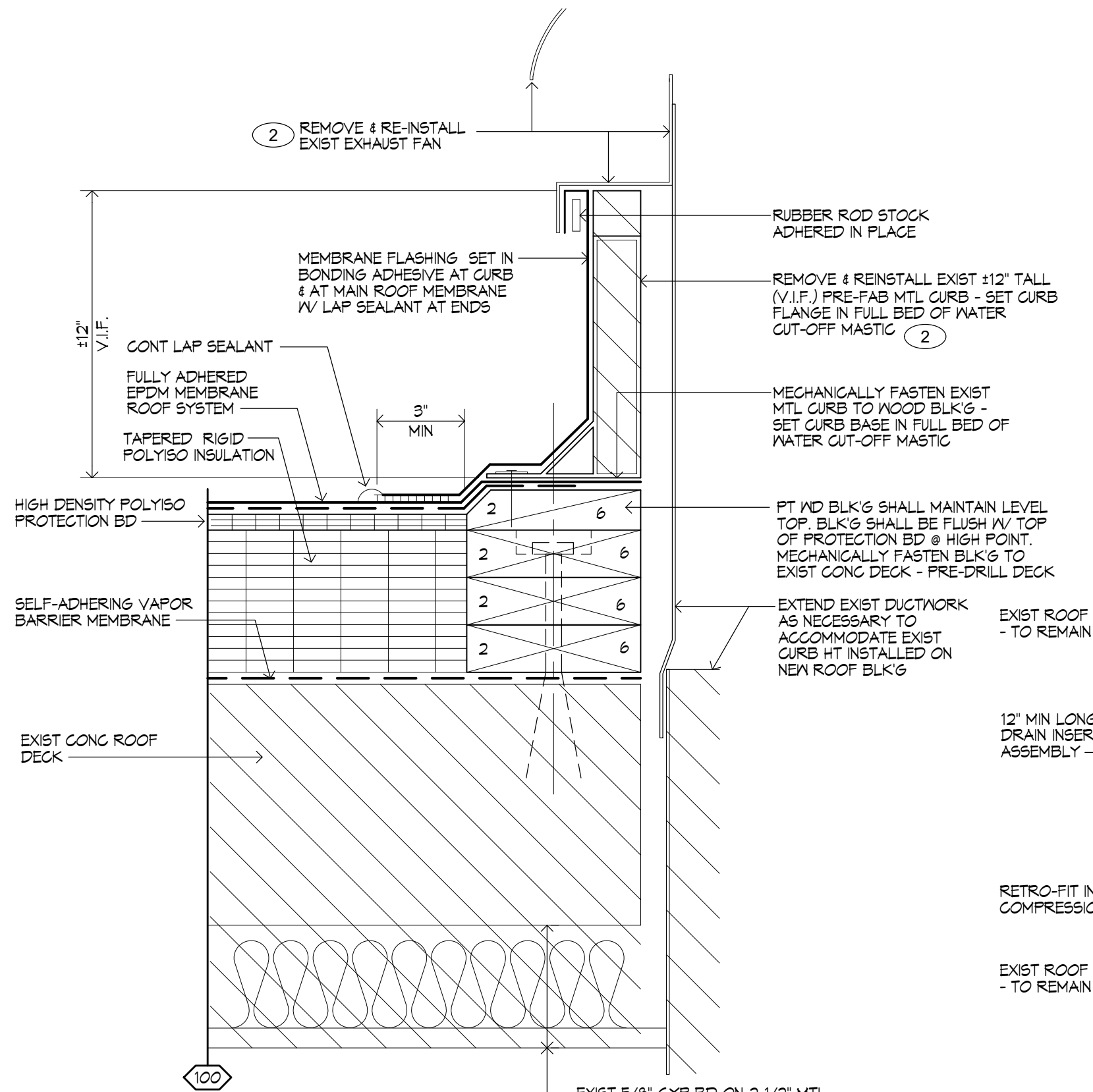
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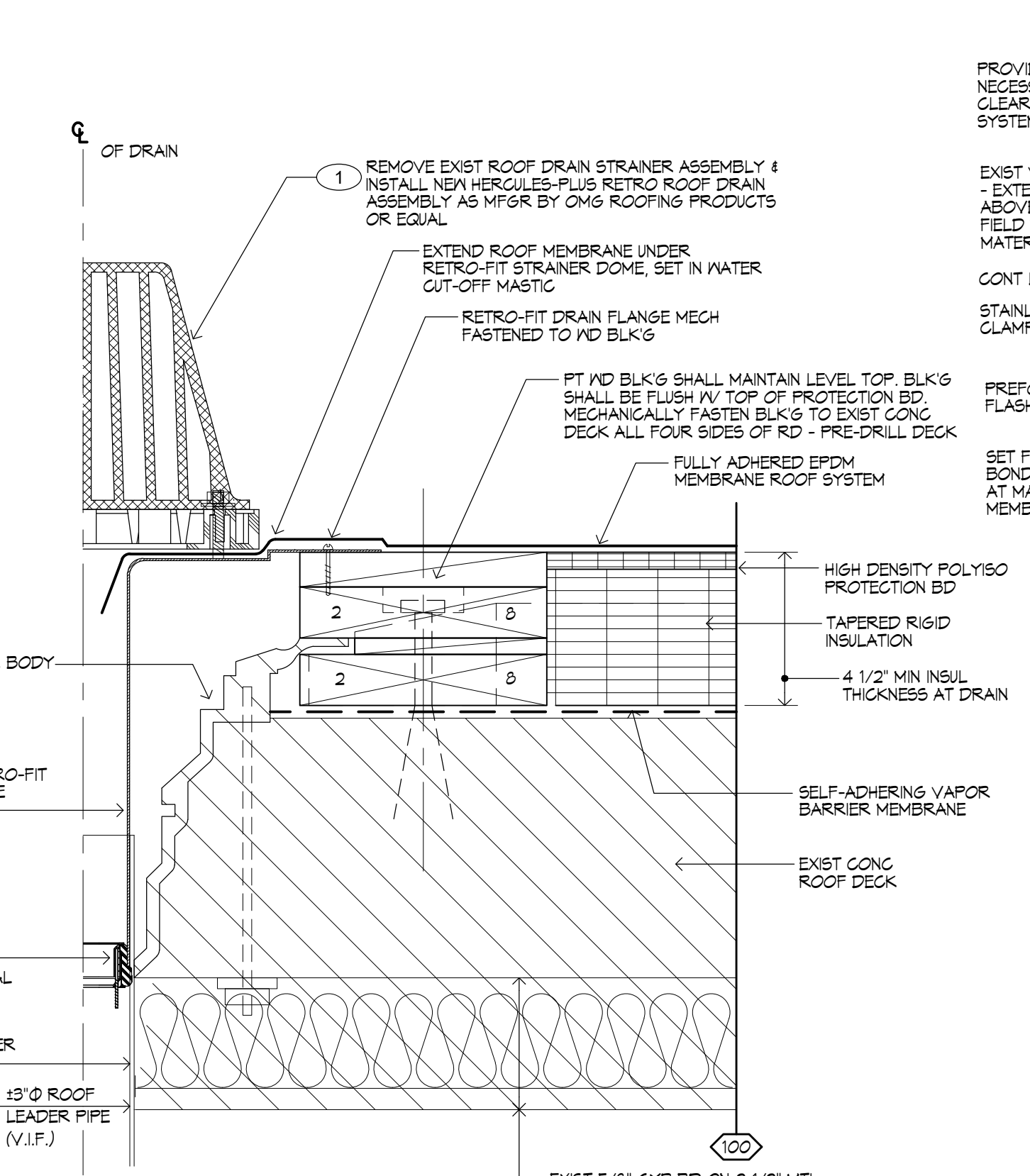
No.	Date	Description

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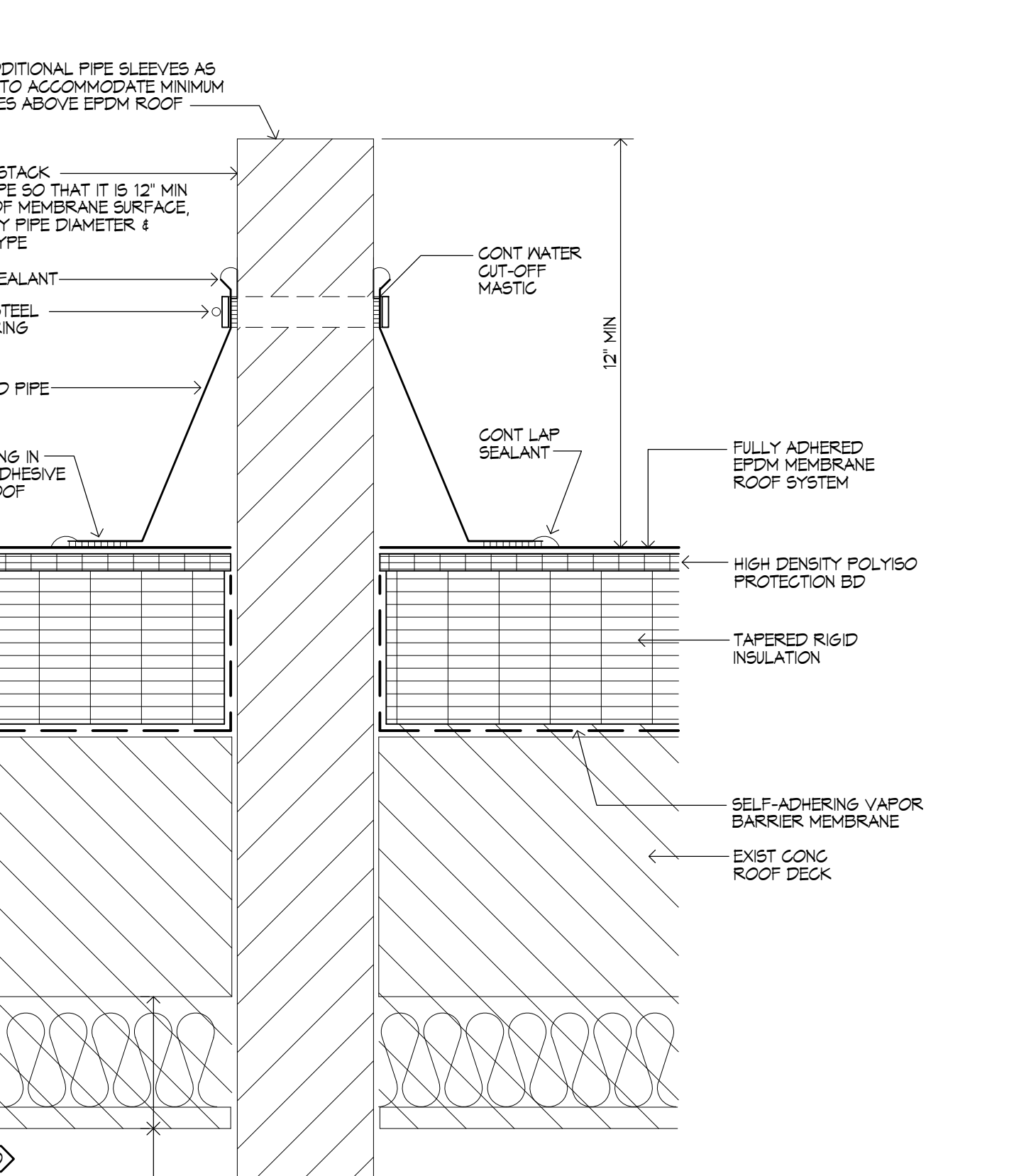
OVERALL MAIN LEVEL CEILING PLAN & PARTIAL LARGE SCALE CEILING PLAN
A1.4
20230 - A1.4 7 of 8



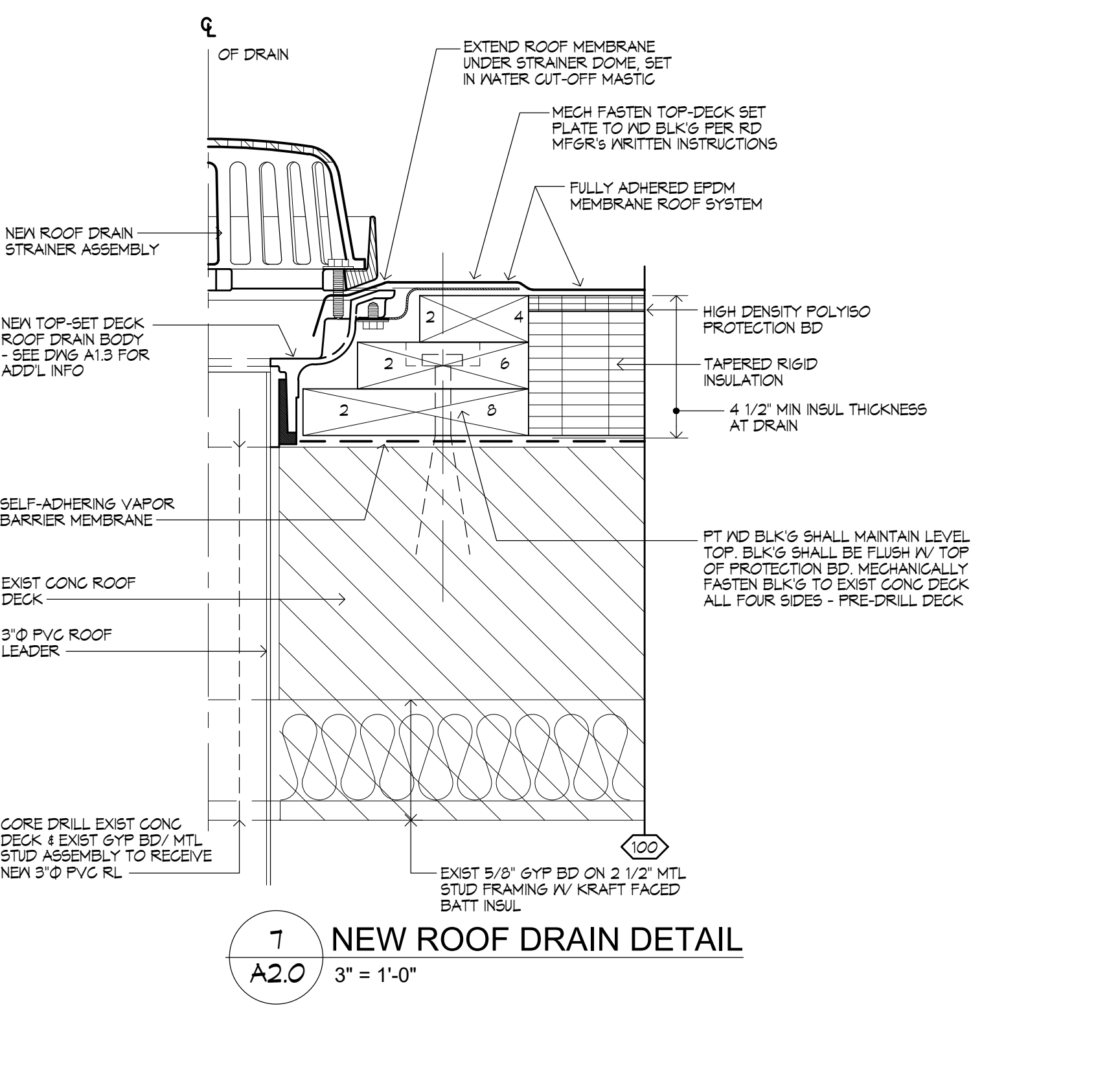
1 EXHAUST FAN DETAIL
A2.0 3" = 1'-0"



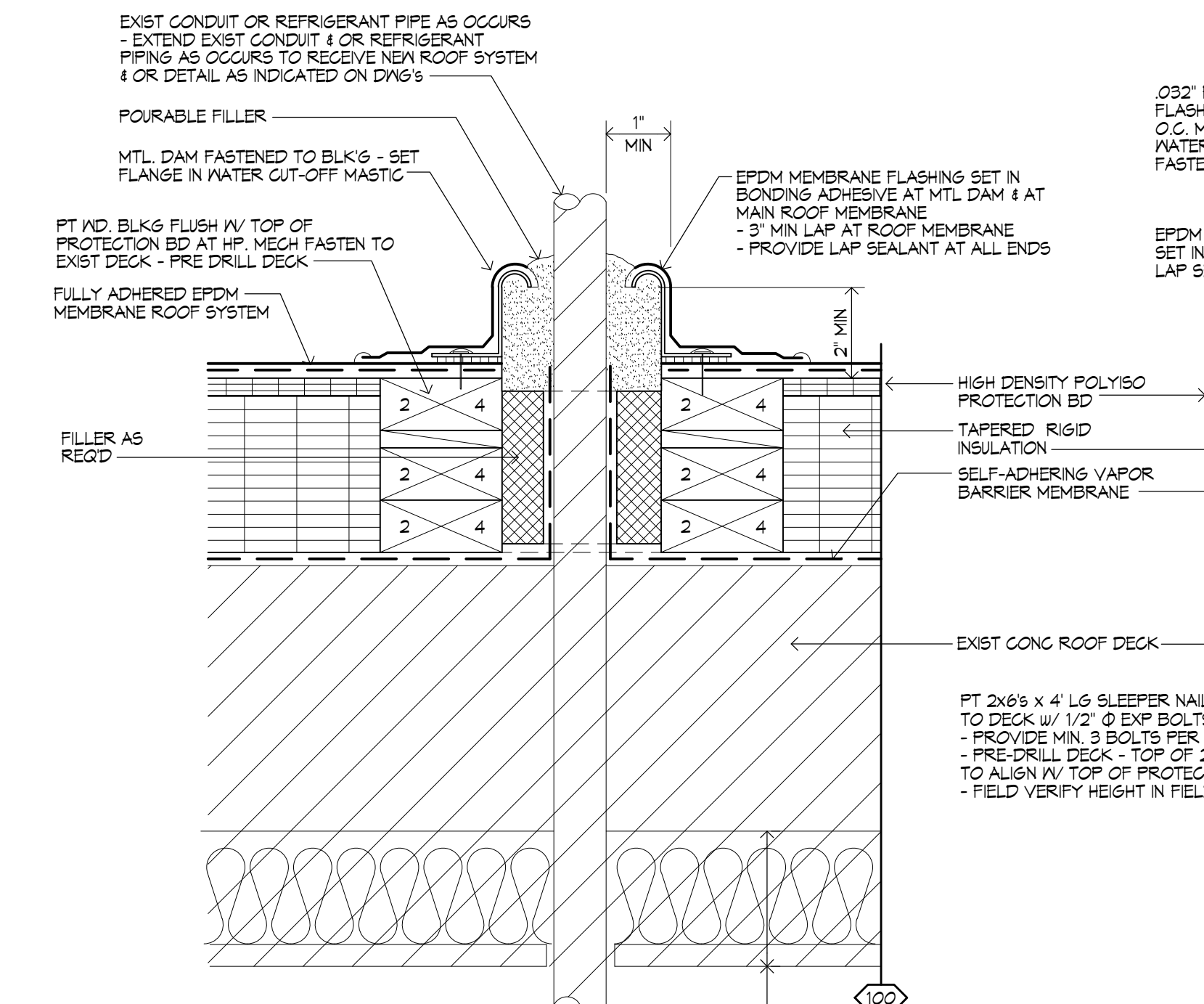
2 RETRO-FIT ROOF DRAIN DETAIL
A2.0 3" = 1'-0"



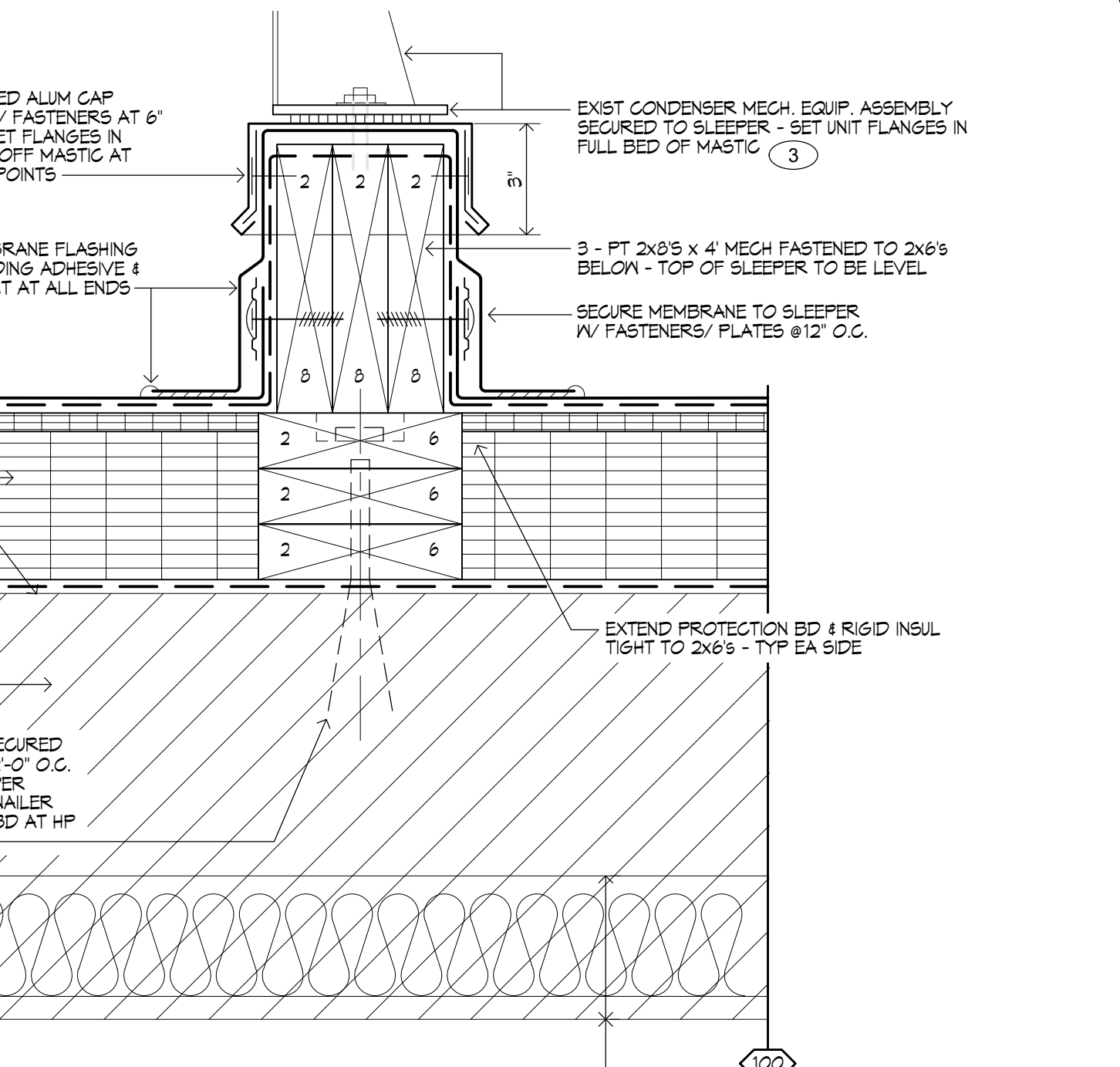
3 VENT STACK DETAIL
A2.0 3" = 1'-0"



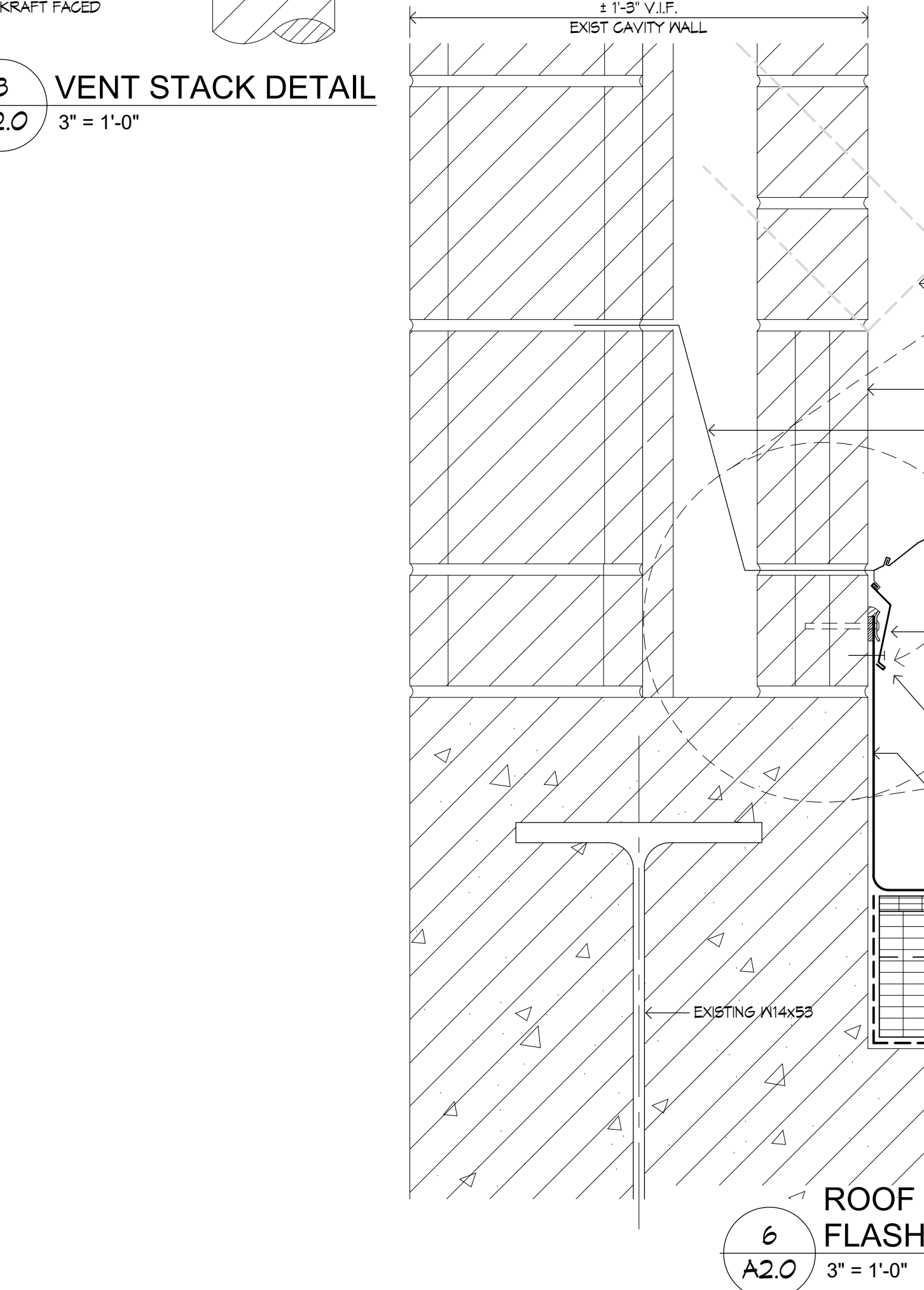
7 NEW ROOF DRAIN DETAIL
A2.0 3" = 1'-0"



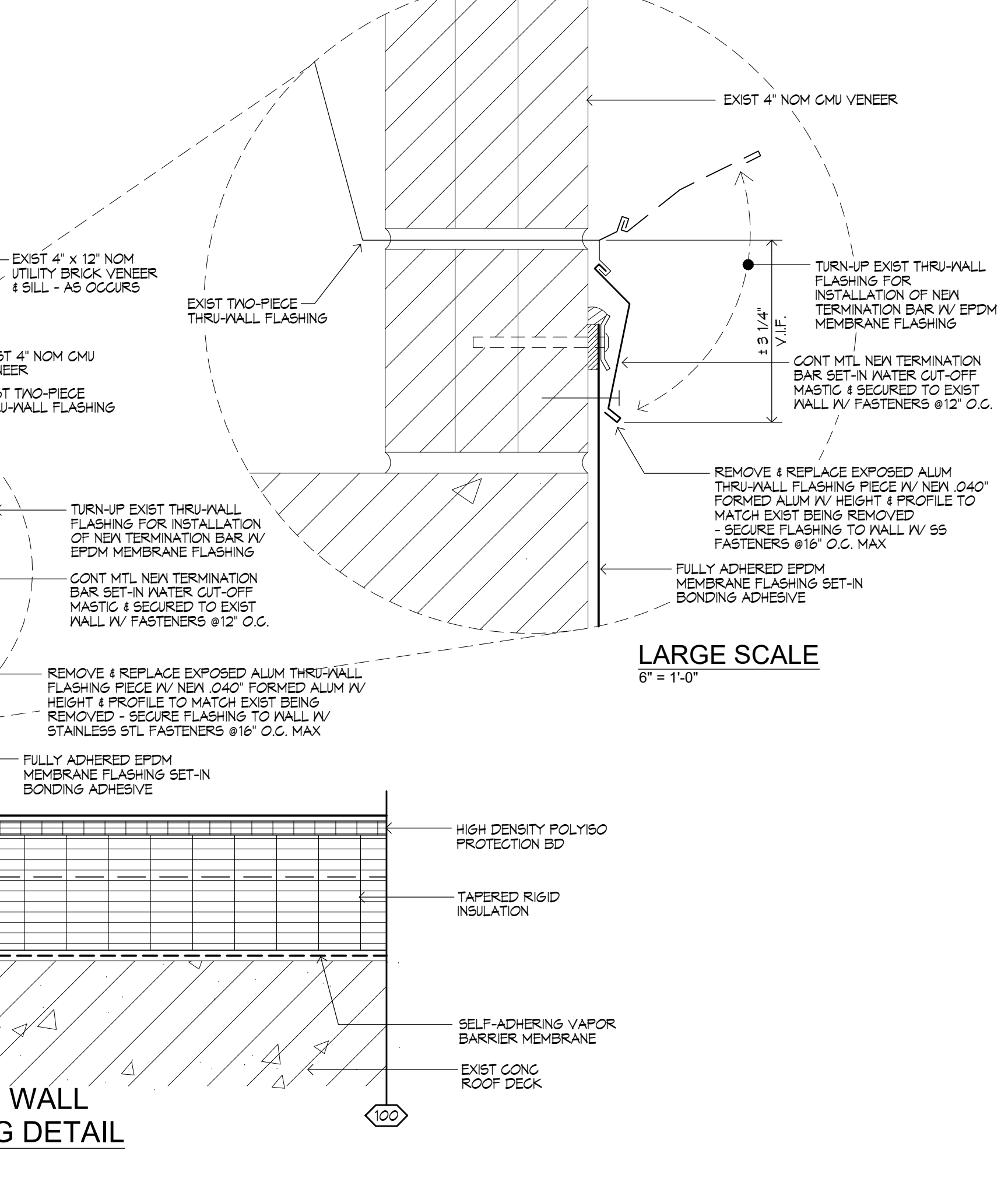
4 PITCH POCKET DETAIL
A2.0 3" = 1'-0"



5 SLEEPER DETAIL
A2.0 3" = 1'-0" (2 SLEEPERS PER CONDENSING UNIT)



6 ROOF TO WALL FLASHING DETAIL
A2.0 3" = 1'-0"



LARGE SCALE
6" = 1'-0"

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ROOF DETAILS
A2.0
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