

IN WITNESS THEREOF, the Parties hereto have caused this Contract to be executed by their duly authorized representatives as attested and witnessed and their corporate seals to be hereunto affixed as of the day and year date first above written.

OWNER:

FULTON COUNTY, GEORGIA

DocuSigned by:

Robert L. Pitts

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Robert L. Pitts, Chairman
Fulton County Board of Commissioners

Please select Attest or Notary from checkbox ☒ Attest ☐ Notary

ATTEST:

DocuSigned by:

Tonya R. Grier

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Tonya R. Grier
Interim Clerk to the Board of
Commission

(Affix County Seal)



APPROVED AS TO FORM:

DocuSigned by:

Patrice Perkins-Hooker

71280461BB0D4CD...

Office of the County Attorney

APPROVED AS TO CONTENT:

DocuSigned by:

Joseph Davis

B20354A88008422

Joseph Davis Director

Department

CONTRACTOR:

SRS; Inc.

DocuSigned by:

Jeffery Pilkenton

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Jeffery Pilkenton President

ATTEST:

Joseph Pilkenton

Secretary/
Assistant Secretary

(Affix Corporate Seal)

DocuSigned by:



ATTEST:

Notary Public

County: _____

Commission Expires: _____

(Affix Notary Seal)

Please select RCS or RM from the checkbox

RCS

☒

RM

ITEM#: _____	RCS: _____	ITEM#: 19-1016	RM: 12/4/2019
RECESS MEETING		REGULAR MEETING	

Insurance Certificate to be attached



OWNER - CONTRACTOR AGREEMENT

19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building

Contractor: SRS, INC

Project No.19ITB300390K-JAK

Address: 357 Odel Rd.
Griffin, GA. 30224

Telephone: 770-228-2658

Contact: Jeffery Pilkenton

Facsimile: N/A

THIS AGREEMENT is effective as of the _____ day of _____, 2019, by and between Fulton County, a political subdivision of the State of Georgia (hereinafter called the "County"), and the above named CONTRACTOR in accordance with all provisions of this Construction Agreement ("Contract"), which consists of the following: Owner-Contractor Agreement, Owner's invitation for bid, instructions to bidders, bid form, performance bond, payment bond, acknowledgments, general conditions, special conditions, scope of work and specifications, plans, drawings, exhibits, addenda, Purchasing forms, Office of Contract Compliance Forms, Risk Management insurance provisions forms and written change orders.

The specific Exhibits of this Contract are as follows:

- Exhibit A: General Conditions
- Exhibit B: Special Conditions
- Exhibit C: Addenda
- Exhibit D: Bid Form
- Exhibit E: Bonds (Bid, Payment & Performance)
- Exhibit F: Scope of Work and Technical Specifications
- Exhibit G: Exhibits
- Exhibit H: Purchasing Forms
- Exhibit I: Office of Contract Compliance Forms
- Exhibit J: Risk Management Insurance Provisions Forms

WITNESSETH: That the said Contractor has agreed, and by these present does agree with the said County, for and in consideration of a Contract Price of **Nine Hundred Ninety-Eight Thousand, Seven Hundred Dollars and Zero Cents(\$998,700.00)** and other good and valuable consideration, and under the penalty expressed on Bonds hereto attached, to furnish all equipment, tools, materials, skill, and labor of every description necessary to carry out and complete in good, firm, and workmanlike manner, the Work specified, in strict conformity with the Drawings and the Specifications hereinafter set forth, which Drawings and Specifications together with the bid submittals made by the Contractor, General Conditions, Special Provisions, Detailed Specifications, Exhibits, and this Construction Agreement, shall all form essential parts of this Contract. The Work covered by this Contract includes all Work indicated on Plans and Specifications and listed in the Bid entitled:

Project Number: 19ITB300390K-JAJ
Roof Replacement @ Juvenile Justice Center & Medical Examiners Building

The Contractor, providing services as an Independent Contractor, shall commence the Work with adequate force and equipment within 10 days from receipt of Notice to Proceed ("NTP") from the County, and shall complete the work within **300** calendar days from the Notice to Proceed or the date work begins, whichever comes first. The Contractor shall remain responsible for performing, in accordance with the terms of the Contract, all work assigned prior to the expiration of the said calendar days allowed for completion of the work even if the work is not completed until after the expiration of such days. The Contractor shall agree that in the performance of this Contract he will comply with all lawful agreements, if any, which the contractor has made with any association, union or other entity, with respect to wages, salaries and working conditions, so as to cause inconvenience, picketing or work stoppage.

[Insert if applicable For each calendar day that any work remains uncompleted after the time allowed for completion of the work, the Contractor shall pay the County the sum of \$ 500.00 not as a penalty but as liquidated damages, which liquidated damages the County may deduct from any money due the contractor. At the County's convenience and not to it prejudice the County may provide written notice of the commencement of the assessment of liquidated damages].

As full compensation for the faithful performance of this Contract, the County shall pay the Contractor in accordance with the General Conditions and the prices stipulated in the Bid, hereto attached.

It is further mutually agreed between the parties hereto that if, at any time after the execution of this Agreement and the Surety Bonds hereto attached for its faithful performance, the County shall deem the surety or sureties upon such bonds to be unsatisfactory, or, if, for any reason, such bonds cease to be adequate to cover the performance of the Work, the Contractor shall, at his expense, within five days after receipt of notice from the County so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the County. In such event no further payment to the Contractor shall be deemed to be due under this Agreement until such new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the County.

The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any and all persons, including the Contractor's agents, servants, and employees, and in addition thereto, for any and all damages to property caused by or resulting from or arising out of any act or omission in connection with this contract or the prosecution of work hereunder, whether caused by the Contractor or the Contractor's agents, Servants, or employees, or by any of the Contractor's subcontractors or suppliers, and the Contractor shall indemnify and hold harmless the County, the Construction Manager, County's Commissioners, officers, employees, successors, assigns and agents, or any of their subcontractors from and against any and all loss and/or expense which they or any of them may suffer or pay as a result of claims or suits due to, because of, or arising out of any and all such injuries, deaths and/or damage, irrespective of County or Construction Manager negligence (except that no party shall be indemnified for their own sole negligence). The Contractor, if requested, shall assume and defend at the Contractor's own expense, any suit, action or other legal proceedings arising there from, and the Contractor hereby agrees to satisfy, pay, and cause to be discharged of record any

judgment which may be rendered against the County and the Construction Manager arising there from.

In the event of any such loss, expense, damage, or injury, or if any claim or demand for damages as heretofore set forth is made against the County or the Construction Manager, the County may withhold from any payment due or thereafter to become due to the Contractor under the terms of this Contract, an amount sufficient in its judgment to protect and indemnify it and the Construction Manager, County's Commissioners, officers, employees, successors, assigns and agents from any and all claims, expense, loss, damages, or injury; and the County, in its discretion, may require the Contractor to furnish a surety bond satisfactory to the County providing for such protection and indemnity, which bond shall be furnished by the Contractor within five (5) days after written demand has been made therefore. The expense of said Bond shall be borne by the Contractor. **[See General Conditions for similar provision]**

This Contract constitutes the full agreement between the parties, and the Contractor shall not sublet, assign, transfer, pledge, convey, sell or otherwise dispose of the whole or any part of this Contract or his right, title, or interest therein to any person, firm or corporation without the previous consent of the County in writing. Subject to applicable provisions of law, this Contract shall be in full force and effect as a Contract, from the date on which a fully executed and approved counterpart hereof is delivered to the Contractor and shall remain and continue in full force and effect until after the expiration of any guarantee period and the Contractor and his sureties are finally released by the County.

This agreement was approved by the Fulton County Board of Commissioner on December 4, 2019 Item # 19-1016.

[SIGNATURES NEXT PAGE]

EXHIBIT A

GENERAL CONDITIONS

SECTION 8 GENERAL CONDITIONS

00700-1 FAMILIARITY WITH SITE

Execution of this agreement by the Contractor is a representation that the Contractor has visited the site, has become familiar with the local conditions under which the work is to be performed, and has correlated personal observations with the requirements of this agreement.

00700-2 CONTRACT DOCUMENTS

This agreement consists of Owner's invitation for bid, instructions to bidders, bid form, performance bond, payment bond, acknowledgments, the contract, general conditions, special conditions, specifications, plans, drawings, exhibits, addenda, and written change orders.

- A. Notice of Award of Contract:
- B. Execution of Contract Documents

Upon notification of Award of Contract, the Owner shall furnish the Contractor the conformed copies of Contract Documents for execution by the Contractor and the Contractor's surety.

Within ten (10) days after receipt the Contractor shall return all the documents properly executed by the Contractor and the Contractor's surety. Attached to each document shall be an original power-of-attorney for the person executing the bonds for the surety and certificates of insurance for the required insurance coverage.

After receipt of the documents executed by the Contractor and his surety with the power-of-attorney and certificates of insurance, the Owner shall complete the execution of the documents. Distribution of the completed documents will be made upon completion.

Should the Contractor and/or Surety fail to execute the documents within the time specified; the Owner shall have the right to proceed on the Bid Bond accompanying the bid.

If the Owner fails to execute the documents within the time limit specified, the Contractor shall have the right to withdraw the Contractor's bid without penalty.

Drawings and Specifications:

The Drawings, Specifications, Contract Documents, and all supplemental documents, are considered essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to define, describe and provide for all Work necessary to complete the Project in an acceptable manner, ready for use, occupancy, or operation by the Owner.

In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.

In cases where products or quantities are omitted from the Specifications, the description and quantities shown on the Drawings shall govern.

Any ambiguities or need for clarification of the Drawings or Specifications shall be immediately reported to the Construction Manager in writing. Any such ambiguity or need for clarification shall be handled by the Construction Manager in writing. No clarification of the Drawings and Specifications hereunder by the Construction Manager shall entitle the Contractor to any additional monies unless a Change Order has been processed as provided by "Changes in the Contract" hereof.

Any work done by the Contractor following a discovery of such differing site condition or ambiguity or need for clarification in the Contract Drawings and Specifications prior to a written report to the Construction Manager shall not entitle the Contractor to additional monies and shall be done at the Contractor's risk.

The Construction Manager will furnish the Contractor five (5) copies of the Contract Drawings and the Specifications, one copy of which the Contractor shall have available at all times on the Project site.

00700-3 DEFINITIONS

The following terms as used in this agreement are defined as follows to the extent the definitions herein differ or conflict with those in the Instructions for Bidders, Section 00100, the definitions herein shall control.

Alternate bids – the amount stated in the bid or proposal to be added to or deducted from the amount of the base bid or base proposal if the corresponding change in project scope or alternate materials or methods of construction is accepted.

Base bid – the amount of money stated in the bid or proposal as the sum for which the bidder or proposer offers to perform the work.

Change Order - an alteration, addition, or deduction from the original scope of work as defined by the contract documents to address changes or unforeseen conditions necessary for project completion. A written order to the Contractor issued by the County pursuant to Fulton County Code Section 102-420 for changes in the work within the general scope of the contract documents, adjustment of the contract price, extension of the contract time, or reservation of determination of a time extension.

Construction Manager - shall mean the individual designated in writing by the Director of Real Estate and Asset Management Department as the Construction Manager.

Contractor - shall mean the party of the second part to the Contract Agreement or the authorized and legal representative of such party.

Contract Documents- include the Contract Agreement, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the County prior to the Notice of Award), Bonds, all Special Conditions, General Conditions, Supplementary Conditions, Specifications, Drawings and addenda, together with written amendments, change orders, field orders and the Construction Manager's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.

Shop drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils report and drawings of physical conditions in or relating to existing surface structures at or contiguous to the site are not Contract Documents.

Contract Price - The sum specified in the Agreement to be paid to the Contractor in consideration of the Work.

Contract Time - shall mean the number of consecutive calendar days as provided in the Contract Agreement for completion of the Work, to be computed from the date of Notice to Proceed.

Owner or County - shall mean Fulton County Government, party of the first part to the Contract Agreement, or its authorized and legal representatives.

Day - A calendar day of twenty-four hours lasting from midnight of one day to midnight the next day.

Director - Director of the Real Estate and Asset Management Department of Fulton County, Georgia or the designee thereof.

Final Completion - shall mean the completion of all work as required in accordance with the terms and conditions of the contract documents.

Liquidated Damages - shall mean the amount, stated in the Contract Agreement, which the Contractor agrees to pay to the Owner for each consecutive calendar day beyond the Contract time required to complete the Project or for failing to comply with associated milestones. Liquidated Damages will end upon written notification from the Owner of Final Acceptance of the Project or upon written notification of from the Owner of completion of the milestone.

Notice to Proceed - A written communication issued by the County to the Contractor authorizing it to proceed with the work, establishing the date of commencement and completion of the work, and providing other direction to the Contractor.

Products - shall mean materials or equipment permanently incorporated into the work.

Project Manual - The Contract Documents.

Provide - shall mean to furnish and install.

Substantial Completion - The date certified by the Construction Manager when all or a part of the work, as established pursuant to General Condition 0700-81, is sufficiently completed in accordance with the requirements of the contract documents so that the identified portion of the work can be utilized for the purposes for which it is intended.

Work or Project - All of the services specified, indicated, shown or contemplated by the contract documents, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plans, supplies, power, water, transportation and other things necessary to complete such services in accordance with the contract documents to insure a functional and complete facility.

00700-4 CODES

All codes, specifications, and standards referenced in the contract documents shall be the latest editions, amendments and revisions of such referenced standards in effect as of the date of the request for proposals for this contract.

00700-5 REVIEW OF CONTRACT DOCUMENTS

Before making its proposal to the County, and continuously after the execution of the agreement, the Contractor shall carefully study and compare the contract documents and shall at once report to the Construction Manager any error, ambiguity, inconsistency

or omission that may be discovered, including any requirement which may be contrary to any law, ordinance, rule, or regulation of any public authority bearing on the performance of the work. By submitting its proposal, the Contractor agrees that the contract documents, along with any supplementary written instructions issued by or through the Construction Manager that have become a part of the contract documents, appear accurate, consistent and complete insofar as can be reasonably determined. If the Contractor has timely reported in writing any error, inconsistency, or omission to the Construction Manager, has properly stopped the affected work until instructed to proceed, and has otherwise followed the instructions of the Construction Manager, the Contractor shall not be liable to the County for any damage resulting from any such error, inconsistency, or omission in the contract documents. The Contractor shall not perform any portion of the work without the contract documents, approved plans, specifications, products and data, or samples for such portion of the work. For purposes of this section "timely" is defined as the time period in which the contractor discovers, or should have discovered, the error, inconsistency, or omission, with the exercise of reasonable diligence.

00700-6 STRICT COMPLIANCE

No observation, inspection, test or approval of the County or Construction Manager shall relieve the Contractor from its obligation to perform the work in strict conformity with the contract documents except as provided in General Condition 00700-48.

00700-7 APPLICABLE LAW

All applicable State laws, County ordinances, codes, and rules and regulations of all authorities having jurisdiction over the construction of the project shall apply to this agreement. The Contractor shall comply with the requirements of any Fulton County program concerning non-discrimination in contracting. All work performed within the right of way of the Georgia Department of Transportation and any railroad crossing shall be in accordance with Georgia Department of Transportation regulations, policies and procedures and, where applicable, those of any affected railroad. The Contractor shall comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work as specified and the Contractor agrees to indemnify and hold harmless the County, its officers, agents and employees, as well as the Construction Manager and the Program Manager against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree affecting the conduct of the work, whether occasioned by the Contractor, his agents or employees.

00700-8 PERMITS, LICENSES AND BONDS

All permits and licenses necessary for the work shall be secured and paid for by the Contractor. If any permit, license or certificate expires or is revoked, terminated, or suspended as a result of any action on the part of the Contractor, the Contractor shall not be entitled to additional compensation or time. The Contractor shall obtain and keep in force at all times performance and payment bonds payable to Fulton County in penal amounts equal to 100% of the Contract price.

00700-9 TAXES

- A. The Contractor shall pay all sales, retail, occupational, service, excise, old age benefit and unemployment compensation taxes, consumer, use and other similar taxes, as well as any other taxes or duties on the materials, equipment, and labor for the work provided by the Contractor which are legally enacted by any municipal, county, state or federal authority, department or agency at the time

bids are received, whether or not yet effective. The Contractor shall maintain records pertaining to such taxes and levies as well as payment thereof and shall make the same available to the County at all reasonable times for inspection and copying. The Contractor shall apply for any and all tax exemptions which may be applicable and shall timely request from the County such documents and information as may be necessary to obtain such tax exemptions. The County shall have no liability to the Contractor for payment of any tax from which it is exempt.

- B. The Contractor is obligated to comply with all local and State Sales and Use Tax laws. The Contractor shall provide the Owner with documentation to assist the Owner in obtaining sales and/or use tax refunds for eligible machinery and equipment used for the primary purpose of reducing or eliminating air or water pollution as provided for in Chapter 48-8-3 (36) and (37) of the Official Code of Georgia. All taxes shall be paid by the Contractor. All refunds will accrue to the Owner.

Acceptance of the project as complete and final payment will not be made by the Owner until the Contractor has fully complied with this requirement.

00700-10 DELINQUENT CONTRACTORS

The County shall not pay any claim, debt, demand or account whatsoever to any person firm or corporation who is in arrears to the County for taxes. The County shall be entitled to a counterclaim, back charge, and offset for any such debt in the amount of taxes in arrears, and no assignment or transfer of such debt after the taxes become due shall affect the right of the County to offset any taxes owed against said debt.

00700-11 LIEN WAIVERS

The Contractor shall furnish the County with evidence that all persons who have performed work or furnished materials pursuant to this agreement have been paid in full prior to submitting its demand for final payment pursuant to this agreement. A final affidavit, Exhibit A, must be completed, and submitted to comply with requirements of 00700-11. In the event that such evidence is not furnished, the County may retain sufficient sums necessary to meet all lawful claims of such laborers and materialmen. The County assumes no obligation nor in any way undertakes to pay such lawful claims from any funds due or that may become due to the Contractor.

00700-12 MEASUREMENT

All items of work to be paid for per unit of measurement shall be subject to inspection, measurement, and confirmation by the Construction Manager.

00700-13 ASSIGNMENT

The Contractor shall not assign any portion of this agreement or moneys due there from (include factoring of receivables) without the prior written consent of the County. The Contractor shall retain personal control and shall provide personal attention to the fulfillment of its obligations pursuant to this agreement. Any assignment without the express written consent of the County shall render this contract voidable at the sole option of the County.

00700-14 FOREIGN CONTRACTORS

In the event that the Contractor is a foreign corporation, partnership, or sole proprietorship, the Contractor hereby irrevocably appoints the Secretary of State of Georgia as its agent for service of all legal process for the purpose of this contract only.

00700-15 INDEMNIFICATION

The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any and all persons, including the Contractor's agents, servants, and employees, and in addition thereto, for any and all damages to property caused by or resulting from or arising out of any act or omission in connection with this contract or the prosecution of work hereunder, whether caused by the Contractor or the Contractor's agents, Servants, or employees, or by any of the Contractor's subcontractors or suppliers, and the Contractor shall indemnify and hold harmless the County, the Construction Manager, County's Commissioners, officers, employees, successors, assigns and agents, or any of their subcontractors from and against any and all loss and/or expense which they or any of them may suffer or pay as a result of claims or suits due to, because of, or arising out of any and all such injuries, deaths and/or damage, irrespective of County or Construction Manager negligence (except that no party shall be indemnified for their own sole negligence). The Contractor, if requested, shall assume and defend at the Contractor's own expense, any suit, action or other legal proceedings arising there from, and the Contractor hereby agrees to satisfy, pay, and cause to be discharged of record any judgment which may be rendered against the County and the Construction Manager arising there from.

In the event of any such loss, expense, damage, or injury, or if any claim or demand for damages as heretofore set forth is made against the County or the Construction Manager, the County may withhold from any payment due or thereafter to become due to the Contractor under the terms of this Contract, an amount sufficient in its judgment to protect and indemnify it and the Construction Manager, County's Commissioners, officers, employees, successors, assigns and agents from any and all claims, expense, loss, damages, or injury; and the County, in its discretion, may require the Contractor to furnish a surety bond satisfactory to the County providing for such protection and indemnity, which bond shall be furnished by the Contractor within five (5) days after written demand has been made therefore. The expense of said Bond shall be borne by the Contractor.

00700-16 SUPERVISION OF WORK AND COORDINATION WITH OTHERS

The Contractor shall supervise and direct the work using the Contractor's best skill and attention. The Contractor shall be solely responsible for all construction methods and procedures and shall coordinate all portions of the work pursuant to the contract subject to the overall coordination of the Construction Manager. All work pursuant to this agreement shall be performed in a skillful and workmanlike manner.

The County reserves the right to perform work related to the Project with the County's own forces and to award separate contracts in connection with other portions of the project, other work on the site under these or similar conditions of the contract, or work which has been extracted from the Contractor's work by the County.

When separate contracts are awarded for different portions of the project or other work on the site, the term "separate contractor" in the Contract Documents in each case shall mean the contractor who executes each separate County Agreement.

The Contractor shall cooperate with the County and separate contractors in arranging the introduction and storage of materials and equipment and execution of their work, and shall cooperate in coordinating connection of its work with theirs as required by the Contract Documents.

If any part of the Contractor's Work depends for proper execution or results upon the work of the County or any separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Construction Manager any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results **within fourteen (14) days** of discovery of such discrepancy or defect. Failure of the Contractor to so report in writing shall constitute an acceptance of the County's or separate contractor's work as fit and proper to receive the Work, except as to any defects which may subsequently become apparent in such work by others.

Any costs caused by defective or untimely work shall be borne by the party responsible therefore.

Should the Contractor wrongfully cause damage to the work or property of the County or to other work or property on the site, including the work of separate contractors, the Contractor shall promptly remedy such damage at the Contractor's expense.

Should the Contractor be caused damage by any other contractor on the Project, by reason of such other contractor's failure to perform properly his contract with the County, no action shall lie against the County or the Construction Manager inasmuch as the parties to this agreement are the only beneficiaries hereof and there are no third party beneficiaries and neither the County nor the Construction Manager shall have liabilities therefore, but the Contractor may assert his claim for damages solely against such other contractor. The Contractor shall not be excused from performance of the contract by reason of any dispute as to damages with any other contractor or third party.

Where the Work of this Contract shall be performed concurrently in the same areas as other construction work, the Contractor shall coordinate with the Construction Manager and the separate contractors in establishing mutually acceptable schedules and procedures that shall permit all jobs to proceed with minimum interference.

If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up, the County may clean up and charge the cost thereof to the Contractor or contractors responsible therefore as the County shall determine to be just.

00700-17 ADMINISTRATION OF CONTRACT

The Program Manager and the Construction Manager shall provide administration services as hereinafter described.

For the administration of this Contract, the Construction Manager shall serve as the County's primary representative during design and construction and until final payment to the Contractor is due. The Construction Manager shall advise and consult with the County and the Program Manager. The primary point of contact for the Contractor shall be the Construction Manager. All correspondence from the Contractor to the County shall be forwarded through the Construction Manager. Likewise, all correspondence and instructions to the Contractor shall be forwarded through the Construction Manager.

The Construction Manager will determine in general that the construction is being performed in accordance with design and engineering requirements, and will endeavor to guard the County against defects and deficiencies in the Work.

The Construction Manager will not be responsible for or have control or charge of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, nor will it be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Construction Manager will not be responsible for or have control or charge over the acts or omissions of the Contractor, its engineers, consultants, subcontractors, or any of their agents or employees, or any other persons performing the Work.

Based on the Construction Manager's observations regarding the Contractor's Applications for Payment, the Construction Manager shall determine the amounts owing to the Contractor, in accordance with the payment terms of the Contract, and shall issue Certificates for Payment in such amount to the County.

The Construction Manager shall render interpretations necessary for the proper execution or progress of the Work. Either party to the Contract may make written requests to the Construction Manager for such interpretations.

Claims, disputes and other matters in question between the Contractor and the County relating to the progress of the Work or the interpretation of the Contract Documents shall be referred to the Construction Manager for interpretation.

All interpretations of the Construction Manager shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in graphic form.

Except as otherwise provided in this Contract, the Construction Manager shall issue a decision on any disagreement concerning a question of fact arising under this Contract. The Construction Manager shall reduce the decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Construction Manager shall be final and conclusive unless, within thirty (30) days from the date of receipt of such copy, the Contractor files a written appeal with the Director of Public Works and mails or otherwise furnishes the Construction Manager a copy of such appeal. The decision of the Director of Public Works or the Director's duly authorized representative for the determination of such appeals shall be final and conclusive. Such final decision shall not be pleaded in any suit involving a question of fact arising under this Contract, provided such is not fraudulent, capricious, arbitrary, so grossly erroneous as necessarily implying bad faith, or is not supported by substantial evidence. In connection with any appeal proceeding under this Article, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of Contractor's appeal. Pending any final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract as directed by the Construction Manager.

The Construction Manager shall have authority to reject Work which does not conform to the Contract Documents. Whenever, in the Construction Manager's opinion, it is considered necessary or advisable for the implementation of the intent of the Contract Documents, the County shall have authority to require special inspection or testing of the Work whether or not such Work be then fabricated, installed or completed. The Contractor shall pay for such special inspection or testing if the Work so inspected or tested is found not to comply with the requirements of the contract; the County shall pay for special inspection and testing if the Work is found to comply with the contract. Neither the Construction Manager's authority to act under this Subparagraph, nor any decision made by the Construction Manager in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Construction

Manager to the Contractor, any subcontractor, any of their agents or employees, or any other person performing any of the Work.

The Contractor shall provide such shop drawings, product data, and samples as may be required by the Construction Manager and/or as required by these Contract Documents.

The Construction Manager shall conduct inspections to determine Substantial Completion and Final Completion, and shall receive and forward to the County for review written warranties and related documents required by the Contract Documents and assembled by the Contractor. The Construction Manager shall approve and issue Certificates for Payment upon compliance with Substantial and Final Completion requirements indicated in General Conditions 00700-81, 00700-82, 00700-84 and 00700-85 of this Agreement.

Except as provided in General Condition 00700-48, the Contractor shall not be relieved from the Contractor's obligations to perform the work in accordance with the contract documents by the activities or duties of the County or any of its officers, employees, or agents, including inspections, tests or approvals, required or performed pursuant to this agreement.

00700-18 RESPONSIBILITY FOR ACTS OF EMPLOYEES

The Contractor shall employ only competent and skilled personnel. The Contractor shall, upon demand from the Construction Manager, immediately remove any superintendent, foreman or workman whom the Construction Manager may consider incompetent or undesirable.

The Contractor shall be responsible to the County for the acts and omissions of the Contractor's employees, subcontractors, and agents as well as any other persons performing work pursuant to this agreement for the Contractor.

00700-19 LABOR, MATERIALS, SUPPLIES, AND EQUIPMENT

Unless otherwise provided in this agreement, the Contractor shall make all arrangements with necessary support agencies and utility companies provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the execution and completion of the work.

00700-20 DISCIPLINE ON WORK SITE

The Contractor shall enforce strict discipline and good order among its employees and subcontractors at all times during the performance of the work, to include compliance with the Fulton County Drug Free Work Place Policy. The Contractor shall not employ any subcontractor who is not skilled in the task assigned to it. The Construction Manager may, by written notice, require the Contractor to remove from the work any subcontractor or employee deemed by the Construction Manager to be incompetent.

00700-21 HOURS OF OPERATION

All work at the construction site shall be performed during regular business hours of the Fulton County government, except upon the Construction Manager's prior written consent to other work hours. It is further understood that the Contractor's construction schedule is based on a normal 40 hours, five day work week, less Fulton County-recognized holidays. Contractors work schedule shall not violate Fulton County Noise Ordinance by working hours inconsistent with the Fulton County Noise Ordinance. The County's current noise ordinance or other applicable ordinance shall govern. If the

Contractor desires to work in excess of this limit, the Contractor shall submit a written request to the Construction Manager, a minimum of five days prior to the desired work date. The Contractor shall be responsible for any additional expenses incurred by the Owner as a result of the extended work hours, including resident inspection overtime. The cost associated with resident inspector overtime shall be deducted from the Contractor monthly payment request.

00700-22 FAMILIARITY WITH WORK CONDITIONS

The Contractor shall take all steps necessary to ascertain the nature and location of the work and the general and local conditions which may affect the work or the cost thereof. The Contractor's failure to fully acquaint itself with the conditions which may affect the work, including, but not limited to conditions relating to transportation, handling, storage of materials, availability of utilities, labor, water, roads, weather, topographic and subsurface conditions, other separate contracts to be entered into by the County relating to the project which may affect the work of the Contractor, applicable provisions of law, and the character and availability of equipment and facilities necessary prior to and during the performance of the work shall not relieve the Contractor of its responsibilities pursuant to this agreement and shall not constitute a basis for an equitable adjustment of the contract terms. The County reserves the right to perform with its own forces or to contract with other entities for other portions of the project work, in which case the Contractor's responsibility to assure its familiarity with work conditions hereunder shall include all coordination with such other contractors and the County necessary to insure that there is no interference between contractors as will delay or hinder any contractor in its prosecution of work on the project. The County assumes no responsibility for any understandings or representations concerning conditions of the work made by any of its officers, agents, or employees prior to the execution of this agreement.

00700-23 RIGHT OF ENTRY

The County reserves the right to enter the site of the work by such agent, including the Construction Manager, as it may elect for the purpose of inspecting the work or installing such collateral work as the County may desire. The Contractor shall provide safe facilities for such access so that the County and its agents may perform their functions.

00700-24 NOTICES

Any notice, order, instruction, claim or other written communication required pursuant to this agreement shall be deemed to have been delivered or received as follows:

Upon personal delivery to the Contractor, its authorized representative, or the Construction Manager on behalf of the County. Personal delivery may be accomplished by in-person hand delivery or bona fide overnight express service.

Three days after depositing in the United States mail a certified letter addressed to the Contractor or the Construction Manager for the County. For purposes of mailed notices, the County's mailing address shall be 141 Pryor Street, 6th Floor, Atlanta, Georgia 30303, or as the County shall have otherwise notified the Contractor. The Contractor's mailing address shall be the address stated in its proposal or as it shall have most recently notified the Construction Manager in writing.

00700-25 SAFETY

A. SAFETY, HEALTH AND LOSS PREVENTION

The Contractor shall be responsible for implementing a comprehensive project-specific safety, health and loss prevention program and employee substance

abuse program for this project. All Sub-Contractors must either implement their own program or follow the Contractor's safety, health and loss prevention program and employee substance abuse program.

The Contractor's safety, health and loss prevention program and employee substance abuse program must meet or exceed all governmental regulations (OSHA, EPA, DOT, State, local), and any other specific Fulton County requirements

B. COUNTY'S SAFETY, HEALTH, AND LOSS PREVENTION PROCESS GUIDELINES AND REQUIREMENTS

The County and its agents reserve the right, but assume no duty, to establish and enforce safety, health, and loss prevention guidelines and to make the appropriate changes in the guidelines, for the protection of persons and property and to review the efficiency of all protective measures taken by the Contractor. The Contractor shall comply with all safety, health, and loss prevention process guidelines and requirements and changes made by the County or its agent(s). The issuance of any such guidelines or changes by the County or its agent(s) shall not relieve the Contractor of its duties and responsibilities under this Agreement, and the County or its agent(s) shall not thereby assume, nor be deemed to have assumed, any such duties or responsibilities of the Contractor.

C. COMPLIANCE OF WORK, EQUIPMENT, AND PROCEDURES WITH ALL APPLICABLE LAWS and REGULATIONS

All Work, whether performed by the Contractor or its Sub-Contractors of any tier, or anyone directly or indirectly employed by any of them, and all equipment, appliances, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with and conform to:

1. All applicable laws, ordinances, rules, regulations and orders of any public, quasi-public or other governmental authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act.
2. All rules, regulations, and requirements of the County or its agent(s) and its insurance carriers relating there to. In the event of a conflict or differing requirements the more stringent shall govern.

D. PROTECTION OF THE WORK

1. The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work and temporary facilities against loss or damage from whatever cause, shall protect the property of the County and third parties from loss or damage from whatever cause arising out of the performance of the Work, and shall comply with the requirements of the County or its agent(s) and its insurance carriers, and with all applicable laws, codes, rules and regulations, (as same may be amended) with respect to the prevention of loss or damage to property as a result of fire or other hazards.
2. The County or its agent(s) may, but shall not be required to, make periodic inspections of the Project work area. In such event, however, the

Contractor shall not be relieved of its aforesaid responsibilities and the County or its agent(s) shall not assume, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the assurance of Contractor by this Agreement.

E. SAFETY EQUIPMENT

1. The Contractor shall provide to each worker on the Project work area the proper safety equipment for the duties being performed by that worker and will not permit any worker on the Project work area who fails or refuses to use the same. The County or its agent shall have the right, but not the obligation, to order the removal of a worker from the Project work site for his/her failure to comply with safe practices or substance abuse policies.

F. EMERGENCIES

1. In any emergency affecting the safety of persons or property, or in the event of a claimed violation of any federal or state safety or health law or regulation, arising out of or in any way connected with the Work or its performance, the Contractor shall act immediately to prevent threatened damage, injury or loss and to remedy said violation. Failing such action the County or its agent(s) may immediately take whatever steps it deems necessary including, but not limited to, suspending the Work as provided in this Agreement.
2. The County or its agent(s) may offset any and all costs or expenses of whatever nature, including attorneys' fees, paid or incurred by the County or its agent(s) (whether such fees are for in-house counsel or counsel retained by the County or its agent), in taking the steps authorized by Section 00700-25(G) (1) above against any sums then or thereafter due to the Contractor. The Contractor shall defend, indemnify and hold the County, its officers, agents, and employees harmless against any and all costs or expenses caused by or arising from the exercise by the County of its authority to act in an emergency as set out herein. If the Contractor shall be entitled to any additional compensation or extension of time change order on account of emergency work not due to the fault or neglect of the Contractor or its Sub-Contractors, such additional compensation or extension of time shall be determined in accordance with General Condition 00700-52 and General Condition 00700-87 of this Agreement.

G. SUSPENSION OF THE WORK

1. Should, in the judgment of the County or its agent(s), the Contractor or any Sub-Contractor fail to provide a safe and healthy work place, the County or its agent shall have the right, but not the obligation, to suspend work in the unsafe areas until deficiencies are corrected. All costs of any nature (including, without limitation, overtime pay, liquidated damages or other costs arising out of delays) resulting from the suspension, by whomsoever incurred, shall be borne by the Contractor.
2. Should the Contractor or any Sub-Contractor fail to provide a safe and healthy work place after being formally notified in writing by the County or

its agents of such non-compliance, the contract may be terminated following the termination provision of the contract.

H. CONTRACTOR'S INDEMNITY OF THE COUNTY FOR CONTRACTOR'S NON-COMPLIANCE WITH SAFETY PROGRAM

1. The Contractor recognizes that it has sole responsibility to assure its Safety Program is implemented and to assure its construction services are safely provided. The Contractor shall indemnify, defend and hold the County and its agents harmless, from and against any and all liability (whether public or private), penalties (contractual or otherwise), losses, damages, costs, attorneys' fees, expenses, causes of action, claims or judgments resulting, either in whole or in part, from any failure of the Contractor, its Sub-Contractors of any tier or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with the safety requirements of the contract. The Contractor shall not be relieved of its responsibilities under the safety requirements of the Contract should the County or its agent(s) act or fail to act pursuant to its rights hereunder.
2. The Contractor shall not raise as a defense to its obligation to indemnify under this Subparagraph I any failure of those indemnified hereunder to assure Contractor operates safely, it being understood and agreed that no such failure shall relieve the Contractor from its obligation to assure safe operations or from its obligation to so indemnify. The Contractor also hereby waives any rights it may have to seek contribution, either directly or indirectly, from those indemnified hereunder.
3. In any and all claims against those indemnified hereunder by any employee of the Contractor, any Sub-Contractor of any tier or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Subparagraph I shall not be limited in any way as to the amount or type of damages, compensation or benefits payable by or for the Contractor or any Sub-Contractor of any tier under any workers' compensation act, disability benefit or other employee benefit acts.

00700-26 BLASTING AND EXCAVATION

The Contractor acknowledges that it is fully aware of the contents and requirements of O.C.G.A. § 25-9-1 through 25-9-12 concerning blasting and excavation near underground gas pipes and facilities and shall fully comply therewith.

00700-27 HIGH VOLTAGE LINES

The Contractor acknowledges that it is fully aware of the contents and requirements O.C.G.A. § 46-3-30 through 46-3-39 concerning safeguards against contact with high voltage lines, and the Contractor shall fully comply with said provisions.

00700-28 SCAFFOLDING AND STAGING

The Contractor acknowledges that it is the person responsible for employing and directing others to perform labor within the meaning of O.C.G.A. § 34-1-1 and agrees to comply with said provisions.

00700-29 CLEAN-UP

The Contractor shall clean up all refuse, rubbish, scrap materials, and debris caused by its operations to the end that the site of the work shall present a neat, orderly and workmanlike appearance at all times.

00700-30 PROTECTION OF WORK

The Contractor shall be responsible for maintenance and protection of the work, which shall include any County-furnished supplies, material, equipment, until final completion of this agreement and acceptance of the work as defined herein. Any portion of the work suffering injury, damage or loss shall be considered defective and shall be corrected or replaced by the Contractor without additional cost to the County.

00700-31 REJECTED WORK

The Contractor shall promptly remove from the project all work rejected by the Construction Manager for failure to comply with the contract documents and the Contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the County. The Contractor shall also bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

00700-32 DEFECTIVE WORK

If the Contractor defaults or neglects to carry out any portion of the work in accordance with the contract documents, and fails within three days after receipt of written notice from the Construction Manager to commence and continue correction of such default or neglect with diligence and promptness, the County may, after three days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, make good such deficiencies and complete all or any portion of any work through such means as the County may select, including the use of a separate Contractor. In such case, an appropriate change order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. In the event the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the County on demand.

The County may, at its option, accept defective or nonconforming work instead of requiring its removal or correction. In such case, a change order shall be issued reducing the price due the contractor to the extent appropriate and equitable. Such contract price adjustment shall be effected whether or not final payment has been made.

00700-33 WARRANTY OF NEW MATERIALS

The Contractor warrants to the County that all materials and equipment furnished under this contract will be new unless otherwise specified, and the Contractor further warrants that all work will be of good quality, free from faults and defects, and in conformance with the contract documents. The warranty set forth in this paragraph shall survive final acceptance of the work.

00700-34 CONTRACTOR'S WARRANTY OF THE WORK

If within one year after the date of issuance of the certificate of final payment pursuant to General Condition 84, or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the contract documents, any of the work is found to be defective or not in accordance with the contract

documents, the Contractor shall correct such work promptly after receipt of written notice from the Construction Manager to do so. This obligation shall survive both final payment for the work and termination of the contract.

00700-35 ASSIGNMENT OF MANUFACTURERS' WARRANTIES

Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the work are hereby assigned by the Contractor to the County. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the County. All such warranties shall be directly enforceable by the County.

00700-36 WARRANTIES IMPLIED BY LAW

The warranties contained in this agreement, as well as those warranties implied by law, shall be deemed cumulative and shall not be deemed alternative or exclusive. No one or more of the warranties contained herein shall be deemed to alter or limit any other.

00700-37 STOP WORK ORDERS

In the event that the Contractor fails to correct defective work as required by the contract documents or fails to carry out the work in accordance with contract documents, the Construction Manager, in writing, may order the Contractor to stop work until the cause for such order has been eliminated. This right of the County to stop work shall not give rise to any duty on the part of the County or the Construction Manager to execute this right for the benefit of the Contractor or for any other person or entity.

00700-38 TERMINATION FOR CAUSE

If the Contractor is adjudged bankrupt, makes a general assignment for the benefit of creditors, suffers the appointment of a receiver on account of its insolvency, fails to supply sufficient properly skilled workers or materials, fails to make prompt payment to subcontractors or materialmen, disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, fails to diligently prosecute the work, or is otherwise guilty of a material violation of this agreement and fails within seven days after receipt of written notice to commence and continue correction of such default, neglect, or violation with diligence and promptness, the County may, after seven days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, terminate the employment of the Contractor and take possession of the site as well as all materials, equipment, tools, construction equipment and machinery thereon. The County may finish the work by whatever methods the County deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is completed.

Upon completion of the work, the County shall determine in its sole discretion whether the Contractor is due any compensation for those services the Contractor performed prior to the termination to the satisfaction of the County ("Unpaid Satisfactory Work"), and shall compensate Contractor for the same. The County shall further determine in its sole discretion whether the County's completion of the work was made more costly as a result of failures, acts, or omissions of the Contractor, and if so, shall deduct such amounts ("Overages") from any amounts that may be due to the Contractor. In the event that the Overages exceed the Unpaid Satisfactory Work, the Contractor shall immediately pay the difference to the County on demand. These obligations for payment shall survive the termination of the contract. Termination of this agreement pursuant to

this paragraph may result in disqualification of the Contractor from bidding on future County contracts.

00700-39 TERMINATION FOR CONVENIENCE

The County may, at any time upon written notice to the Contractor, terminate the whole or any portion of the work for the convenience of the County. The effective date of the termination shall be provided in the written notice. Said termination shall be without prejudice to any right or remedy of the County provided herein. In addition, in the event this agreement has been terminated by the County through the Termination for Cause provisions due to a claim of default by the Contractor, and it is later determined that the Contractor was not in default pursuant to the provisions of this agreement at the time of termination, then such termination shall be considered a Termination for Convenience pursuant to this paragraph and administered according to the provisions related to Termination for Convenience set out in this Contract.

00700-40 TERMINATION FOR CONVENIENCE - PAYMENT

If the Contract is terminated for convenience by the Owner as provided in this article, Contractor will be paid compensation for those services actually performed as approved by the Owner or his representative. Partially completed tasks will be compensated for based on a signed statement of completion prepared by the Project Manager and submitted to the Contractor which shall itemize each task element and briefly state what work has been completed and what work remains to be done. Contractor shall also be paid for reasonable costs for the orderly filing and closing of the project.

00700-41 TERMINATION FOR CONVENIENCE - PAYMENT LIMITATIONS

Except for normal spoilage, and except to the extent that the County shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor the fair value, as determined by the Construction Manager, of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the County or to another buyer.

00700-42 COST TO CURE

If the County terminates for cause the whole or any part of the work pursuant to this agreement, then the County may procure upon such terms and in such manner as the Construction Manager may deem appropriate, supplies or services similar to those so terminated, for the purpose of completing the work for which the Contractor was contractually engaged, and the Contractor shall be liable to the County for any excess costs for such similar supplies or services. The Contractor shall continue the performance of this agreement to the extent not terminated hereunder.

00700-43 ATTORNEY'S FEES

Should the Contractor default pursuant to any of the provisions of this agreement, the Contractor and its surety shall pay to the County such reasonable attorney's fees as the County may expend as a result thereof and all costs, expenses, and filing fees incidental thereto.

00700-44 CONTRACTOR'S RESPONSIBILITIES UPON TERMINATION

After receipt of a notice of termination from the County, and except as otherwise directed by the Construction Manager, 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 agreement as is not terminated;
3. Unless otherwise directed by the Construction Manager, 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 County in the manner, at the times, and to the extent directed by the Construction Manager, all of the rights, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the County shall have the right, at its discretion, to settle or pay any and all claims arising out of the termination of such orders or 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 Construction Manager, to the extent the Construction Manager may require, which approval or ratification shall be final for all purposes;
6. Transfer title and deliver to the entity or entities designated by the Construction Manager, in the manner, at the times, and to the extent, if any, directed by the Construction Manager, and to the extent specifically produced or specifically acquired by the Contractor for the performance of such portion of the work as has been terminated:
 - a. The fabricated or un-fabricated parts, work, and progress, partially completed supplies, and equipment, materials, parts, tools, dyes, jigs, and other fixtures, 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
 - b. The completed or partially completed plans, drawings, information, and other property to the work.
7. Use its best efforts to sell in the manner, at the times, to the extent, and at the prices directed or authorized by the Construction Manager, any property described in Section 6 of this paragraph, provided, however, that the Contractor shall not be required to extend credit to any buyer and further provided that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the County to the Contractor pursuant to this agreement.
8. Complete performance of such part of the work as shall not have been terminated by the notice of termination; and
9. Take such action as may be necessary, or as the Construction Manager may direct, for the protection and preservation of the property related to the agreement which is in the possession of the Contractor and in which the County has or may acquire an interest.

00700-45 RECORDS

The Contractor shall preserve and make available to the County all of its records, books, documents and other evidence bearing on the costs and expenses of the Contractor and

any subcontractor pursuant to this agreement upon three days advance notice to the Contractor.

00700-46 DEDUCTIONS

In arriving at any amount due the Contractor pursuant to the terms of this agreement, there shall be deducted all liquidated damages, advance payments made to the Contractor applicable to the termination portion of the contract, the amount of any claim which the County may have against the Contractor, the amount determined by the Construction Manager to be necessary to protect the County against loss due to outstanding potential liens or claims, and the agreed price of any materials acquired or sold by the Contractor and not otherwise recovered by or credited to the County.

00700-47 REIMBURSEMENT OF THE COUNTY

In the event of termination for cause or convenience, the Contractor shall refund to the County any amount paid by the County to the Contractor in excess of the costs properly reimbursable to the Contractor.

00700-48 SUSPENSION, INTERRUPTION, DELAY, DAMAGES

The Contractor shall be entitled to only those damages and that relief from termination by the County as specifically set forth in this agreement. The Construction Manager may issue a written order requiring the Contractor to suspend, delay or interrupt all or any part of the work for such period of time as the County may determine to be appropriate for the convenience of the County. If the Construction Manager issues a written order requiring the Contractor to suspend, delay or interrupt all or any part of the work and if performance of the work is interrupted for an unreasonable period of time by an act of the County or any of its officers, agents, employees, contractors, or consultants in the administration of this agreement, an equitable adjustment may be made for any increase in the Contractor's costs of performance and any increase in the time required for performance of the work necessarily caused by the unreasonable suspension, delay, or interruption. Any equitable adjustment shall be reduced to writing and shall constitute a modification to this agreement. In no event, however, shall an equitable adjustment be made to the extent that performance of this agreement would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor. No claim for an equitable adjustment pursuant to this paragraph shall be permitted before the Contractor shall have notified the Construction Manager in writing of the act or failure to act involved, and no claim shall be allowed unless asserted in writing to the Construction Manager within ten days after the termination of such suspension, delay or interruption.

00700-49 COMMENCEMENT AND DURATION OF WORK

The County may issue a Notice to Proceed at any time within 120 days following execution of the contract by the County. The Contractor shall commence work pursuant to this agreement within ten days of mailing or delivery of written notice to proceed. The Contractor shall diligently conduct the work to completion within the time specified therefore in the Agreement. The capacity of the Contractor's construction and manufacturing equipment and plan, sequence and method of operation and forces employed, including management and supervisory personnel, shall be such as to insure completion of the work within the time specified in the Agreement. The Contractor and County hereby agree that the contract time for completion of the work is reasonable taking into consideration the average climatic conditions prevailing in the locality of the

work and anticipated work schedules of other contractors whose activities are in conjunction with or may affect the work under this contract.

00700-50 TIME OF THE ESSENCE

All time limits stated in this agreement are of the essence of this contract.

00700-51 IMPACT DAMAGES

Except as specifically provided pursuant to a stop work order or change order, the Contractor shall not be entitled to payment or compensation of any kind from the County for direct or indirect or impact damages including, but not limited to, costs of acceleration arising because of delay, disruption, interference or hindrance from any cause whatsoever whether such delay, disruption, interference or hindrance is reasonable or unreasonable, foreseeable or unforeseeable, or avoidable, provided, however, that this provision shall not preclude the recovery of damages by the Contractor for hindrances or delays due solely to fraud or bad faith on the part of the County, its agents, or employees. The Contractor shall be entitled only to extensions in the time required for performance of the work as specifically provided in the contract.

00700-52 DELAY

The Contractor may be entitled to an extension of the contract time, but not an increase in the contract price or damages, for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or its subcontractors for labor strikes, acts of God, acts of the public enemy, acts of the state, federal or local government in its sovereign capacity, by acts of another separate contractor, or by an act or neglect of the County.

00700-53 INCLEMENT WEATHER

The Contractor shall not be entitled to an extension of the contract time due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the Construction Manager that there was greater than normal inclement weather and that such greater than normal inclement weather actually delayed the work, the Contractor shall not be entitled to an extension of time therefore. The following shall be considered the normal inclement weather days for each month listed, and extensions of time shall be granted in increments of not less than one half day only for inclement weather in excess of the days set out.

January	10 days
February	10 days
March	7 days
April	6 days
May	4 days
June	3 days
July	4 days
August	2 days
September	2 days
October	3 days
November	6 days
December	9 days

00700-54 DELAY - NOTICE AND CLAIM

The Contractor shall not receive an extension of time unless a Notice of Delay is filed with the Construction Manager within ten days of the first instance of such delay, disruption, interference or hindrance and a written Statement of the Claim is filed with the Construction Manager within 20 days of the first such instance. In the event that the Contractor fails to comply with this provision, it waives any claim which it may have for an extension of time pursuant to this agreement.

00700-55 STATEMENT OF CLAIM - CONTENTS

The Statement of Claim referenced in Article 00700-54 shall include specific information concerning the nature of the delay, the date of commencement of the delay, the construction activities affected by the delay, the person or organization responsible for the delay, the anticipated extent of the delay, and any recommended action to avoid or minimize the delay.

00700-56 WORK BEHIND SCHEDULE, REMEDY BY CONTRACTOR

If the work actually in place falls behind the currently updated and approved schedule, and it becomes apparent from the current schedule that work will not be completed within the contract time, the Contractor agrees that it will, as necessary, or as directed by the Construction Manager, take action at no additional cost to the County to improve the progress of the work, including increasing manpower, increasing the number of working hours per shift or shifts per working day, increasing the amount of equipment at the site, and any other measure reasonably required to complete the work in a timely fashion.

00700-57 DILIGENCE

The Contractor's failure to substantially comply with the requirements of the preceding paragraph may be grounds for determination by the County that the Contractor is failing to prosecute the work with such diligence as will insure its completion within the time specified. In such event, the County shall have the right to furnish, from its own forces or by contract, such additional labor and materials as may be required to comply with the schedule after 48 hours written notice to the Contractor, and the Contractor shall be liable for such costs incurred by the County.

00700-58 SET-OFFS

Any monies due to the Contractor pursuant to the preceding paragraph of this agreement may be deducted by the County against monies due from the County to the Contractor.

00700-59 REMEDIES CUMULATIVE

The remedies of the County under Articles 00700-56, 00700-57, and 00700-58 are in addition to and without prejudice to all of the rights and remedies of the County at law, in equity, or contained in this agreement.

00700-60 TITLE TO MATERIALS

No materials or supplies shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sales contract or other agreement by which any interest is retained by the seller. The Contractor hereby warrants that it has good and marketable title to all materials and supplies used by it in the work, and

the Contractor further warrants that all materials and supplies shall be free from all liens, claims, or encumbrances at the time of incorporation in the work.

00700-61 INSPECTION OF MATERIALS

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards and in accordance with the requirements of the contract documents. Additional tests performed after the rejection of materials or equipment shall be at the Contractor's expense.

00700-62 CONSTRUCTION MANAGER'S PRESENCE DURING TESTING

All tests performed by the Contractor shall be witnessed by the Construction Manager unless the requirement therefore is waived in writing. The Construction Manager may perform additional tests on materials previously tested by the Contractor, and the Contractor shall furnish samples for this purpose as requested.

00700-63 MATERIALS INCORPORATED IN WORK

The Contractor shall furnish all materials and equipment to be incorporated in the work. All such materials or equipment shall be new and of the highest quality available. Manufactured materials and equipment shall be obtained from sources which are currently manufacturing such materials, except as otherwise specifically approved by the Construction Manager.

00700-64 STORAGE OF MATERIALS

Materials and equipment to be incorporated in the work shall be stored in such a manner as to preserve their quality and fitness for the work and to facilitate inspection.

00700-65 PAYROLL REPORTS

The Contractor may be required to furnish payroll reports to the Construction Manager as required by the Owner Controlled Insurance Program.

00700-66 CONTRACTORS' REPRESENTATIVE

Before beginning work, the Contractor shall notify the Construction Manager in writing of one person within its organization who shall have complete authority to supervise the work, receive orders from the Construction Manager, and represent the Contractor in all matters arising pursuant to this agreement. The Contractor shall not remove its representative without first designating in writing a new representative. The Contractor's representative shall normally be present at or about the site of work while the work is in progress. When neither the Contractor nor its representative is present at the work site, the superintendent, foreman, or other of the Contractor's employee in charge of the work shall be an authorized representative of the Contractor.

00700-67 SPECIALTY SUB-CONTRACTORS

The Contractor may utilize the services of specialty subcontractors on those parts of the project which, under normal contracting practices, are performed by specialty subcontractors. The Contractor shall not award more than seventy-five percent of the work to subcontractors.

00700-68 INSPECTION BY THE CONSTRUCTION MANAGER

All work pursuant to this agreement shall be subject to inspection by the Construction Manager for conformity with contract drawings and specifications. The Contractor shall

give the Construction Manager reasonable advance notice of operations requiring special inspection of a portion of the work.

00700-69 WORK COVERED PRIOR TO CONSTRUCTION MANAGER'S INSPECTION

In the event that work is covered or completed without the approval of the Construction Manager, and such approval is required by the specifications or required in advance by the Construction Manager, the Contractor shall bear all costs involved in inspection notwithstanding conformance of such portion of the work to the contract drawings and specifications.

00700-70 SCHEDULING OF THE WORK

The work of this contract shall be planned, scheduled, executed, and reported as required by the Contract Documents.

00700-71 PROGRESS ESTIMATES

The Contractor shall prepare a written report for the Construction Manager's approval, on County forms, of the total value of work performed and materials and equipment obtained to the date of submission. Such a report must accompany each request for a progress payment and is subject to review and approval by the Construction Manager. Approval of a progress estimate or tendering of a progress payment shall not be considered an approval or acceptance of any work performed, and all estimates and payments shall be subject to correction in subsequent estimates. Progress payments shall be made for all completed activities and for materials suitably stored on-site.

00700-72 PROGRESS PAYMENTS

Upon approval of each monthly estimate of work performed and materials furnished, the Construction Manager shall approve payment to the Contractor for the estimated value of such work, materials, and equipment, less the amount of all prior payments and any liquidated damages. The Contractor will be paid 100 percent, less retainage, of the cost of materials received and properly stored on-site but not incorporated into the work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale to establish the County's title to such materials or equipment. The Contractor's request for payment shall provide sufficient detail as to the work completed or materials purchased for which payment is requested to permit meaningful review by the Construction Manager.

00700-73 TIME OF PAYMENT

The Contractor will be paid within 45 days following receipt of an approved Progress Estimate. The Contractor expressly agrees that the payment provisions within this Contract shall supersede the rates of interest, payment periods, and contract and subcontract terms provided for under the Georgia Prompt Pay Act, O.C.G.A. §13-11-1 et seq., and that the rates of interest, payment periods, and contract and subcontract terms provided for under the Prompt Pay Act shall have no application to this Contract. The County shall not be liable for any late payment interest or penalty.

Submittal of Invoices: Invoices shall be submitted as follows:

Via Mail:

Fulton County Government
141 Pryor Street, SW
Suite 7001
Atlanta, Georgia 30303

Attn: Finance Department – Accounts Payable

OR

Via Email:

Email: Accounts.Payable@fultoncountyga.gov

At minimum, original invoices must reference all of the following information:

- 1) Vendor Information
 - a. Vendor Name
 - b. Vendor Address
 - c. Vendor Code
 - d. Vendor Contact Information
 - e. Remittance Address
- 2) Invoice Details
 - a. Invoice Date
 - b. Invoice Number (uniquely numbered, no duplicates)
 - c. Purchase Order Reference Number
 - d. Date(s) of Services Performed
 - e. A written report of the total value of work performed and materials and equipment obtained to the date of submission
- 3) Fulton County Department Information (needed for invoice approval)
 - a. Department Name
 - b. Department Representative Name

00700-74 RETAINAGE

The County shall retain from each progress payment ten percent of the estimated value of the work performed until the progress payments, including retainage, total 50 percent of the contract price. If a contract includes two or more projects or assignments that have been separately priced and have separate budgets, and the performances of such projects or assignments are not related to or dependent upon the performance of any other, the 50 per cent limit shall be based upon the price for each individual project or assignment. Thereafter, no further retainage shall be withheld so long as the Contractor is making satisfactory progress to insure completion of the work within the time specified therefore. The County may reinstate the ten percent retainage in the event the Construction Manager determines that the Contractor is not making satisfactory progress to complete the work within the time specified in this agreement or in the event that the Construction Manager provides a specific cause for such withholding. The County may also withhold retainage upon substantial completion of the work as provided in O.C.G.A. §13-10-81(c). Interest may be paid upon the retainage in accordance with Georgia law.

00700-75 PAYMENT OF SUBCONTRACTORS

The Contractor shall promptly pay each subcontractor upon the receipt of payment from the County. Such payment shall be made from the amount paid to the Contractor pursuant to the subcontractor's work. The Contractor shall also maintain the records of the percentage retained from payments to the Contractor pursuant to such subcontractor's work. The Contractor shall procure agreements from each subcontractor

requiring each subcontractor to pay their subcontractors, agents and employees in a similar manner. The County reserves the right to inquire of any subcontractor, supplier, materialmen, or subconsultant, the status of any indebtedness of the Contractor. The County further reserves the right to require the Contractor to designate on each instrument of payment exceeding \$400.00 to subcontractors, suppliers, materialmen, and subconsultants that such payment is on account of the work under this Contract.

00700-76 COUNTY'S RESPONSIBILITIES TO SUBCONTRACTORS

Neither the County nor the Construction Manager shall have any obligation to pay any subcontractor except as otherwise required by law.

00700-77 PROGRESS PAYMENTS - ACCEPTANCE OF WORK

Certification of progress payments, as well as the actual payment thereof, shall not constitute the County's acceptance of work performed pursuant to this agreement.

00700-78 PAYMENTS IN TRUST

All sums paid to the Contractor pursuant to this agreement are hereby declared to constitute trust funds in the hands of the contractor to be applied first to the payment of claims of subcontractors, laborers, and suppliers arising out of the work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety and other bonds and on insurance for any other application.

00700-79 JOINT PAYMENTS

The County reserves the right to issue any progress payment or final payment by check jointly to the Contractor and any subcontractor or supplier.

00700-80 RIGHT TO WITHHOLD PAYMENT

The Construction Manager may decline to approve payment and may withhold payment in whole or in part to the extent reasonable and necessary to protect the County against loss due to defective work, probable or actual third party claims, the Contractor's failure to pay subcontractors or materialmen, reasonable evidence that the work will not be completed within the contract time or contract price or damage to the County or any other contractor on the project.

00700-81 CERTIFICATE OF SUBSTANTIAL COMPLETION

Upon the Contractor's submission of a request for a certificate of Substantial Completion, the Construction Manager shall inspect the work and determine whether the work is Substantially Complete. If the work is Substantially Complete, the Construction Manager shall issue a certificate of Substantial Completion of the work which shall establish the date of Substantial Completion, shall state the responsibilities of the County and the Contractor for security, maintenance, heat, utilities, damage to the work and insurance, and shall fix the time within which the Contractor shall complete the items submitted by the Contractor as requiring correction or further work. The certificate of substantial completion of the work shall be submitted to the County and the Contractor for their written acceptance of the responsibilities assigned to them pursuant to such certificate.

If in the sole opinion of the Construction Manager, the work is not substantially complete, the Construction Manager shall notify the Contractor of such, in writing, and outline requirements to be met to achieve Substantial Completion.

00700-82 PAYMENT UPON SUBSTANTIAL COMPLETION

Upon Substantial Completion of the work and upon application by the Contractor and approval by the Construction Manager, the County shall make payment reflecting 100% work completed, less value of work remaining as determined by Construction Manager and any authorized retainage.

00700-83 COMMENCEMENT OF WARRANTIES

Warranties required by this agreement shall commence on the date of final completion of the project as determined under Article 00700-84 unless otherwise provided in the certificate of Substantial Completion.

00700-84 FINAL PAYMENT - WAIVER OF CLAIMS, DISPUTE OF FINAL PAYMENT

The acceptance of the Substantial Completion payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of application for payment at Substantial Completion and except for the retainage sums due at final acceptance. Following the Construction Manager's issuance of the certificate of Substantial Completion and the Contractor's completion of the work pursuant to this agreement, the Contractor shall forward to the Construction Manager a written notice that the work is ready for final inspection and acceptance. If after inspection the Construction Manager certifies that the work is complete and issues written notification of such to the Contractor, the Contractor shall forward to the Construction Manager a final application for payment. The Construction Manager shall issue a certificate for payment, which shall approve final payment to the Contractor and shall establish the date of final completion.

In the event the Contractor timely disputes the amount of the final payment, the amount due the Contractor shall be deemed by the Contractor and the County to be an unliquidated sum and no interest shall accrue or be payable on the sum finally determined to be due to the Contractor for any period prior to final determination of such sum, whether such determination be by agreement of the Contractor and the County or by final judgment of the proper court in the event of litigation between the County and the Contractor. The Contractor specifically waives and renounces any and all rights it may have under O.C.G.A. §13-6-13 and agrees that in the event suit is brought by the Contractor against the County for any sum claimed by the Contractor under the Contract or for any extra or additional work, no interest shall be awarded on any sum found to be due from the County to the Contractor in the final judgment entered in such suit. All final judgments shall draw interest at the legal rate, as specified by law.

00700-85 DOCUMENTATION OF COMPLETION OF WORK

Neither the final payment nor the remaining retainage shall become due until the Contractor submits the following documents to the Construction Manager:

- a. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work have been paid other otherwise satisfied;
- b. The surety's consent to final payment; and
- c. Any other data reasonably required by the County or Construction Manager establishing payment or satisfaction of all such obligations, including releases, waivers of liens, and documents of satisfaction of debts.

In the event that a subcontractor refuses to furnish a release or waiver as required by the County or Construction Manager, the Contractor may furnish a bond satisfactory to the County to indemnify the County against such loss. In the event that any lien or indebtedness remains unsatisfied after all payments are made, the contractor shall refund to the County all moneys that the County may become compelled to pay in discharging such lien or other indebtedness, including all costs and reasonable attorney's fees.

00700-86 GOVERNING LAW

Each and every provision of this agreement shall be construed in accordance with and governed by Georgia law. The parties acknowledge that this contract is executed in Fulton County, Georgia and that the contract is to be performed in Fulton County, Georgia. Each party hereby consents to the Fulton Superior Court's sole jurisdiction over any dispute which arises as a result of the execution or performance of this agreement, and each party hereby waives any and all objections to venue in the Fulton Superior Court.

00700-87 CHANGES IN THE WORK

A. CHANGE ORDERS

1. A Change Order is a written order to the Contractor signed to show the approval and the authorization of the County, issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum or the Contract Time. Change Orders shall be written using forms designated by the County with Contractor providing supporting documentation as required by the Construction Manager. The Contract Sum and the Contract Time may be changed only by approved Change Order pursuant to Fulton County Code Section 102-420. The amount payable by the Change Order is payment in full for all direct and indirect costs incurred and related to the work under said Change Order, including but not limited to delays, imports, acceleration, disruption and extended overhead. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including the adjustment in either or both of the Contract Sum or the Contract Time.
2. The County, without invalidating the Contract, may order changes in the Work within the general scope of the Contract as defined herein. The time allowed for performance of the work and the contract price to be paid to the Contractor may be adjusted accordingly.
3. The cost or credit to the County resulting from a change in the Work shall be determined in one or more of the following ways:
 - a. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - b. By unit prices stated in the Contract Documents or subsequently agreed upon;
 - c. By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
 - d. By the method provided in Subparagraph A4 below.

4. If none of the methods set forth in Subparagraphs 3a, 3b, or 3c above is agreed upon, the Contractor, provided a written order signed by the Construction Manager is received, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Construction Manager on basis of the reasonable expenditures and savings of those performing the Work attributable to the change. The cost of the change shall include only the items listed in Subparagraph 5a below, and in the case of either a decrease or an increase in the Contract Sum, an allowance for overhead and profit in accordance with the schedules set forth in Subparagraphs 5b and 6 below shall be applied to the cost or credit.
 - a. In such case, and also under Subparagraph 3a above, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting of all actual costs expended, together with appropriate supporting data for inclusion in a Change Order.
 - b. All hourly rate charges shall be submitted to the Construction Manager for prior review and approval. All hourly rate charges shall be properly supported as required by the Construction Manager with certified payrolls, or their acceptable equivalent. When authorized to proceed for a given change and actual expenditures have been made prior to execution of a Change Order for the entire change, such actual expenditures may be summarized monthly, and if approved, incorporated into a Change Order. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase or decrease, if any, with respect to that change.
5. In Subparagraphs 3 and 4 above, the items included in "Cost and Overhead" shall be based on the following schedule:
 - a. Unless otherwise provided in the Contract Documents, "Cost" shall be limited to the following: cost of materials incorporated into the Work, including sales tax and cost of delivery; cost of direct labor (labor cost may include a pro rata share of foreman's account of the change) including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; rental value of equipment and machinery; costs for preparing Shop Drawings.
 - b. Unless otherwise provided in the Contract Documents, "Overhead" shall include the following: bond and insurance premiums including increase and decreases from change in the Work, supervision, superintendence, construction parking, wages of timekeepers, watchmen and clerks, small tools, consumable supplies, expendables, incidentals, general office expense, the cost of additional reproduction for the Contractor's subcontractors beyond that agreed upon in the Contract Documents, construction parking, any additional costs of craft supervision by the

Contractor's or subcontractors' superintendents, and overhead charges which would be customary and expended regardless of the change in the Work due to other overlapping activities which are included as part of the original Contract, and all other expenses not included in "Cost" above.

- c. In the event that a change is issued by the County which would require the expenditure of substantial amounts of special supervision (beyond the foreman level) by the Contractor, the Contractor may, at the sole direction of the Construction Manager, be allowed to incorporate these charges into the agreement cost for the change.
6. In Subparagraphs 3 and 4 above, the allowance for overhead and profit combined, included in the total cost or credit to the County, shall be based on the following schedule:
 - a. For the Contractor, for any work performed by the Contractor's own forces, ten (10) percent of the cost.
 - b. For the Contractor, for any work performed by a Contractor's subcontractor, five (5) percent of the amount due the subcontractor.
 - c. For each subcontractor or sub-subcontractor involved, for any work performed by that subcontractor's or sub-subcontractor's own forces, ten (10) percent of the cost.
 - d. For each subcontractor, for work performed by a sub-subcontractor, five (5) percent of the amount due to the sub-subcontractor.
 - e. Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 5 above unless modified otherwise.
7. In order to facilitate checking of quotations for extras or credits, all proposals or bids, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs, including labor cost, materials and subcontracts. Labor and materials shall be itemized in the manner defined in Subparagraph 4 above. Where major cost items are subcontracts, they shall be itemized also. In no case shall a change be approved without such itemization.
8. No payment shall be made for any changes to the contract that are not included in a fully executed Change Order.

B. CONCEALED, UNKNOWN AND DIFFERING CONDITIONS

1. Should concealed conditions be encountered in the performance of the Work below the surface of the ground, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be

encountered, the Contract Sum and Contract Time shall be equitably adjusted by Change Order upon request by either party made **within twenty (20) days after the first observance** of the conditions. No such request for equitable adjustment shall be valid unless the Contractor complies with this (20) days' notice and Subparagraph C.1. below.

2. The Contractor shall promptly, and before such conditions are disturbed, notify the Construction Manager in writing of any claim of concealed, unknown or differing conditions pursuant to this paragraph. The Construction Manager shall authorize the Engineer to investigate the conditions, and if it is found 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 part of the Work under this Contract, whether or not changed as a result of such conditions, an equitable adjustment shall be recommended to the Construction Manager.
3. No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in (a) above, prior to disturbing the condition.
4. No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this Contract.
5. Any materially differing site condition as between what is shown on the Drawings and Specifications and actually found on site shall be immediately reported to the Construction Manager in writing prior to the commencement of Work at the site. Failure of the Contractor to notify the Construction Manager in writing of the differing site condition prior to performance of Work at the site shall constitute a waiver of any claim for additional monies. Any Change Order necessitated by the differing site condition shall be processed as provided under "Changes in the Contract".

C. REQUESTS FOR ADDITIONAL COST

1. If the Contractor wishes to request an increase in the Contract Sum, the Contractor shall give the Construction Manager written notice thereof within twenty (20) days after the occurrence of the event, or identification of the conditions, giving rise to such request. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Article 00700-25 and Subparagraph A.4 above. No such request shall be valid unless so made within the twenty (20) days specified above. If the County and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Construction Manager. Any change in the Contract Sum resulting from such claim shall be documented by Change Order.
2. If the Contractor claims that addition cost is involved because of, but not limited to (1) any written interpretation pursuant to General Condition 00700-17 of this Agreement, (2) any order by the County to stop the Work pursuant to Articles 00700-25 and 00700-37 of this Agreement where the Contractor was not at fault, or any such order by the Construction Manager as the County's agent, or (3) any written order for a minor

change in the Work issued pursuant to Paragraph D below, the Contractor shall submit a request for an increase in the Contract Sum as provided in Subparagraph C.1 above. No such claim shall be valid unless the Contractor complies with Subparagraph C.1 above and approved by the County pursuant to Fulton County Code Section 102-420.

D. MINOR CHANGES IN THE WORK

The Construction Manager may order minor changes in the Work not involving an adjustment in the Contract Price, extension of the time allowed for performance of the work and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by a written Change Directive issued by the Construction Manager, and shall be binding on the County and the Contractor. The Contractor shall carry out such written orders promptly.

E. BONDS

If any change order results in an increase in the contract price, the contractor shall increase the penal sum of the performance and payment bonds to equal the increased price.

00700-88 DISAGREEMENT WITH ORDERS FOR CHANGE

Contractor's written acceptance of a Change Order or other order for changes shall constitute his final and binding agreement to the provisions thereof and a waiver of all claims in connection therewith, whether direct or consequential in nature. Should Contractor disagree with any order for changes, he may submit a notice of potential claim to the Construction Manager, at such time as the order is set forth in the form of a Change Order. Disagreement with the provisions of an order for changes shall not relieve Contractor of his obligation under Article 00700-87 of this Agreement.

00700-89 NO WAIVER OF REMEDIES

Exercise by the County of any remedy is not exclusive of any other remedy available to County and shall not constitute a waiver of any such other remedies. Failure of the County to exercise any remedy, including breach of contract remedies, shall not preclude the County from exercising such remedies in similar circumstances in the future.

00700-90 LAND AND RIGHTS-OF-WAY

The owner will provide, as indicated in the Contract Documents and prior to Notice to Proceed, the lands upon which the work is to be done, right-of-way for access thereto, and such other lands which are designated for the use of the Contractor. The Contractor shall confine the Contractor's work and all associated activities to the easements and other areas designated for the Contractor's use. The Contractor shall comply with any limits on construction methods and practices which may be required by easement agreements. If, due to some unforeseen reason, the necessary easements are not obtained, the Contractor shall receive an equitable extension of contract time dependent upon the effect on the critical path of the project schedule or the County may terminate the Contract for its convenience.

00700-91 COORDINATION WITH STATE DEPARTMENT OF TRANSPORTATION

No clearing or grading shall be completed by Contractor within the State Department of Transportation (DOT) area under construction. The Contractor must coordinate his construction scheduling with DOT.

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Roof Replacement JJC & ME Bldg.

Section 8

General Conditions

If the Contractor begins work before DOT's completion date, he must obtain the approval of DOT before starting work in the area. The state DOT has the right to stop the Contractor's work the DOT area.

The Contractor shall receive no additional compensation or damages resulting from delay or work stoppage from DOT actions or scheduling.

Contractor shall obtain DOT drawings of the DOT, project area for verification of road geometry, storm drains, etc. from Georgia Department of Transportation or Fulton County. The Contractor is responsible for obtaining any pertinent DOT revisions.

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Section 8

General Conditions

EXHIBIT A
FINAL AFFIDAVIT

TO FULTON COUNTY, GEORGIA

I, _____, hereby certify that all suppliers of materials, equipment and service, subcontractors, mechanic, and laborers employed by _____ or any of his subcontractors in connection with the design and/or construction of _____ at Fulton County have been paid and satisfied in full as of _____, 20__, and that there are no outstanding obligations or claims of any kind for the payment of which Fulton County on the above-named project might be liable, or subject to, in any lawful proceeding at law or in equity.

Signature

Title

Personally appeared before me this _____ day of _____, 20____. _____, who under Oath deposes and says that he is _____ of the firm of _____, that he has read the above statement and that to the best of his knowledge and belief same is an exact true statement.

Notary Public

My Commission expires

END OF SECTION

EXHIBIT B

SPECIAL CONDITIONS

SECTION 9

SPECIAL CONDITIONS

SAFETY POLICY STATEMENT

It is the policy of Fulton County to establish a comprehensive accident and loss prevention process for all Projects implemented by Fulton County or its agents.

The goals of this comprehensive accident and loss prevention process are as follows:

- To prevent personal injury, property damage, and injury to the public.
- To implement safety and loss prevention processes as critical elements in the complete design and build process.
- To establish a proactive safety and health process that complies with all laws, regulations, consensus standards, and good management practices.
- To have the Contractors partner with Fulton County in the implementation of a Safety and Loss Prevention Process Program to minimize loss potential and to minimize risk.

Fulton County requires safety, health and loss prevention requirements and expectations to be included in project design, in the invitation to bid, in bid award and project meetings, and in the post job evaluations. The Contractor is required to develop and submit a project safety and health program for acceptance by Fulton County prior to Notice to Proceed. The Contractor is required to implement these requirements, and develop a management system to ensure compliance following the safety and health process outlined in this document and the bid documents.

The Contractor and other entities placed under contract with Fulton County will be obligated to implement, adhere to and enforce this Policy. The safety and health of the Contractor's employees, Sub-Contractors, and the public are the sole responsibility of the Contractor. The County may use and direct designated Representatives to implement and enforce this policy. **Failure of the Contractor to comply with this policy or any Safety related obligations may be grounds for contract termination.**

Fulton County's designated Representative will periodically inspect all Fulton County construction projects to identify safety hazards and make recommendations to resolve the issues. Contractor will be responsible for abating the identified issues in a timely manner, and submitting written description of corrective action within 48 hours to Fulton County designated Representatives. Failure to bring timely resolution to the issues may result in work stoppage at Contractor's expense.

Prior to commencing work under this contract, Contractor's Project Manager and Project Superintendent shall attend a Pre-Construction Meeting and Safety Pre-Planning meeting to address safety issues/requirements.

CONTRACTOR SAFETY AND HEALTH MANAGEMENT PROCESS

1.0 NOT USED

2.0 REFERENCES

- 1.1 Occupational Safety and Health Regulations (OSHA) 29CFR1910 and 29CFR1926
- 1.2 Environmental Protection Agency Regulations (EPA) 40CFR
- 1.3 Fulton County Safety and Health and Requirements
- 1.4 Georgia Department of Transportation Regulations and Requirements
- 1.5 US Department of Transportation Requirements
- 1.6 Manual of Uniform Traffic Control Devices for Streets and Highways (ANSI D6.1)
- 1.7 Georgia Department of Natural Resources Environmental Protection Division Regulations

Safety rules and regulations will be followed using federal, state or local regulations in force. Should a Contractor's rule be in use which is more effective, the most stringent rule or regulation will be enforced by the Contractor, Sub-Contractors and Fulton County designated Safety Representative(s).

3.0 RESPONSIBILITY

The Contractor receiving the bid has the ultimate responsibility for the safety and health of all Sub-Contractors, all employees on the project, and the general public and complying with all governmental regulations and requirements (OSHA, EPA, DOT, state, local).

Nothing contained herein shall relieve the Contractor or any Sub-Contractor of such responsibility or liability.

4.0 PROCEDURE

- 4.1 The Contractor and each Sub-Contractor must implement a written safety and health prevention process and program following the guidelines contained in this document and in any other relevant portion of the Contract Documents. This program must be accepted by Fulton County or its Representatives prior to Notice to Proceed.
- 4.2 The Contractor and each Sub-Contractor must implement a drug and alcohol policy following the guidelines contained in this document and in the bid specific actions. This program must be accepted by Fulton County or its Representatives prior to Notice to Proceed.
- 4.3 The Contractor must designate a person responsible for site safety. Each Sub-Contractor must designate a person responsible for site safety.
- 4.4 Not Used.
- 4.5 Contractor is responsible for providing all necessary safety supplies and personal protective equipment required to protect its employees, Sub-Contractors, and the general public.
- 4.6 Contractor shall make available certified First-aid services, First-aid supplies, and provisions for medical care for all employees at the construction site prior to beginning work on site.
- 4.7 Contractor shall maintain a competent person at the construction site at all times with an OSHA 10-hour certification, Said person shall have the

knowledge to recognize hazards or potential hazards and has the authority to correct such hazards.

- 4.8 The status of project safety shall be included in the Contractor's agenda, which is required in Progress Meetings.

5.0 DRUG AND ALCOHOL POLICY

The Contractor and each Sub-Contractor must implement a drug and alcohol policy in order to maintain a safe and efficient work environment. This policy must include the following elements.

1. Written policy that prohibits the use, transportation, sale and possession of these materials
2. Disciplinary action plan for violations
3. Any treatment or reinstatement reemployment options
4. Drug and alcohol testing schedule that includes pre-employment, periodic for safety sensitive or critical jobs, and for cause

Note: AGC, ABC and/or Fulton County programs may be used as guidance documents.

6.0 OTHER CONTROLLED ITEMS

The Contractor and each Sub-Contractor is required to include in the Project Safety Program a prohibition against the use, possession, concealment, transportation, promotion or sale of the following controlled items

1. Firearms, weapons, and ammunition.
2. Switchblades
3. Unauthorized explosives including fireworks
4. Stolen property or contraband
5. Controlled chemicals or chemicals recognized as being able to be used for improper purposes

7.0 EMERGENCY PROCEDURES/GUIDELINES

- 7.1 The Contractor is required to establish site specific emergency procedures in the Project Safety Program to manage emergencies that may occur at any time in the following categories:

1. Fire
2. Employee injury
3. Pedestrian injury due to work activity of any kind
4. Property damage and damage to various utilities (i.e., electrical, gas, sewerage,, water, telephone or public roadways)
5. Public demonstrations
6. Bomb threats
7. Flood, Wind, Lightening, Hail
8. Terrorists Threats
9. Work place violence

- 7.2 These Emergency Procedures will be made part of the Contractor's Project Safety Program submittal and shall include but not be limited to the following elements:

1. A list of emergency phone numbers posted at the job site, along with information to be transmitted in such emergencies.
2. An incident command structure defining duties and responsibilities

3. A system to train supervisors and employees on this emergency plan
4. Procedures on how to handle emergencies including access to the site by emergency responders, accounting for workers, and securing the area.
5. Procedures for media releases. These releases must be coordinated through the Fulton County Information and Public Affairs Office in coordination with the County's designated Representative.
6. A plan that addresses serious incidents that includes notification to Fulton County, Fulton County's designated Representative immediately after the incident.
7. A review and updating frequency that includes forwarding a copy to Fulton County and the County's designated Representative.

8.0 ACCIDENT AND INCIDENT INVESTIGATION AND REPORTING

- 8.1 The Contractor is responsible for reporting all accidents and incidents on the project site to the County's designated Representative within (1) business day. Accidents or incidents resulting in a fatality, property loss in excess of \$5,000, or involvement with the general public must be reported immediately to Fulton County's designated Representative and the investigation of the accident or incident coordinated with Fulton County Safety staff.
- 8.2 The Contractor will maintain a log of all injuries that occur on the job site. This log will be current and available for review.
- 8.3 For any incidents such as fires, explosions, fatalities, etc., the Contractor must notify Fulton County's designated Representative immediately and must coordinate any releases to the news media through the County's designated Representative and the County's Information and Public Affairs Office,
- 8.4 If a work-related injury should occur on this project, Contractor shall perform a thorough investigation of the incident and document the information.
- 8.5 A written accident investigation report containing the following information a minimum must be forwarded to the Fulton County's designated Representative within 24 hours of incident.
 1. Company Name
 2. Location
 3. Date and Time of incident
 4. Description of incident
 5. Names of all parties involved and all witnesses
 6. Corrective action(s) taken to prevent recurrence
 7. If the incident involves injury or illness, the following information must be provided:
 - a) A medical description of the injury or illness
 - b) OSHA recordability status i.e. first aid, medical treatment, lost time, days of restricted work.
 - c) If the public is involved, information about treatment and treatment location.
 8. Any pictures, site drawings, etc. if they assist in describing the incident.

If the investigation cannot be completed in 24 hours, a preliminary report marked as such shall be forwarded and the report completed and forwarded as soon as possible.

9.0 JOB SAFETY ANALYSIS

- 9.1 The Contractor and each Sub-Contractor must implement a procedure to conduct a written job safety analysis or job hazard analysis for all project work tasks prior to beginning each task. Reference Appendix A.
- 9.2 The job safety analysis should follow National Safety Council, AGC, or other recognized guidelines and address all safety and health hazards for the work, identify personal protective and other safety equipment required, identify potential hazards to the general public if applicable, and identify any safety equipment, training, or controls that must be implemented prior to starting the work.
- 9.3 The Contractor must maintain a file for all job safety analysis forms, which is Accessible for review.

10.0 SAFETY AND HEALTH COMPLIANCE AUDITING

10.1 Self Auditing Requirements

- 10.1.1 The Contractor and each Sub-Contractor must implement a procedure to assure that written safety and health audits or inspections are conducted at least biweekly (every 2 weeks). Safety checklists used by Fulton County's designated Representative may be used. The Contractor may use this checklist or an equivalent approved by Fulton County's designated Representative.
- 10.1.2 Each written safety audit must be filed on the site and a copy forwarded to Fulton County designated Representative.

10.2 NOT USED

10.3 INSPECTIONS BY REGULATORY AGENCIES

- 10.3.1 The Contractor must notify the Fulton County designated Representative whenever an 051-IA compliance officer, health inspector, or EPA or Georgia Environmental Protection Division Representative arrives at the project site to conduct an inspection.
- 10.3.2 The Contractor is required to forward a copy of all regulatory citations, notice of violations, or similar for this project to Fulton County's designated Representative.
- 10.3.3 These records will be reviewed with Fulton County designated Representative and included in the Construction Project files.

10.4 SAFETY INSPECTION AND AUDIT FOLLOW UP

- 10.4.1 Every safety audit or regulatory inspection conducted per the requirements above may be reviewed by the Fulton County designated Representative. This review may identify serious and repeat safety items, look at trends, identify risks and potential losses, and site safety and loss prevention activities.
- 10.4.2 After this review the findings may identify areas needing improvement.
- 10.4.3 A copy of the audit and any areas identified, as needing improvement will be forwarded to the Contractor's senior management.
- 10.4.4 For findings that indicate major loss potential or serious concerns about site safety, the areas identified as needing improvement and

- the overall performance may be reviewed by Fulton County's designated Representative A written action plan to address the Contractor's performance issues may be developed.
- 10.4.5 Fulton County or designated Representative may meet the Contractor's senior management to discuss the findings, contract requirements, and their plans to address the findings.
- 10.4.6 The number and frequency of safety audits and site visits may be increased until improvements are noted.

11.0 SAFETY MEETINGS

- 11.1 The Contractor will conduct weekly safety meetings with all Contractor and Sub-Contractor employees on the site.
- 11.2 The Contractor will keep safety-meeting records that include meeting topic(s), outline of items discussed, and attendance and sign in sheet. At this meeting any accidents or audit findings and corrective actions from the previous week will be discussed.
- 11.3 The Contractor will maintain a job site file that contains copies of the safety meeting records.

12.0 TRAINING, INSPECTION AND CERTIFICATION

12.1 Employee Training

- 12.1.1 The Contractor must be able to show when requested the required safety training for all Contractor and Subcontractor employees and competent persons working on the site including any required craft training,
- 12.1.2 The Contractor must be able to show when requested that all employees operating mobile equipment or cranes have met or exceeded training and licensing requirements.
- 12.1.3 The Contractor must be able to show when requested that all scaffolds are erected under the direction of a competent scaffold builder, that all users are properly trained, and that the scaffold is inspected daily.
- 12.1.4 The Contractor shall ensure that each employee is properly trained in the recognition and avoidance of unsafe conditions and the regulations applicable to his or her work environment to control or eliminate any hazards or other exposure to illness or injury.
- 12.1.5 If Contractor or Sub-Contractor employs anyone who cannot effectively communicate using the English language, a translator must be maintained on site who can relay instructions, questions, or concerns in a manner that the non-English and English-speaking employees will understand. The identification of this translator shall be provided to Fulton County's designated Representative.
- 12.1.6 Contractor shall orient all supervision and employees concerning safety requirements before working on the project

12.2 Equipment Certification and Inspection

- 12.2.1 The Contractor must be able to document that all cranes and mobile equipment used on the job site have current inspections and certifications.
- 12.2.2 The Contractor must assure that required daily and weekly equipment inspections are performed and documented in writing per governmental regulations and the requirements of this policy.

- 12.2.3 The Contractor must maintain a job site file for these required inspections and certifications.
- 12.2.4 Equipment identified as having safety problems or not meeting standards or codes shall be tagged as defective and shall not be used until those identified items have been corrected.
- 12.2.5 Contractor shall maintain, and have available for viewing, safety inspection reports for ladder, electrical cords, scaffolds, and trenches/excavations.

13.0 SAFETY AND HEALTH PROGRAM ELEMENTS

Note: Based on the project work activities and scope of work, some program elements may be not applicable to the project work and therefore do not have to be implemented. Elements marked with an asterisk are applicable to all Projects.

13.1 Return to Work Policy

The Contractor and each Sub-Contractor will be required to establish a transitional work program for employees injured at work, which provides modified duty within the employee's physical limitations.

13.2 Fire Prevention Program

The Contractor and each Sub-Contractor will be required to submit a temporary fire protection plan to be in effect for the duration of the contract. This plan must be submitted as part of the Contractor's Safety Program submittal. It must include provisions for fire protection systems and equipment, as identified in OSHA Safety and Health for Construction 1926, Sub-Part F, Fire Protection and Prevention.

13.3 Hazard Communication (HAZCOM)

The Contractor and each Sub-Contractor shall have a written HAZCOM Program. The program shall meet OSHA 1926 Requirements and provide for training so that all employees will be able to:

- Understand the program and identify hazardous chemicals with which they work.
- Understand product-warning labels.
- Have MSDSs for all potentially hazardous materials brought onto, used on, or stored at the job site.
- Know the physical location of the Material Safety Data Sheets (MSDS).

13.4 Personal Protective Equipment (PPE)*

All Contractor and Sub-Contractor employees and other site visitors will be required to wear the PPE necessary to accomplish the work in a safe manner. PPE required will vary from job to job and must be based on a written hazard assessment. A list of PPE that is required is identified below:

- Hard Hats shall be worn at all times on all projects
- Hearing Protection for operations that create noise in excess of 65 dBA is required.

- Contractor shall provide eye or face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents.
Work boots or work shoes made of leather shall be required. No open toed shoes or canvas shoes are allowed
- Shirts with sleeves at least 4 inches long are required. Tank tops and mesh shirt are not allowed.
- Full Body Safety Harnesses with shock absorbing lanyards for fall protection are required.
- Full body and chemical splash protection is required when handling hazardous chemicals.
- Respirators are required when employees may be exposed to dust and/or chemicals in excess of the OSHA permissible exposure limits.
- Long pants are required.

13.5 Confined Space Entry

If the project work involves permit required confined spaces, a permit required confined space entry program that meets 051-iA requirements must be established. This program must include but is not limited to the following elements.

- Confined Space Identification
- Environmental Testing
- Rescue
- Communication with employees in the confined space
- Employee Training
- Permit System for entry

13.6 Excavations

If the Contractor or Sub-Contractor must make a cut, cavity, trench or depression in an earth surface formed by earth removal, the work must comply with the OSHA Regulations on trenching and excavations. A competent person must be assigned for each excavation. Requirements include but are not limited to:

- Employee Training
- Daily inspections
- Soil testing
- Protective or support systems.

13.7 Electrical Tools, Equipment, and Systems

- The Contractor and each Sub-Contractor must implement Assured Grounding Program or use Ground Fault Circuit Interrupter (GFCI) devices on all electrical tools and extension cords.
- All electrical work must be performed in accordance with the National Electrical Code (NEC) and OSHA,
- All electrical tools and extension cords must be in good repair and the Contractor must establish a written inspection program for all electrical

tools. The frequency of inspection shall be at least monthly.

13.8 Lockout/Tagout Procedure

The Contractor and each Sub-Contractor will be required to implement a written Lockout/Tag procedure that meets OSHA requirements if their work requires energy isolation, Program elements include but are not limited to the following:

- Energy isolation lists for each piece of equipment
- Employee training
- Individually keyed locks and danger tags
- Written Procedure that assigns responsibilities

13.9 Fall Protection

Contractor shall provide an approved fall protection system for all employees working at an elevation of 6 feet or higher on this project, including scaffolding work and steel erection. Employees will be responsible for utilizing the fall protection 100% of the time. Sub-Contractor will be responsible for ascertaining their employees' compliance with this requirement. The plan must address the following items:

- Only full body harnesses with shock absorbing lanyards and double locking hooks shall be use.
- Falls should be limited to less than. 6 feet such than employee can neither fall more than 6 feet nor contact any lower level.
- Fall protection systems must be planned into the job and must be designed to handle loads and forces expected. The project goal is 100% fall protection.
- Employee training and enforcement of these requirements are mandatory to assure an effective program.

13.10 Scaffolding

All scaffolds and work platforms shall be constructed to meet the requirements of OSHA 1926.451 and ANSI A10.8, Some program elements include but are no limited to

- User training for all employees who may use scaffolds
- Scaffolding is to be designed and erected by competent person(s) following manufacturer's guidelines. Employees must use fall protection when erecting scaffolding.
- Daily inspection by competent person. Must implement daily tag system to document inspection.
- Must have engineering approval for scaffolds above 100 feet in height.
- Must be able to document competent person credentials,
- Scaffolds must have proper egress (ladder/stairs) and should have guardrails, complete deck, toe boards and netting if anything can fall on people below. If guardrails or decking is not complete, fall protection must

be used.

13.11 Cranes and Other Lifting Devices

- Trained and experienced operators shall operate Cranes in accordance with the applicable OSHA and ANSI/ASME.
- The Contractor is responsible for ensuring that the crane is properly sized for the job and that all required inspections and maintenance required by 051-IA and ANSI/ASME standards have been conducted.
- All cranes should have anti-two block devices installed and operational. Cranes lifting employees in personnel baskets must have an anti-two block device to stops the crane if this condition occurs (positive acting).
- Tag lines are required to secure materials while being moved or handled by cranes.
- All cranes working in the vicinity of overhead power lines shall be grounded and be equipped with proximity guards.
- A lift plan must be submitted for all lifts that exceed 20,000 pounds or 75% of the crane's lift capacity. This plan must be reviewed and approved by the Contractor.
- Slings, hooks, and other lifting devices must be inspected on regular basis and stored properly.

13.12 Use of Personnel Baskets

- Personnel baskets should only be used as the last practical means after documenting that all other means are unacceptable.
- The personnel basket must be manufactured, tested, and used in accordance with OSHA 1926.550. The crane lifting the basket must also meet OSHA requirements.

13.13 Personal Lifts with Articulating Booms (Jig) and Scissors Lifts

- Operators must be trained in the safe operation of the lift including daily inspection procedures prior to use.
- Operators of JLG lifts must wear a full body harness with shock absorbing lanyard and be tied off while the lift is operation. Operators in a scissors lift must use fall protection anytime the guardrail system removed or altered.

13.14 Ladders

- Ladders are acceptable means of access when used in compliance with OSHA 1926.1053.
- Ladders must be in good repair, have safety feet and be inspected
- Extension ladders must be either held by an employee on the ground or tied off at the top.
- Homemade ladders not meeting OSHA requirements should not be used.

- * Non-conducting ladders are required for electrical work.
- Fall protection is encouraged for employees working on ladders especially if they will be leaning and turning in their work activities.

13.15 Tools And Equipment

All tools and equipment used on the project must be in a safe operating condition, with all guards in place, and must meet or exceed all governmental regulations (OSHA, EPA, DOT, etc.). Tools and equipment must be maintained, inspected, tested, and used in accordance with OSHA regulations.

13.16 Compressed Gas Cylinders

- Compressed gas cylinders must be used, stored, and transported in accordance with OSHA requirements, DOT requirements, and Compressed Gas Association standards.
- Fuel and oxygen cylinders must be store separately or separated by a % hour rated firewall.
- Compressed gas cylinders are not allowed inside confined spaces.

13.17 Welding, Burning, and Cutting*

- The Contractor's program must meet or exceed OSHA and NFPA requirements.
- All flammables must be removed from work area and a fire watch posted in area until 30 minutes after the job is completed.
- At a minimum a 10 LB ABC rated fire extinguisher must be available in the immediate work area.
- Regulators must be in good working order and must have anti-flash back and check valves.
- Welding shields and burning goggles must be used.

13.18 Sanitation and Housekeeping

- The project site shall have an adequate number of portable toilets and hand washing facilities.
- The project site must establish a housekeeping plan that includes daily site clean-up and trash and debris removal.

13.19 Hearing Conservation

The Contractor and each Sub-Contractor who has employees exposed to noise levels exceeding 85 dBA must establish a hearing conservation program that meets or exceeds OSHA requirements. Minimum program elements include audiometric testing, noise monitoring, use of hearing protectors, and employee training.

13.20 Respiratory Protection

The Contractor and each Sub-Contractor who has employees who wear

respiratory protection must implement a respiratory protection program that meets or exceeds OSHA requirements. Minimum program elements include risk based respirator selection, medical surveillance, employee training, respirator fit testing, and written operating procedures.

14. 0 SPECIALIZED SAFETY PROGRAM ELEMENTS

If required by the project scope of work and specific work site or activities, specialized programs listed below shall be included in the Contractor's Safety Program submittal. The Contractor is required to implement the required programs and assure that they meet or exceed all contractual, regulatory and Fulton County's requirements applicable. Details for specific program elements may be included in the contract documents,

- 14.1 Asbestos Removal
- 14.2 Lead Based Paint Removal
- 14.3 Exposure Assessment and Employee Monitoring (Industrial Hygiene)
- 14.4 Hazardous Waste Operations and Training
- 14.5 Overhead Power Lines
- 14.6 Locating underground utilities
- 14.7 Dust Control
- 14.8 Guarding for floor holes and roof openings
- 14.9 Heavy Equipment, Truck and Earth Moving Equipment requirements
- 14.10 Environmental Requirements

15.0 ROAD AND TRANSPORTATION SAFETY REQUIREMENTS

The Contractor shall implement the following into its safety program whether required by the contract or any other authority having jurisdiction if required to perform the work and maintain vehicular and pedestrian traffic safety:

- 15.1 Barricades and Cones
- 15.2 Traffic and Warning Signs
- 15.3 Traffic control devices
- 15.4 Equipment and materials storage
- 15.5 Reflective Clothing and other personal protective equipment
- 15.6 Excavation and road hole protection
- 15.7 Erosion protection
- 15.8 Trained flaggers

16.0 ADDITIONAL REQUIREMENTS TO PROTECT THE GENERAL PUBLIC

Based on the Contractor's scope of work and specific work activities or location the Contractor may be required to implement the following into its safety program to protect the general public:

- 16.1 Fencing and other measures for site security
- 16.2 Warning, direction and no trespassing signs
- 16.3 Alternate public walk ways
- 16.4 Protection of the public from over head and other construction hazards

- 16.5 Site Traffic Control
- 16.6 Barricading off hazardous areas and open pits and holes
- 16.7 Additional Safety Training to correct deficiencies.

END OF SECTION

EXHIBIT C

ADDENDA

EXHIBIT C

ADDENDA



Date: September 9, 2019

Re: 19ITB300390K-JAJ Roof Replacement @ Romae T. Powell - Juvenile Justice Center & Medical Examiner's Building

Dear Bidders/Proposers:

Attached is one (1) copy of Addendum 1 19ITB300390K-JAJ, hereby made a part of the above-referenced Invitation to Bid (ITB).

Except as provided herein, all terms and conditions in the ITB referenced above remain unchanged and in full force and effect.

Sincerely,

James A. Jones

James A. Jones

APA

19ITB300390K-JAJ

September 9, 2019

Page 2

This Addendum forms a part of the contract documents and **modifies** the original ITB documents as noted below:

Coring of the roofing material will be performed on Thursday, September 12, 2019 at 8:00 A.M at the Juvenile Justice Center. Coring of the roofing material at the Medical Examiner's Building will be performed immediately following the Juvenile Justice Center coring. Contractors are invited to witness the coring of roofing material at both buildings. All contractors should meet Armond Borders at the Juvenile Justice Center no later than 7:55 A.M. The results of the coring will be issued as an Addendum to the project.

ACKNOWLEDGEMENT OF ADDENDUM NO. 1, 19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building

The undersigned Proposer acknowledges receipt of this Addendum by returning one (1) copy of this form with the Bid/Proposal submittal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, S.W., Suite 1168, Atlanta, Georgia 30303 by the ITB due date September 20, 2019 @ 11:00 A.M.

This is to acknowledge receipt of Addendum No. 1, 9 day of September, 2019.

SRS, Inc
Legal Name of Bidder/Proposer

Jeffy Pellito
Signature of Authorized Representative

President
Title



Date; September 18, 2019

Re: 19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building

Dear Bidders/Proposers:

Attached is one (1) copy of Addendum 2 19ITB300390K-JAJ, hereby made a part of the above-referenced Invitation to Bid (ITB)

Except as provided herein, all terms and conditions in the ITB referenced above remain unchanged and in full force and effect.

Sincerely,

James A. Jones

James A. Jones

Assistant Purchasing Agent

19ITB300390K-JAJ
September 18, 2019
Page 2

This Addendum forms a part of the contract documents and **modifies** the original ITB documents as noted below:

The date for receipt of bids is hereby extended from **Friday, September 20, 2019** to **Friday, October 4, 2019**. The time and location for receipt of bids remains the same.

ACKNOWLEDGEMENT OF ADDENDUM NO. 2, 19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's building.

The undersigned Proposer acknowledges receipt of this Addendum by returning one (1) copy of this form with the Bid/Proposal submittal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, S.W., Suite 1168, Atlanta, Georgia 30303 by the ITB due date October 4, 2019 @ 11:00 A.M.

This is to acknowledge receipt of Addendum No. 2, 18 day of September, 2019.

SRS, Inc
Legal Name of Bidder/Proposer

[Signature]
Signature of Authorized Representative

President
Title



Date; September 25, 2019

Re: 19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building

Dear Bidders/Proposers:

Attached is one (1) copy of Addendum 3 19ITB300390K-JAJ, hereby made a part of the above-referenced Invitation to Bid (ITB)

Except as provided herein, all terms and conditions in the ITB referenced above remain unchanged and in full force and effect.

Sincerely,

James A. Jones

James A. Jones

Assistant Purchasing Agent

This Addendum forms a part of the contract documents and **modifies** the original ITB documents as noted below:

- Revised Bid Form (B) Medical Examiner's Building (attached)
- JJC & ME Building Core Cut Photos (attached)
- JJC Core Cuts Locations (attached)
- ME Building Core Cuts Locations (attached)

1. **Question:** Why should the bidder provide an EBO plan?

Answer: The EBO Plan is a methodology which outlines and demonstrates good faith efforts in accordance with Fulton County Code 102-426. The Prime Contractor is required to include ALL outreach attempts/Good Faith Efforts in the solicitation of subcontractors.

2. **Question:** (JJC) the project summary scope of work on sheet G002 indicates to install new metal coping at parapet walls. The details on A501 indicate to re-install coping cap. Is the coping cap on the parapets to be replaced with new metal cap on JJC?

Answer: The existing metal coping shall be removed and re-installed at parapets in accordance with details designated on shot A-501 of the construction documents.

3. **Question:** (JJC) Bid Form A has line items for 1" and 2 ½" rigid insulation. Does the line item for 1" thick rigid insulation represent tapered insulation with a 1" start? The details on A501 indicate tapered insulation with 3/16" slope and base layer of 3.5" minimum. Is 3.5" base layer insulation required or does the 3.5" minimum represent the minimum thickness for a 2.5" base and tapered insulation with 1" start?

Answer: In accordance with the specifications the base layer is 2 ½" and the intermediate layer is 1" for a total minimum thickness of 3 ½" for compliance with the energy code. Tapered insulation designated is in addition to the 3 ½" insulation.

4. **Question:** (JJC) Key note 9 on A101 indicates to install new strainer dome and new clamping ring at the existing roof drain and overflow drain similar to detail 1 and 2 on A504. Detail 1 shows strainers and clamping rings and Detail 2 shows a retrofit drain insert. Are retrofit drain inserts to be installed or just new clamping rings and strainers?

Answer: Retrofit drain inserts: The contractor will be required to coordinate roof drain height adjustments with revised minimum thickness of the insulation associated with the roof replacement.

5. **Question:** (ME) Bid Form B have line items for 1.5" and 2" rigid insulation Key note 1 on A101 indicates to install 1" polysio on 2 ½" polysio on metal deck. Please clarify insulation thickness requirements. Will the 1.5" and 2" as indicated on the bid form be acceptable?

Answer: In accordance with the specifications the base layer thickness is a minimum of 2 ½" and the intermediate layer thickness is a minimum of 1" for a total thickness of 3 ½"

6. **Question:** Specification calls for 3/16" per foot tapered insulation. The cores showed existing tapered insulation was 1/8" per foot. In an effort to keep the base flashing heights the same will 1/8" tapered insulation in the field be acceptable?

Answer: The minimum taper for insulation shall be as designated on the construction documents. The International Building Code requires a minimum ¼" per foot slope. Due to constraints on existing flashing heights with a siding, a minimum of 3/16" per foot shall be provided as designated on the construction documents.

7. **Question:** In the bid package on page 10 under bid preparation it clearly states to provide one (1) original and two (2) copies. On page 11 under receipt and opening of bids (line 5-6) it asks for the bidder to provide one (1) original and three (3) copies. Please advise as to which to comply with.

Answer: One (1) original and three (3) copies.

8. **Question:** Are there day or hour restrictions to when work can be performed?

Answer: Correction Specifications Section 01 10 00 Summary of Work 1.7 Work Restrictions. The first sentence reads as follows: On Site Work Hours: "Work shall be generally performed during business hours of 7:00 A.M. to 6:00 P.M. Monday through Friday". The remainder of the section remains as written.

9. **Question:** Is a permit required and if so what is the cost?

Answer: The successful Bidder shall secure the necessary permits from the City of Atlanta (See Invitation to Bid under Permits). The cost is determined by the City of Atlanta.

10. **Question:** Is all access for the work limited to outside only via ladder stairs?

Answer: Yes, each contractor will build a scaffolding ladder system to access the roof for construction. The Medical Examiner's Building has an existing stair to get to the lower roof, but an exterior scaffolding ladder will be required for the higher roof at the ME Building.

11.Question: The spec sheet is calling for a 25 year warranty. Can someone confirm this detail?

Answer: Yes the County is seeking a 25 year warranty based on the specifications and drawings.

ACKNOWLEDGEMENT OF ADDENDUM NO. 3, 19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's building.

The undersigned Proposer acknowledges receipt of this Addendum by returning one (1) copy of this form with the Bid/Proposal submittal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, S.W., Suite 1168, Atlanta, Georgia 30303 by the ITB due date October 4, 2019 @ 11:00 A.M.

This is to acknowledge receipt of Addendum No. 3, 25 day of September, 2019.

SRS, Inc
Legal Name of Bidder/Proposer

[Signature]
Signature of Authorized Representative

President
Title

EXHIBIT D

BID FORMS

19ITB300390K-JAJ
Roof Replacement @ JJC & ME Building

Bid Form

Section 2

BID FORM

Submitted To: Fulton County Government

Submitted By: SRS Inc

For: **18ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building**

Submitted on 10-4, 2018

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company or parties making a Bid; and that it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the Drawings and Specifications for the work and contractual documents relative thereto, and has read all instructions to Bidders and General Conditions furnished prior to the openings of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees, if this Bid is accepted, to contract with the Board of Commissioners of Fulton County, Atlanta, Georgia, in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary, and to complete the construction of the work in full and complete accordance with the shown, noted, and reasonably intended requirements of the Specifications and Contract Documents to the full and entire satisfaction of the Board of Commissioners of Fulton County, Atlanta, Georgia, with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents for the following prices.

THE BASE BID IS THE AMOUNT UPON WHICH THE BIDDER WILL BE FORMALLY EVALUATED AND WHICH WILL BE USED TO DETERMINE THE LOWEST RESPONSIBLE BIDDER.

The base bid may not be withdrawn or modified for a period of sixty (60) days following the receipt of bids.

TOTAL BASE BID AMOUNT A (JJC)

\$ 605,900.00
(Dollar Amount in Numbers)

Six hundred five thousand nine hundred
(Dollar Amount in Words)

19ITB300390K-JAJ
Roof Replacement @ JJC & ME Building

Bid Form

Section 2

TOTAL BASE BID AMOUNT B (ME)

\$ 392,800.00
(Dollar Amount In Numbers)
Three hundred ninety two thousand eight hundred
(Dollar Amount in Words)

TOTAL BASE BID AMOUNT A + B

\$ 998,700.00
(Dollar Amount In Numbers)
Nine hundred ninety eight thousand seven hundred
(Dollar Amount in Words)

The Bidder agrees hereby to commence work under this Contract, with adequate personnel and equipment, on a date to be specified in a written "Notice to Proceed" from the County.

The Bidder declares that he understands that the quantities shown for the unit prices items are subject to either increase or decrease, and that should the quantities of any of the items of work be increased, the Bidder proposes to do the additional work at the unit prices stated herein; and should the quantities be decreased, the Bidder also understands that payment will be made on the basis of actual quantities at the unit price bid and will make no claim for anticipated profits for any decrease in quantities; and that actual quantities will be determined upon completion of work, at which time adjustments will be made to the contract amount by direct increase or decrease.

Continued on the next page

19ITB300390K-JAJ
Roof Replacement @ JJC & ME Building

Section 2

Bid Form

BASE BID AMOUNT JUVENILE JUSTICE CENTER (A)

Scope of Work	Quantity	Unit	Unit Cost	Total Cost
Demolition Built-Up Roof System	40,603.59	Sq. Ft.	.30	12181
Demolition Pipe Vent Flashing	3	EA	10.00	30
Removal-Reinstall Metal Coping	711	L.F.	1.41	1000
Demolition Rigid Insulation	40,478.6	Sq. Ft.	.30	12181
Removal-Reinstall Metal wall Panels	925	Sq. Ft.	2.16	2000
Waterproof Membrane Removal @ Parapet	1,688	Sq. Ft.	1.00	1688
New Waterproof Membrane @ Parapet	1,688	Sq. Ft.	1.00	1688
New TPO Roofing System	416.56	SQ	145.00	60401
Metal Wall flashing	831	Sq. Ft.	10.00	8310
New Rigid Insulation 1" thick	40,603.59	Sq. Ft.	.80	32482
New Rigid Insulation 2 1/2" thick	40,653.59	Sq. Ft.	1.10	44718
New 4" Rigid Insulation	125	Sq. Ft.	3.00	375
New Cover Board	39,747	Sq. Ft.	1.00	39747
TPO Scupper Box	1	EA	150.00	150
Roof Drains (Allowance-Each)	8	EA	225.00	2040
Overflow Drains	8	EA	225.00	2040
Exhaust Fan Curb Flashing	22	EA.	400.00	8800
Expansion Joints Roof to Roof	97	LF	7.00	679
Expansion Joints Roof to Wall	10	LF	7.00	70
Pitch Pockets 4 x 4	21	EA	20	420
Pitch Pockets 1' -4"x 6..6"	3	EA	20	60
Pitch Pockets 8' - 1" x 6"	1	EA	20	20
Pipe Vent Flashing	3	EA	50	150
Pipe Supports 9' Long	36	EA	16.67	600
Pipe Supports 20" Long	12	EA	25	300
Metal Drip Edge	35	LF	10	350
Walkpads	228	EA	17.54	4000

19ITB300390K-JAJ
Roof Replacement @ JJC & ME Building

Section 2

Bid Form

Scope of Work	Quantity	Unit	Unit Cost	Total Cost
Painting – Coatings (Allowance)	1	EA	500.00	500
Final Clean-Up	1	EA.	500.00	500
Supervision	4	Weeks.	1000.00	4000
Subtotal:				\$ 241480
Contractor Overhead & Profit:				\$ 314420
Owner-Controlled Contingency:				\$50,000.00
TOTAL:				605900

18ITB114375K-JAJ
Roof Replacement @ JJC & ME Building

Section 2
Bid Form

BASE BID AMOUNT MEDICAL EXAMINERS BUILDING (B)

Scope of Work	EST.Quantities	Unit	Unit Cost	Total Cost
Dumpsters (Allowance)	3'	LS	600.00	1800
Construction Clean-Up	4	LS	250.00	1000
Demolition Built-Up Roofing System	24,989	Sq. Ft.	130	7497
Demolition Pipe Vent Flashing	8	EA	10.00	80
Demolition Metal Coping	1061	L.F.	3.00	3183
Demolition Rigid Insulation	24989	Sq. Ft.	130	7497
Demolition Wall Membrane	37.48	SQ	70.00	2624
Demolition Plywood Sheathing Panel @ Parapet	642	Sq. Ft.	1.00	642
New Plywood Sheathing Panel @ Parapet	642	Sq. Ft.	1.56	1000.
New TPO Roofing System	249.89	SQ	145.00	36234
TPO Wall Flashing	37.48	SQ.	1000.00	37,480
New Rigid Insulation 3 1/2" thick (minimum)	24989	Sq. Ft.	1.50	37484
New Exhaust Fan Curb Flashing (Allowance)	37	EA	400.00	14800
New Skylight Curb Flashing (4'x 4') (Allowance)	5	RS	400.00	2000.
New Skylight Curb Flashing Large (Allowance)	3	EA	800.00	2400
New Pipe Vent Flashing	8	EA.	50.00	400
New Pitch pockets	41	EA	20.00	820
New Cover Board	24989	Sq. Ft.	1.00	24989
New Metal Coping System	1591.5	Sq. Ft.	20.00	31830
TPO Scupper Boxes (Allowance)	10	EA	150.00	1500
Walkpads	313	EA	17.54	5490
Crane Rental (Allowance)	1	EA	500.00	500
Remove & Install Rooftop Mechanical Equipment	1	EA	500.00	500
Final Clean-Up	3	L. S.	166.67	500

18ITB114375K-JAJ

Section 2

Roof Replacement @ JJC & ME Building

Bid Form

Supervision	6	Weeks	1000.00	6000
TPO Wall Flashing	11	Square	1000.00	11000

Contractor Overhead & Profit		\$ 103550
Owner-Controlled Contingency:		\$50,000.00
TOTAL:		392,800.00

Three hundred ninety two thousand eight hundred Dollars

Bidder furthermore agrees that, in the case of a failure on his part to execute the documents for execution, the Bid Bond accompanying his bid and the monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure

Enclosed is the Bid Bond in the approved form, in the sum of:

Fifty thousand Dollars

(\$ 50,000.00) according to the conditions of "Instructions to Bidders" and provisions thereof.

The undersigned acknowledges receipt of the following addenda (list by the number and date appearing on each addendum) and thereby affirms that its Bid considers and incorporates any modifications to the originally issued Bidding Documents included therein.

ADDENDUM # 1

DATED 9-9-19

ADDENDUM # 2

DATED 9-18-19

ADDENDUM # 3

DATED 9-23-19

ADDENDUM # _____

DATED _____

18ITB114375K-JAJ
Roof Replacement @ JJC & ME Building

Bid Form

Section 2

BIDDER: SRS Inc.
Signed by: Jeff Pilkenton Jeffery Pilkenton
[Type or Print Name]
Title: President
Business Address: 357 Odell Rd
Griffin GA 30224
Business Phone: 770-228-2658

Note: If the Bidder is a corporation, the Bid shall be signed by an officer of the corporation; if a partnership, it shall be signed by a partner. If signed by others, authority for signature shall be attached.

The full name and addresses of persons or parties interested in the foregoing Bid, as principals, are as follows:

Name	Address
<u>Jeffery Pilkenton</u>	<u>775 Tralee Dr</u>
	<u>Fayetteville GA 30215</u>
<u>Joseph Pilkenton</u>	<u>1284 McKinley Rd</u>
	<u>Zebulon GA 30295</u>

EXHIBIT E

**BONDS (BID, PAYMENT,
PERFORMANCE)**

BID BOND

19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building

**STATE OF GEORGIA
COUNTY OF FULTON**

KNOW ALL MEN BY THESE PRESENTS, THAT WE SRS, Inc.
357 Odell Rd. Griffin Ga. 30224

hereinafter called the PRINCIPAL, and Hudson Insurance Company
100 William Street, 5th Floor, New York, New York 10038

hereinafter call the SURETY, a corporation chartered and existing under the laws of the State of DE and duly authorized to transact Surety business in the State of Georgia, are held and firmly bound unto the Fulton County Government (COUNTY), in the penal sum of Five Percent of Bid Amount
 Dollars and Cents (\$ 5%) good and lawful money of the United States of America, to be paid upon demand of the COUNTY, to which payment well and truly to be made we bind ourselves, our heirs, executors, and administrators and assigns, jointly and severally and firmly by these presents.

WHEREAS the PRINCIPAL has submitted to the COUNTY, for 19ITB300390K-JAJ Roof Replacement @ Juvenile Justice Center & Medical Examiner's Building, a Bid;

WHEREAS the PRINCIPAL desires to file this Bond in accordance with law:

NOW THEREFORE: The conditions of this obligation are such that if the Bid be accepted, the PRINCIPAL shall within ten (10) calendar days after receipt of written notification from the COUNTY of the award of the Contract execute the Contract in accordance with the Bid and upon the terms, conditions and prices set forth therein, in the form and manner required by the COUNTY, and execute sufficient and satisfactory Performance and Payments Bonds payable to the COUNTY, each in the amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to said COUNTY, then this obligation to be void; otherwise, to be and remain in full force and virtue in law; and the SURETY shall upon failure of the PRINCIPAL to comply with any or all of the foregoing requirements within the time specified above immediately pay to the COUNTY, upon demand the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

In the event suit is brought upon this Bond by the COUNTY and judgment is recovered, the SURETY shall pay all costs incurred by the COUNTY in such suit, including attorney's fees to be fixed by the Court.

Enclosed is a Bid Bond in the approved form, in the amount of Fifty thousand and 00
Dollars

(\$ 50,000.00) being in the amount of five percent (5%) of the Contract Sum.

The money payable on this bond shall be paid to the COUNTY, for the failure of the Bidder to execute a Contract within ten (10) days after receipt of the Contract and at the same time furnish a Payment Bond and Performance Bond.

(SIGNATURES ON NEXT PAGE)

IN TESTIMONY THEREOF, the PRINCIPAL and SURETY have caused these presents to be duly signed and sealed this 20th day of September, 2019

ATTEST:

SRS, Inc.

PRINCIPAL

(SEAL)

BY Jeffery Pilkenton

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Jody Pilkenton, certify that I am the Secretary of the Corporation named as principal in the within bond; that Jeffery Pilkenton, who signed the said bond of said corporation; that I know this signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed and attested for in behalf of said Corporation by authority of its governing body.

Joseph Pilkenton
SECRETARY

(CORPORATE SEAL)

Hudson Insurance Company

SURETY

(SEAL)

Christy Lackey
Christy Lackey, Attorney In Fact

BY

Karin Maynard
Karin Maynard

END OF SECTION



BID BOND POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That HUDSON INSURANCE COMPANY, a corporation of the State of Delaware, with offices at 100 William Street, New York, New York, 10038, has made, constituted and appointed, and by these presents, does make, constitute and appoint

Frederick R. Mitchell, Angie E. Ferguson, Christy Lackey,
Keith H. Dillon and Carolyn F. Smith

its true and lawful Attorney(s)-in-Fact, at New York City in the State of New York, each of them alone to have full power to act without the other or others, to make, execute and deliver on its behalf, as Surety, bid bonds for any and all purposes.

Such bid bonds, when duly executed by said Attorney(s)-in-Fact, shall be binding upon said Company as fully and to the same extent as if signed by the President of said Company under its corporate seal attested by its Secretary.



In Witness Whereof, HUDSON INSURANCE COMPANY has caused these presents to be of its Executive Vice President thereunto authorized, on this 3rd day of March, 2014 at New York, New York.

Attest
Dina Daskalakis, Corporate Secretary

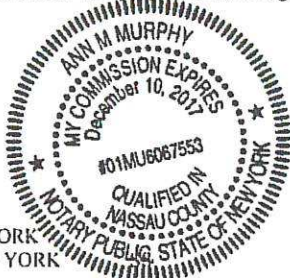
HUDSON INSURANCE COMPANY

By
Christopher T. Suarez, Executive Vice President

STATE OF NEW YORK
COUNTY OF NEW YORK SS.

On the 3rd day of March, 2014 before me personally came Christopher T. Suarez to me known, who being by me duly sworn did depose and say that he is an Executive Vice President of HUDSON INSURANCE COMPANY, the Company described herein and which executed the above instrument, that he knows the seal of said Company, that the seal affixed to said instrument is the corporate seal of said Company, that it was so affixed by order of the Board of Directors of said Company, and that he signed his name thereto by like order.

(Notarial Seal)



ANN M. MURPHY
Notary Public, State of New York
No. 01MU6067553
Qualified in Nassau County
Commission Expires December 10, 2017

CERTIFICATION

STATE OF NEW YORK
COUNTY OF NEW YORK

The undersigned Dina Daskalakis hereby certifies

THAT the original resolution, of which the following is a true and correct copy, was duly adopted by unanimous written consent of the Board of Directors of Hudson Insurance Company dated July 27th, 2007, and has not since been revoked, amended or modified:

"RESOLVED, that the President, the Executive Vice Presidents, the Senior Vice Presidents and the Vice Presidents shall have the authority and discretion, to appoint such agent or agents, or attorney or attorneys-in-fact, for the purpose of carrying on this Company's surety business, and to empower such agent or agents, or attorney or attorneys-in-fact, to execute and deliver, under this Company's seal or otherwise, bonds obligations, and recognizances, whether made by this Company as surety thereon or otherwise, indemnity contracts, contracts and certificates, and any and all other contracts and undertaking made in the course of this Company's surety business, and renewals, extensions, agreements, waivers, consents or stipulations regarding undertakings so made; and

FURTHER RESOVLED, that the signature of any such Officer of the Company and the Company's seal may be affixed by facsimile to any power of attorney or certification given for the execution of any bond, undertaking, recognizance, contract of indemnity or other written obligation in the nature thereof or related thereto, such signature and seal when so used whether heretofore or hereafter, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed."

THAT the above and foregoing is a full, true and correct copy of Power of Attorney issued by said Company, and of the whole of the original and that the said Power of Attorney is still in full force and effect and has not been revoked, and furthermore that the Resolution of the Board of Directors, set forth in the said Power of Attorney is now in force



Witness the hand of the undersigned and the seal of said Company this 20th day of September, 2019

By
Dina Daskalakis, Corporate Secretary

PAYMENT BOND

INSTRUCTIONS

1. This form is required for use in connection with the Agreement identified on its face. There shall be no deviation from this form without approval by the County.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of the form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an office of the corporation involved, evidence of this authority must be furnished.
3. Corporation executing the bond as surety must be among those appearing on the U.S. Treasury Department's most current list of approved sureties and must be acting within the amounts and limitations set forth therein.
4. Corporate surety shall be duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.
5. Do not date this bond. The County will date this bond the same date or later than the date of the Agreement.
6. The Surety shall attach a duly authorized power-of-attorney authorizing signature on its behalf of any attorney-in-fact.
7. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal."
8. The name of each person signing this bond shall be typed or printed in the space provided.

PAYMENT BOND

"County:" means Fulton County Government; a political subdivision of the State of Georgia (hereinafter called the "Owner").

"Project:" means [Insert Project Number and Project Name]

"Principal:" (Legal Name and Business Address),
called the

[Insert Name of Contractor (hereinafter
"Principal")]

Type of Organization ("X" one): _____ Individual
_____ Partnership
_____ Joint Venture
_____ Corporation

"Surety:" (Name and Business Address)

duly authorized by the Commissioner of
Insurance of the State of Georgia to
transact surety business in the State of
Georgia.

"Contract:" Agreement between Principal and Owner, dated _____ day of _____,
20____, regarding performance of Work relative to the Project.

"Penal Sum:" [100% of contract amount]_____

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety hereto, as named above, are held and firmly bound to the Owner in the above Penal Sum for the payment of which well and truly to be made we bind ourselves, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal and the Owner entered into a certain written Contract identified above, which is incorporated herein by reference in its entirety (hereinafter called the "Contract"), for construction-type services for the Project identified above;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall promptly make payment of all persons working on or supplying labor or materials or equipment for the performance of said work, this obligation shall be void; otherwise of full force and effect.

1. A "Claimant" shall be defined herein as any subcontractor, person, party, partnership, corporation or the entity furnishing labor, services or materials used, or reasonably required for use, in the performance of the Contract, without regard to whether such labor, services or materials were sold, leased or rented, and without regard to whether such Claimant is or is not in privity of contract with the Principal or any subcontractor performing work on the Project, including, but not limited to, the following labor, services, or materials: water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
2. In the event a Claimant files a lien against the property of the Owner, and the Principal fails or refuses to satisfy or remove it promptly, the Surety shall satisfy or

remove the lien promptly upon written notice from the Owner, either by bond or as otherwise provided in the Contract.

3. The Surety hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in the payment terms, and any other amendments in or about the Contract and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and amendments.
4. The Surety hereby agrees that this Bond shall be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment or modifications to the Contract, so as to bind the Principal and Surety, jointly and severally, to the full payment of any Claimant under the Contract, as amended or modified, provided only that the Surety shall not be liable for more than the penal sum of the Bond, as specified in the first paragraph hereof.
5. This Bond is made for the use and benefit of all persons, firms, and corporations who or which may furnish any materials or perform any labor for or on account of the construction-type services to be performed or supplied under the Contract, and any amendments thereto, and they and each of them may sue hereon.
6. No action may be maintained on this Bond after one (1) year from the date the last services, labor, or materials were provided under the Contract by the Claimant prosecuting said action.
7. This Bond is intended to comply with O.C.G.A. Section 13-10-1, and shall be interpreted so as to comply with the minimum requirements thereof. However, in the event the express language of this Bond extends protection to the Owner beyond that contemplated by O.C.G.A. Section 13-10-1 and 36-91-1, *et seq.*, or any other statutory law applicable to this Project, then the additional protection shall be enforced in favor of the Owner, whether or not such protection is found in the applicable statutes.

IN WITNESS WHEREOF, the Principal and Surety have hereunto affixed their corporate seals and caused this obligations to be signed by their duly authorized representatives this day of _____, _____.

PRINCIPAL: _____

President/Vice President (Sign)

President/Vice President (Type or Print)

Attested to by:

Secretary/Assistant Secretary (Seal)

SURETY:_____

By: _____

Attorney-in-Fact (Sign)

Attorney-in-Fact (Type or Print)

Secretary/Assistant Secretary (Seal)

PERFORMANCE BOND

INSTRUCTIONS

1. This form is required for use in connection with the Agreement identified on its face. There shall be no deviation from this form without approval by the County.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of the form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an office of the corporation involved, evidence of this authority must be furnished.
3. Corporation executing the bond as surety must be among those appearing on the U.S. Treasury Department's most current list of approved sureties and must be acting within the amounts and limitations set forth therein.
4. Corporate surety shall be duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.
5. Do not date this bond. The County will date this bond the same date or later than the date of the Agreement.
6. The Surety shall attach a duly authorized power-of-attorney authorizing signature on its behalf of any attorney-in-fact.
7. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal."
8. The name of each person signing this bond shall be typed or printed in the space provided.

PERFORMANCE BOND

"County:" means Fulton County Government; a political subdivision of the State of Georgia (hereinafter called the "Owner").

"Project:" means [Insert Project Number and Project Name]

"Principal:" (Legal Name and Business Address),

[Insert Name of Contractor (hereinafter called the "Principal")]

Type of Organization ("X" one): _____ Individual
_____ Partnership
_____ Joint Venture
_____ Corporation

"Surety:" (Name and Business Address)

duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.

"Contract:" Agreement between Principal and Owner, dated _____ day of _____, 20____, regarding performance of Work relative to the Project.

"Penal Sum:" [100% of contract amount]_____.

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety hereto, as named above, are held and firmly bound to the Owner in the above Penal Sum for the payment of which well and truly to be made we bind ourselves, our executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal and the Owner entered into a certain written Contract identified above, which is incorporated herein by reference in its entirety (hereinafter called the "Contract"), for construction-type services for the Project identified above;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall faithfully and fully comply with, perform and fulfill all of the undertakings, covenants, conditions and all other of the terms and conditions of said Contract, including any and all duly authorized modifications of such Contract, within the original term of such Contract and any extensions thereof, which shall include, but not be limited to any obligations created by way of warranties and/or guarantees for workmanship and materials which warranty and/or guarantee may extend for a period of time of one year beyond completion of said Contract, this obligation shall be void; otherwise, of full force and effect.

Whenever the Principal shall be, and declared by the Owner to be, in default under the Construction-Type Contract, the Surety shall promptly remedy the default as follows:

1. Complete the Contract in accordance with its terms and conditions; or, at the sole option of the Owner,
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the Surety and the Owner of the lowest responsible bidder, arrange for a contract between such bidder and Owner and make available as the work

progresses (even though there should be a default or 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 penal sum set forth in the first paragraph hereof, as may be adjusted, and the Surety shall make available and pay to the Owner the funds required by this Paragraph prior to the payment of the Owner of the balance of the contract price, or any portion thereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by the Owner to the Contractor under the Contract, and any amendments thereto, less the amount paid by the Owner to the Contractor; or, at the sole option of the Owner,

3. Allow Owner to complete the work and reimburse the Owner for all reasonable costs incurred in completing the work.

In addition to performing as required in the above paragraphs, the Surety shall indemnify and hold harmless the Owner from any and all losses, liability and damages, claims, judgments, liens, costs and fees of every description, including reasonable attorney's fees, litigation costs and expert witness fees, which the Owner may incur, sustain or suffer by reason of the failure or default on the part of the Principal in the performance of any or all of the terms, provisions, and requirements of the Contract, including any and all amendments and modifications thereto, or incurred by the Owner in making good any such failure of performance on the part of the Principal.

The Surety shall commence performance of its obligations and undertakings under this Bond promptly and without delay, after written notice from the Owner to the Surety.

The Surety hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and any other amendments in or about the Contract, and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, change in payment terms, and amendments.

The Surety hereby agrees that this Bond shall be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment to the Contract, so as to bind the Principal and the Surety to the full and faithful performance of the Contract as so amended or modified, and so as to increase the penal sum to the adjusted Contract Price of the Contract.

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

This Bond is intended to comply with O.C.G.A. Section 36-91-1 et seq., and shall be interpreted so; as to comply with; the minimum requirements thereof. However, in the event the express language of this Bond extends protection to; the Owner beyond that contemplated by O.C.G.A. Section 36-91-1 et seq. and O.C.G.A. Section 13-10-1, as amended, or any other statutory law applicable to this Project, then the additional protection shall be enforced in favor of the Owner, whether or not such protection is found in the applicable statutes.

IN WITNESS WHEREOF, the Principal and the Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20____.

PRINCIPAL: _____

President/Vice President (Sign)

President/Vice President (Type or Print)

Attested to by:

Secretary/Assistant Secretary (Seal)

SURETY: _____

By: _____
Attorney-in-Fact (Sign)

Attorney-in-Fact (Type or Print)

END OF SECTION

EXHIBIT F

SCOPE OF WORK AND

TECHNICAL SPECIFICATIONS

SECTION 4

TECHNICAL SPECIFICATIONS

**Specifications for Roof Replacement @ Juvenile Justice Center (A) and Medical
Examiners 'Building (B) are found on the succeeding pages.**

**PROJECT SPECIFICATIONS
CONSTRUCTION DOCUMENTS**

**JUVENILE JUSTICE CENTER
ROOF REPLACEMENT PROJECT**

January 2, 2019

Final Submittal



PREPARED BY

WILLIAMS-RUSSELL AND JOHNSON, INC

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SECTION 01 02 70

UNIT PRICES

1. DEFINITIONS, STANDARDS AND SUBMITTALS

- A. The Unit Prices listed and described below have been established and shall include the following:
1. The furnishing of all management, supervision, submittals, installation, start-up and service labor, materials, tools, equipment, overhead and profit.
 2. Complete coordination of the work in each Unit Price's scope of work with the work of all other trades, regardless of whether these trades are in the employment of the Contractor, a separate contractor, or of the County or the Construction Manager.
 3. All appropriate corresponding additions or deductions for materials being replaced or modifications to the structure which must be made as a result of the addition or deletion of the item(s) covered by each Unit Price.
 4. Although such work may not be specifically indicated, the furnishing and installation of all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.
 5. If incorporated into the project, each Unit Price shall be considered to be subject to all terms and conditions of the Contract, including, but not necessarily limited to the Owner-Contractor Agreement, all Sections of the General Requirements, and all applicable Sections of the Technical Specifications.
- B. Quality Assurance: See individual Specification Sections and the Contract Drawings for required standards.
- C. Submittals: See individual Specification Sections and the Contract Drawings for required submittals.

2. ACCEPTANCE AND INCORPORATION OF UNIT PRICES

- A. The County reserves the right to accept or reject any and/or all of the Unit Prices. Unit Prices shall remain valid for a period of ninety (90) days from the date of bid. Unit Prices may be awarded after award of the Base Contract, and if so, shall be incorporated into the Contract by change order.
- B. The Contractor agrees that if the quantities of work change from the estimated quantities provided herein, the Contract Sum will be adjusted by an amount equal to the net difference of quantities multiplied by the agreed upon Unit Price. The Unit Price for additions to the estimated quantity shall be the same as that for deductions.
- C. The Contractor is advised that the quantities used for the basis of the Unit Prices are estimated and the actual quantities may vary significantly from the estimates. Unit Prices shall not be adjusted regardless of the difference between the actual and estimated quantities.
- D. The calculations for determining the number of actual units of work shall be based on actual surface area, volume, length, hours, or number of individual items, per the Unit Price descriptions, complete in place and accepted or omitted. No additional quantities or costs for waste, loss, breakage, or damage will be allowed.

3. DESCRIPTION OF UNIT PRICES

- A. Unit Price No. 1: Removal and replacement of deteriorated wood blocking per linear feet.

Definition of deteriorated wood blocking: Any material, in the opinion of the Architect of Record (subject to the review of the Construction Manager), which is unsuitable to remain for the blocking, shall be removed and replaced with new wood blocking as directed by the Architect of Record.

Note: There is no estimated quantity for this work item. The proposed unit price, if accepted by the County, will be applied to actual quantities in the event the work described above is required. **The Base Bid is not to contain any dollars for the above described scope of work.**

B. Unit Price No. 2: Removal and replacement of deteriorated plywood cap per linear feet..

Definition of deteriorated plywood cap: Any material, in the opinion of the Architect of Record (subject to the review of the Construction Manager), which is unsuitable to remain for the plywood cap, shall be removed and replaced with new plywood cap as directed by the Engineer of Record.

Note: There is no estimated quantity for this work item. The proposed unit price, if accepted by the County, will be applied to actual quantities in the event the work described above is required and could not have been expected or reasonably anticipated from the preliminary geotechnical report or other information provided in the Contract Documents. **The Base Bid is not to contain any dollars for the above described scope of work.**

C. Unit Price No. 3: Replacement of deteriorated waterproof membrane per linear feet.

Definition of deteriorated waterproof membrane: Waterproof membrane that is damaged or punctured so that it can no longer adequately function as a waterproofing component.

Note: There is no estimated quantity for this work item. The proposed unit price, if accepted by the County, will be applied to actual quantities in the event the work described above is required and could not have been expected or reasonably anticipated from the preliminary geotechnical report or other information provided in the Contract Documents. **The Base Bid is not to contain any dollars for the above described scope of work.**

D. Unit Price No. 3: Replacement of deteriorated sheathing per square feet.

Definition of deteriorated sheathing: Sheathing that is damaged due to moisture infiltration or punctured so that it can no longer adequately serve as a backup sheathing component.

Note: There is no estimated quantity for this work item. The proposed unit price, if accepted by the County, will be applied to actual quantities in the event the work described above is required and could not have been expected or reasonably anticipated from the preliminary geotechnical report or other information provided in the Contract Documents. **The Base Bid is not to contain any dollars for the above described scope of work**

E. Unit Price No. 4 – 61: Specified building standard materials, products and finishes as specified in the Unit Price table of the Bid Form, Section 00 300 Bid Form. **The Base Bid is to contain dollars for the quantity of items described scope of work. This unit price shall only apply to the addition or deletion of items as may be required.**

END OF SECTION

SECTION 01 10 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 GENERAL NOTES

- A. This Section includes detailed information regarding the scope of work for this Contract. Scopes of work for any separate contracts for the Project, if any, and other information relating to or affecting this Contract shall also be provided in this Section.
- B. The Contractor is responsible for performing the Work described in this Section for the Contract for which it has submitted a bid. The Contractor shall have taken all of the provisions herein into consideration when preparing its bid, and all costs associated with performing all Work required by the Contract Documents shall be included in the Contractor's Contract Sum. The Contractor is responsible for knowing what Work has been assigned to any preceding or succeeding separate contracts. No additional reimbursement or extensions of time will be allowed the Contractor due to its ignorance of the Work assigned to this Contract or to any separate contract which may affect its Work.
- C. The Contract Documents shall be construed so as to require the Contractor to perform all Work reasonably inferable therefrom as being necessary in order to produce the indicated functional, operational or finished result.
- D. The Contract Documents issued are deemed by the County to contain sufficient information for bidding and contracting for the Work specified. However, the Contractor is advised to check documents for thoroughness of information and notify the Construction Manager immediately in writing of any valid discrepancies.
- E. Time is of the essence for every portion of this Contract wherein a definite and certain length of time is fixed for performance of any act whatsoever. The Contractor shall be aware of the extreme importance of performing the Work and achieving all required milestones and completion dates within the allotted Contract Time.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Use of premises.
 - 3. Work restrictions.
 - 4. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Fulton County Juvenile Justice Center Roof Replacement.
 - 1. Project Location: 395 Pryor Street, Atlanta, GA 30312

B. The Work consists of the following:

1. Roof Replacement: Demo all existing roofing and insulation at roof. Remove existing curb flashing at curb mounted mechanical roof top equipment. Remove and reinstall existing metal copings at parapet walls as indicated on the drawings. Remove and install existing metal wall panels at parapet walls. Install new TPO membrane roofing with tapered insulation to roof drains and emergency overflow drains and all associated flashings at curbs, equipment, roof penetrations and parapets. Install walk pads along designated pathways to equipment and roof access points. Install new metal coping at parapet walls. Install new scupper boxes at existing scupper locations. Remove and reinstall existing lighting protection terminals at the roof and parapets. Remove and re-Install existing conductor heads at existing through wall scupper locations. Paint existing exposed steel support framing.

- C. The Contractor's services shall include all construction and equipment installation required to complete the Work as indicated in the Contract Documents. The Contractor shall provide or cause to be provided and shall pay for all testing services, labor, materials, equipment, tools, construction equipment and machinery, temporary utilities, transportation and all other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work. The above shall be provided such that the facility is turned over to the County in a complete, finished, and fully functional and operating manner.

1.4 SCOPE OF WORK

- A. Work includes, but is not limited to, demolition of existing roofing system, insulation, and associated flashing, installation of new roofing and insulation, cover board and associated flashing, termination bars, and sealants. Work also includes the removal and reinstallation of the existing metal coping.
- B. The Contractor shall be responsible for securing and paying for all permits, fees, taps, meters, inspections and bonds required to complete the Work. The Contractor shall also be responsible for paying for and coordinating all the required Work with all utility companies required for services to the Project. Additionally, any disruption in service must be coordinated to the satisfaction of the Owner so as not to disrupt any ongoing activities and requirements of the Owner. Any work involving security and CCTV monitoring shall be closely coordinated with the Sheriff's Office.

1.5 REGULATORY REQUIREMENTS AND STANDARDS

- A. Permitting: The Contractor assumes responsibility for securing all, demolition permits and building permits; providing meters and paying all utility tie-in fees; restoring of roads and right-of-ways;; and securing all final releases from regulating bodies. Minimum permits required for this Project:
 1. Demolition Permit: from City of Atlanta Bureau of Buildings.
 2. Building Permit: from City of Atlanta Bureau of Buildings.

The Contractor is responsible for payment of fees associated with the permits and inspections per the following schedule. ANY FEE FOR REQUIRED PERMITS OR INSPECTIONS NOT

SPECIFICALLY NOTED BELOW AS WAIVED IS THE RESPONSIBILITY OF THE DESIGN/BUILDER.

- a. Land Disturbance Permitting-Fee Waived
- b. Fulton County Building Permit-Fee Waived

- B. Codes: It is the Contractor's responsibility to comply with all applicable laws, statutes, ordinances, building codes, rules and regulations applicable to the Work.

1.6 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated by representative of Fulton County General Services Department.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Confine storage of materials to area designated by Owner.
 - 2. Driveways and Entrances: Keep loading areas and entrances serving premises clear and available to Fulton County, Fulton County employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - 3. Hauling Restrictions: Comply with all legal load restrictions in the hauling of materials. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment.
- C. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed during non-business hours of 7 a.m. to 6 p.m., Monday through Friday, except otherwise indicated.
 - 1. Weekend Hours: 7 a.m. Friday to 6 p.m. Monday
 - 2. Special Events: As indicated by Fulton County and the City of Atlanta. Specific special event days are as noted:
 - a. New Years Day
 - b. Martin Luther King Holiday
 - c. Memorial Day
 - d. Independence Day
 - e. Labor Day
 - f. Presidents Day
 - g. Veteran's Day
 - h. Thanksgiving Day
 - i. Christmas Day

- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Fulton County Juvenile Justice Center or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than five days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's written permission.

1.8 FIELD VERIFICATION

- A. Field verify all new and existing dimensions affecting the work of this contract before ordering products or commencing work.

1.9 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.
 - 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 - 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 21 00

ALLOWANCES

PART 1 - GENERAL

1.1 DEFINITIONS / GENERAL

- A. Allowances: Allowances are defined as sums of monies within the Contract Sum which may, at Owner's option and under terms established in the Contract, be utilized at the Owner's discretion to supplement corresponding basic requirements of Contract Documents.
- B. Owner allowances are exclusively for the cost of materials, delivery to the site and associated installation. The total allowance amount is exclusively for Owner use, and shall include no markup for the Contractor or for its subcontractors.

1.2 SCHEDULE OF ALLOWANCES

A. OWNER-PROVIDED ALLOWANCES

1. Division 01 Owners Allowance

- a. Allowance amount: The Owner-Provided Allowances will consist of the Owner Controlled contingency. The dollar value of the Owner Controlled contingency shall be determined by the Owner.
- b. Scope of Work: As determined by the Owner, through the Construction Manager.
- c. Procurement Procedure: By the Contractor, and coordinated by the Construction Manager.
- d. Schedule Conditions: As required.
- e. Coordination Responsibility: As determined by the Construction Manager.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 GENERAL SUMMARY

- A. The Contractor shall submit to the Construction Manager a Schedule of Values for the entire Contract, either within ten (10) days of Contract award or fifteen (15) days prior to the first Application for Payment deadline, whichever comes first.

B. Breakdown and Content

The Schedule of Values will be submitted in a format as prescribed by and to the level of detail specified by the Construction Manager.

1. The sum of the parts of the Schedule of Values shall aggregate to the total Contract Sum.
2. The minimum level of breakdown will normally be:
 - a. General Conditions line item(s) as required
 - b. Construction costs, by CSI Division or major trade, and broken down into labor and material line items for specific areas of the facility
 - c. Stored material projections
3. Schedule of Values items shall have a direct and understandable relation to the Project CPM Schedule.

1.2 SCHEDULE OF VALUES UTILIZATION

A. Applications for Payment

The Schedule of Values, unless objected to by the Construction Manager or the Architect, shall be the basis for the Contractor's Applications for Payment.

B. Changes to the Schedule of Values

The Construction Manager shall have the right to require the Contractor to alter the value or add/delete categories listed on the Schedule of Values at any time for the following reasons:

1. The Schedule of Values appears to be incorrect or unbalanced.
2. A revision to the segregation of values is required due to the Contractor revising the sequence of construction or assembly of building components, which in turn invalidates the Schedule of Values.
3. Change Orders are issued to the Contractor and require incorporation into the Schedule of Values.

C. Stored Materials

The Contractor is required to correlate the documentation for payment of stored materials requested in the Application for Payment against the agreed upon breakdown of the Schedule of Values. The Construction Manager reserves the right to not process the Application for Payment if this correlation has not been submitted in conjunction with the Application.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 13

PROJECT COORDINATION

PART 1 - GENERAL

1.1 GENERAL SUMMARY

- A. The Contractor shall become thoroughly familiar with the requirements of the Contract Documents, as well as jobsite conditions and the work of separate contractors (if any), and shall make any adjustments necessary to maintain the Project schedule.
- B. Close coordination will be required by the Contractor with the County, Construction Manager, other authorities having jurisdiction, separate contractors (if any), and others having an interest in the Project to assure that all work on the site, access to and from the site, and the general conduct of the operations is maintained in a safe and efficient manner, and that disruption and inconvenience to existing streets and property are minimized.
- C. The Contractor and its subcontractors of all tiers shall be subject to such rules and regulations for the conduct of the Work as the County, Construction Manager, or other authority having jurisdiction may establish.

1.2 COORDINATION OF THE WORK

- A. The Contractor shall be completely responsible for the coordination of its Work, including the Work performed by its subcontractors of all tiers.
- B. Observation of the Work by the Construction Manager or others shall not be interpreted as relieving the Contractor of its responsibility for the coordination of all Work, superintendence of the Work, or scheduling and direction of the Work.
- C. The Contractor shall coordinate its Work with the work of any separate contractors through the Construction Manager for proper function and sequence, coordinating material deliveries and staging of same, all to avoid construction delays.
- D. The Contractor shall review material and equipment staging requirements with the Construction Manager prior to placing such materials or equipment on the site.
- E. The Contractor shall conduct the Work so as to provide the least possible interference to the activities of adjacent properties and traffic patterns. Confine operations only to areas where construction or support functions are required. Portions of the site beyond areas in which construction or support functions are required are not to be disturbed.

1.3 ACCESS AND TRAFFIC CONTROL

- A. The Contractor shall maintain free access to all buildings and areas of the site for emergency vehicles, service vehicles, and fire fighting equipment and at no time shall block off or close roadways or designated fire lanes without providing auxiliary roadways and means of entrance acceptable to the County, the Construction Manager, and any other authority having jurisdiction. Fire hydrants shall remain accessible at all times. The Contractor shall provide at least forty-eight (48) hours notice of any changes to such routes.

- B. The Contractor shall be responsible for security of the site and building(s) until acceptance of the Project by the County. The Contractor shall cooperate with the County, the Construction Manager, and any separate contractors with respect to entry into the Project when requested during non-standard working hours.
- C. The Contractor shall coordinate its operations to minimize the impact on vehicular and pedestrian traffic around the site. Operations and traffic control measures shall comply with the requirements of the authority having jurisdiction.

1.4 WORKING HOURS

- A. The Contractor hours of work operation are 7:00 am until 6:00 pm Monday through Friday. Weekend hours begin 7:00 am Saturday and end 6:00 pm Sunday and are to be planned in coordination with and approved by the Construction Manager.
- B. The Contractor shall work whenever conditions permit (regardless of anticipated or orderly procedure, the operations of the County or other contractors, or conditions encountered) to proceed without delay and to maintain schedule dates. All operations shall be conducted so as to comply with all applicable laws, ordinances, and regulations regarding allowable hours of work.
- C. The Contractor shall notify the Construction Manager at least forty-eight (48) hours in advance of planned late night or weekend work. Failure to provide such notice may be cause for the Construction Manager to require the removal or uncovering of Work performed without the knowledge of the Construction Manager.

1.5 EXISTING UTILITIES AND OTHER SERVICES

- A. Utilities and/or other services which are shown, or not shown but encountered, shall be protected by the Contractor from any damage from any work operations of the Contract, unless or until they are abandoned. If the utilities or services are not abandoned at the time of damage, the Contractor shall immediately repair any damage from its work operations and restore the utilities or services to an equal or better conditions than that which existed prior to the damage.
- B. The Contractor and its subcontractors of all tiers shall be responsible for all damage to the Project including any existing buildings and grounds due to its operations under this Contract. Repair or replacement of damaged items shall be to the satisfaction of the County and the Construction Manager.

1.6 PROTECTION OF FINISHED WORK

- A. The Contractor shall be responsible for protecting its finished Work and materials from damage from any source, and shall maintain such protection until acceptance of the Work by the County. Any damage to finished Work caused by the work operations of this Contract shall be repaired, or such damaged Work replaced, by the Contractor at no additional cost to the County. No exceptions to this policy will be allowed.
- B. The Contractor shall coordinate the proper means by which materials and/or equipment are moved through the construction, ensuring that no structural overloading is allowed and that existing construction is protected from physical damage.

- C. Protect new roof system membrane from puncture or other damage during and after the new roof membrane and system has been installed.
- D. Keep roof membrane free of oils, grease, and other materials to prevent discoloring or damage from chemical contaminants. Where work is performed over finished roof surfaces, the Contractor shall provide an acceptable cover to protect the membrane against damage, puncture, paint, or stains.
- E. Load no part of the structure during construction with a load greater than calculated to bear safely when completed. Make temporary supports as strong as permanent supports.
- F. Take strict precautions against unnecessary traffic on finished roofing surfaces.
- G. Protect all glass surfaces at skylights during construction. Prior to Substantial Completion, replace any broken, scratched, or otherwise damaged skylight glass with glass of the same type, size, and quality as the original.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.1 GENERAL

- A. The Construction Manager will determine the agenda for and chair the meetings described below, and also shall prescribe the format for the documentation of the meetings to be produced by the Contractor.
- B. Representatives of the Contractor and its subcontractors and suppliers in attendance at any project meeting shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall schedule and administer project meetings throughout progress of Work where specified or required, and shall have the following specific responsibilities:
 - 1. Distribute Construction Manager's agenda for meetings
 - 2. Distribute written notice of each meeting a minimum of four days in advance of meeting date
 - 3. Make physical arrangements for meetings
 - 4. Record minutes, in the format to be provided by the Construction Manager, to include significant proceedings and decisions
 - 5. Reproduce and submit word processed minutes, within four working days after each meeting, to the Construction Manager for approval before further distribution. After approval, distribute copies as follows:
 - a. to all participants in the meeting
 - b. to all parties affected by decisions made at meeting
 - c. to all other parties as may be designated by the County or Construction Manager
- D. The County's user department(s) will be active participants in the design and construction process for this project, and their representative(s) shall be invited to all project meetings for which their presence and/or participation is appropriate.

1.2 PRE-CONSTRUCTION MEETING

- A. Scheduling: Meetings shall be held at least two weeks prior to any Work commencing on the site.
- B. Location: Designated by Construction Manager.
- C. Attendance:

1. Owner/user group representative(s), as appropriate.
2. Construction Manager' representative
3. Architect's representative (at its option)
4. Contractor's Project Manager, Superintendent, and other representative(s) as appropriate
5. Major subcontractors and suppliers
6. Others as appropriate

D. Suggested Minimum Agenda:

1. Discussion of major subcontractors and suppliers
2. Projected construction schedules
3. Critical work sequencing
4. Major equipment deliveries and priorities
5. Project coordination and designation of responsible personnel
6. Procedures and processing of:
 - a. Design issues and decisions
 - b. Field decisions
 - c. Proposal requests
 - d. Submittals
 - e. Change orders
 - f. Applications for payment
7. Adequacy of distribution of Construction Documents
8. Procedures for maintaining record documents
9. Use of premises:
 - a. Office, work and storage areas
 - b. County's, Architect's, and Construction Manager's requirements
10. Construction facilities, controls and construction aids
11. Temporary utilities
12. Safety and first-aid procedures
13. Security procedures and site access controls
14. Housekeeping procedures

15. Traffic and parking procedures
16. Other administrative procedures.

1.3 CONSTRUCTION PROGRESS MEETINGS

- A. Scheduling: Meetings shall be conducted at least bi-weekly throughout the construction phase.
- B. Location of the Meetings: Project field office of Contractor or other location designated by Construction Manager.
- C. Attendance:
 1. Owner/user group representative(s), as appropriate
 2. Construction Manager' representative
 3. Architect's representative (at its option)
 4. Contractor's Project Manager, Superintendent, and other representative(s) as appropriate
 5. Subcontractors and suppliers as appropriate to the agenda
 6. Others as appropriate
- D. Suggested Minimum Agenda:
 1. Actual vs. scheduled progress since previous meeting
 2. Planned construction activities for the next four weeks
 3. Problems with and revisions to construction schedule
 4. Review of off-site fabrication and delivery schedules
 5. Corrective measures and procedures to regain projected schedule
 6. Submittal schedules and expediting
 7. Construction Document clarifications
 8. Field observations, problems, conflicts
 9. Quality control
 10. Actual and potential changes and their impacts
 11. Safety issues

1.4 PRE-INSTALLATION MEETINGS

- A. Scheduling: Schedule pre-installation meetings for installation of various aspects of the Work prior to the start of installation, or as otherwise specified in the Project Manual. Do not

schedule pre-installation meetings until required submittals have been approved.

B. Location: At job site.

C. Meeting Requirements:

1. Prior to installation of work, conduct pre-installation meeting at project site with Contractor's superintendent and foreman, primary materials installer, installer of each component of associated work, representative(s) of materials manufacturer(s), inspection and testing agency representative (if any), installers of other work requiring coordination, Construction Manager, Architect, and Owner's representative for the purpose of reviewing job mock-up (if any), job conditions, project requirements and procedures to be followed in performing work.
2. At pre-installation meeting, examine areas and conditions under which work is to be performed. Report in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected. Commencement of work shall constitute acceptance of substrate conditions.
3. At pre-installation meeting, the manufacturer's authorized representative shall inspect storage of job site materials, establish scheduling of initial and final installation of products, and establish the method of preparing written progress reports to Contractor (with copy to Construction Manager) of job conditions and installation.
4. At pre-installation meeting, review manufacturer's product data publications and other published instructions for material installation compliance including shop drawings. Shop drawings and submittals shall be reviewed and approved prior to pre-installation meetings. Contractor shall provide a set of approved shop drawings and submittals for meeting use.
5. Where manufacturer's representative offers recommendations on material use, such recommendations shall be submitted in writing and substantiated by dated, printed, published product data or material use statement which is complete, definite, and clear, and signed by authorized company official.
6. Meeting Report: Submit copy of pre-installation job meeting report. Include copy of manufacturer's inspection report, manufacturer's recommendations, and any statement of non-compliance as applicable.
7. Pre-Installation meetings shall include, but not be exclusive of the following portions of the Work:
 - a. Roof System
 - b. Flashing

1.5 INSPECTION TOURS

- A. Formal inspection tours shall be made of the job progress for the Owner and any other officials as the occasion warrants and as scheduled by the Construction Manager.
- B. If requested by the Construction Manager, the Contractor shall be prepared to show and explain work completed and in progress throughout the Project to the inspection parties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 32 13

SCHEDULING OF THE WORK

PART 1 - GENERAL

1.1 INTRODUCTION

- A. This Section describes the construction scheduling and progress reporting requirements of the Contract. The primary objectives of the requirements of this Section are:
 - 1. to insure adequate planning and execution of the Work by the Contractor;
 - 2. to assist the County and Construction Manager in evaluating the progress of the Work;
 - 3. to provide for optimum coordination by Contractor of its trades, subcontractors and suppliers, and of its Work with the work or services provided by the County or any separate contractors; and
 - 4. to permit the timely prediction or detection of events or occurrences which may affect the timely prosecution of the Work.

1.2 GENERAL SCHEDULING REQUIREMENTS

- A. The Work of this Contract shall be planned, scheduled, executed, and reported using the critical path method (CPM). The Contractor shall use one of the following software programs to develop its Detailed Construction Schedule:
 - 1. Primavera Project Planner, latest version
 - 2. Microsoft Project, latest version (MPX file)
- B. The Detailed Construction Schedule, as defined herein, shall represent the Contractor's commitment and intended plan for completion of the Work in compliance with the Contract completion date and interim milestone dates specified. The Detailed Construction Schedule shall take into account all foreseeable activities to be accomplished by any separate contractors or the County, and interface dates with utility companies, the County's operations, and others. The Detailed Construction Schedule shall anticipate all necessary manpower and resources to complete the Work within the dates set forth.
- C. Once approved by the Construction Manager, the Detailed Construction Schedule will become the Schedule of Record, and will be the basis for coordinating the Work, scheduling the Work, monitoring the Work, reviewing progress payment requests, evaluating time extension requests, and all other objectives listed above. No other schedule will be recognized for this Contract.
- D. The Contractor is responsible for determining the sequence of activities, the time estimates of the detailed construction activities and the means, methods, techniques and procedures to be employed. The Detailed Construction Schedule shall represent the Contractor's best judgment of how it will prosecute the Work in compliance with the Contract requirements. The Contractor shall ensure that Detailed Construction Schedule is current and accurate and is properly and timely monitored, updated and revised as Project conditions and the Contract Documents may require.

- E. When there are separate contractors working concurrently on the Project whose work must interface or be coordinated with the Work of the Contractor, the Contractor shall coordinate its activities with the activities of the separate contractors, and the Detailed Construction Schedule shall take into account and reflect such work by others.
- F. The Contractor shall be solely responsible for expediting the delivery of all materials and equipment to be furnished by it so that the progress of construction shall be maintained according to the currently approved construction schedule for the Work. The Contractor shall notify the Construction Manager in writing, and in a timely and reasonable manner, whenever the Contractor determines or anticipates that the delivery date of any material or equipment to be furnished by the Contractor will be later than the delivery date indicated by the currently approved construction schedule, or required consistent with the completion requirements of this Contract, subject to schedule updates as herein provided.

1.3 DETAILED CONSTRUCTION SCHEDULE

- A. Within two (2) weeks after the Notice to Proceed, the Contractor shall submit a Detailed Construction Schedule according to the requirements established herein.
- B. The Detailed Construction Schedule shall consist of a time-scaled, detailed network graphic representation of all activities which are part of the Contractor's construction plan and an accompanying listing of activity's dependencies and interrelationships. The Detailed Construction Schedule submission shall include, but not be limited to, the following information:
 - 1. Project name
 - 2. Distinct, logical and identifiable subdivisions of Work
 - 3. Activities for all aspects of the Work, with durations not exceeding fourteen (14) calendar days for all activities for which the Contractor will perform actual construction work. Material procurement, submittals, concrete curing and other similar activities may exceed fourteen (14) calendar days if approved by the Construction Manager. Related activities, each of a duration of five (5) calendar days or less, may be shown as one activity together, if not on the critical path of timely job completion.
 - 4. Outage schedules for existing utility services that will be interrupted during the performance of the Work
 - 5. Acquisition and installation of equipment and materials supplied and/or installed by the County or separate contractors
 - 6. All start dates, milestones, float and completion dates
 - 7. An accounting of the number of workdays anticipated to be lost due to weather. This accounting shall be in accordance with allowable days per month provided in Article 8 of the *Owner-Contractor Agreement* (Section 00 500).
 - 8. A tabular report listing all predecessor and successor activities for each activity
 - 9. A legible time scaled network diagram showing the critical path.
 - 10. A listing of the project calendar, indicating the anticipated days of work performance
 - 11. A compact disk or USB flash drive with software application, in a form and format acceptable to the Construction Manager in a form and format acceptable to the Construction Manager, of the Detailed Construction Schedule including all required submission information resident in the computer system and containing all of the files associated with the schedule.

- C. Activities and milestones to appear on the Detailed Construction Schedule shall include, but not be limited to, sitework, structure erection, roof close-in, exterior wall systems, paving, major material fabrication and delivery, shop drawings submittals, bi-weekly progress meetings, furniture delivery and installation, equipment delivery and installation, coordination requirements, mock-up installations and inspections, dates of Substantial and Final Completion, Certificate of Occupancy inspection, systems testing and instruction, and special County reviews and decision points that impact the Work.
- D. Schedule Reports: Schedule submissions will contain the following minimum information for each activity:
1. Activity number, description and estimated duration
 2. Anticipated start and finish dates
 3. Responsibility for activity
 4. The cost loading values for each activity.
- E. For all major equipment and materials to be fabricated or supplied for the Project, the Detailed Construction Schedule shall show a sequence of activities including:
1. Preparation of shop drawings and sample submissions
 2. A reasonable time for review of shop drawings and samples or such time as specified in the Contract Documents
 3. Shop fabrication, delivery and storage
 4. Erection or installation
 5. Testing of equipment and materials.
- F. The Contractor shall submit, as a part of the data submitted to the Construction Manager, a narrative report indicating the anticipated allocation by the Contractor of the following resources and work shifts for each activity which he proposes to be utilized on the Project:
1. labor resources;
 2. equipment resources; and
 3. whether it proposes the Work to be performed on single, double or triple shifts, and whether it is to be done on a 5, 6 or 7 day work week basis.
- G. The Construction Manager shall have the right to require the Contractor to modify any portion of the Contractor's Detailed Construction Schedule, or Recovery Schedule, as herein required, (including cost loading) with the Contractor bearing the expense thereof, which the Construction Manager reasonably determines to be:
1. impractical or unreasonable;
 2. based upon erroneous calculations or estimates;
 3. not in compliance with other provisions of the Contract Documents;
 4. required in order to ensure proper coordination by the Contractor of the Work of its subcontractors and with the work or services being provided by any separate contractors;
 5. necessary to avoid undue interference with the County's operations or those of any utility companies or adjoining property owners;
 6. necessary to ensure completion of the Work by the milestone and completion dates set forth in the Contract Documents;
 7. required in order for the Contractor to comply with the requirements of this Section or any other requirements of the Contract Documents; or

8. not in accordance with the Contractor's actual operations.

1.4 COST LOADING

- A. As part of the submission of the Detailed Construction Schedule, the Contractor shall submit a breakdown of the expected value of each of the schedule activities for which payment is required.
- B. The cost breakdown of the Detailed Construction Schedule shall have a direct correlation to the Schedule of Values to be used as the basis for Applications for Payment.

1.5 UPDATING OF CONSTRUCTION SCHEDULE/PROGRESS REPORTS

- A. Not less than seven (7) calendar days before the submission of the monthly progress payment request, or on a date specified by the Construction Manager, the Contractor shall arrange for its Project Manager, Superintendent and necessary subcontractors and suppliers to attend a monthly schedule meeting with the Construction Manager to review the Contractor's report of actual progress. Said report shall set forth up-to-date and accurate progress data, and shall be prepared by the Contractor in consultation with all principal subcontractors and suppliers.
- B. The progress report of the Contractor shall show the activities, or portions of activities, completed during the reporting period, the actual start and finish dates for these activities, remaining duration and/or estimated completion dates for activities currently in progress, and quantities of material installed during the reporting period.
- C. The Construction Manager will produce a computerized update worksheet for the Contractor to complete as a part of this process.
- D. At the monthly schedule meeting a total review of the Project will take place including but not limited to, the following:
 - 1. Current update of the Detailed Construction Schedule
 - 2. Anticipated detailed construction activities for the subsequent report period
 - 3. Critical items pending
 - 4. Contractor requested changes to the Detailed Construction Schedule.
- E. The Contractor shall submit a narrative with the progress report which shall include, but not be limited to, a description of problem areas, current and anticipated delaying factors and their impact, explanations of corrective actions taken or planned, any proposed newly planned activities or changes in sequence, and proposed logic for a Recovery Schedule, if required, as further described herein. The report shall also include:
 - 1. A narrative describing actual Work accomplished during the reporting period
 - 2. A list of major construction equipment used on the Project during the reporting period
 - 3. The total number of men by craft actually engaged in the Work during the reporting period, with such total stated separately as to office, supervisory, and field personnel
 - 4. A manpower and equipment forecast for the succeeding thirty (30) days, stating the total number of men by craft, and separately stating such total as to office, supervisory and field personnel
 - 5. A list of Contractor supplied materials and equipment, indicating current availability and anticipated job site delivery dates

6. Anticipated changes or additions to Contractor's supervisory personnel.

- F. As part of the updating process, the Construction Manager will calculate, based upon progress data provided by the Contractor and agreed to by the Construction Manager, the value of Work completed based on the sum of the cost loading amounts for all activities, including activities specifically defined for stored materials, less the amount previously paid. Summation of all values of each activity less the appropriate percent of retainage shall be the maximum amount payable to the Contractor, provided that the Contractor has complied with all requirements of the Contract Documents.
- G. No invoice for payment shall be submitted and no payment whatsoever will be made to the Contractor until the required narrative reports, as defined herein, have been submitted and the Detailed Construction Schedule has been updated.

1.6 RECOVERY SCHEDULE

- A. Should the updated Detailed Construction Schedule, at any time during the Contractor's performance, show, in the sole opinion of the Construction Manager, that the Contractor is behind schedule for any milestone or completion date for any location or category of work, the Contractor, at the request of the Construction Manager, shall prepare a Recovery Schedule within five (5) days, at no additional cost to the County (unless the County is solely responsible for the event or occurrence which has caused the schedule slippage), explaining and displaying how the Contractor intends to reschedule its Work in order to regain compliance with the Detailed Construction Schedule within thirty (30) calendar days.
- B. If the Contractor believes that all of the time can be recovered within thirty (30) calendar days, the Contractor will be permitted to prepare a Recovery Schedule as set forth below. However, if the Contractor believes it will take more than thirty (30) days to recover all of the lost time, it shall prepare and submit a request for revision to the Detailed Construction Schedule and comply with all of the requirements of a Schedule Revision as set forth in Paragraph 8 below.
- C. The Contractor shall prepare and submit to the Construction Manager a one month maximum duration Recovery Schedule, incorporating the best available information from subconsultants, subcontractors and others which will permit a return to the Detailed Construction Schedule at the earliest possible time. The Contractor shall prepare a Recovery Schedule to the same level of detail as the Detailed Construction Schedule. The Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.
- D. Within two (2) days after submission of the Recovery Schedule to the Construction Manager, the Contractor and any of the necessary subcontractors, suppliers, vendors, manufacturers, etc. shall participate in a conference with the Construction Manager to review and evaluate the Recovery Schedule. Within two (2) days of the conference, the Contractor shall submit the revisions necessitated by the review for the Construction Manager's review and approval. The Contractor shall use the approved Recovery Schedule as its plan for returning to the Detailed Construction Schedule.
- E. The Contractor shall confer continuously with the Construction Manager to assess the effectiveness of the Recovery Schedule. As a result of these conferences, the Construction Manager will direct the Contractor as follows:

1. If the Construction Manager determines the Contractor continues behind schedule, the Construction Manager will direct the Contractor to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the County and Construction Manager as provided elsewhere in the Contract Documents; or
 2. If the Construction Manager determines the Contractor has successfully complied with provisions of the Recovery Schedule, the Construction Manager will direct the Contractor to return to the use of the approved Detailed Construction Schedule.
- F. In carrying out any approved Recovery Schedule, or whenever it becomes apparent that any critical activity completion date may not be met, the Contractor shall take any or all of the following minimum actions, as may be required, at no additional cost to the County:
1. Increase manpower to put the Work back on schedule.
 2. Increase the number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination which will place the Work back on schedule.
 3. Reschedule activities to achieve maximum practical concurrence and place the Work back on schedule.
- G. If the Contractor fails to take appropriate action as required by this Paragraph 7 to recover delays in the schedule, the Construction Manager may take action to attempt to put the Work back on schedule and deduct the cost of such action from monies due or to become due the Contractor in accordance with the Contract Documents.

1.7 SCHEDULE REVISIONS

- A. Should the Contractor desire to or be otherwise required under the Contract Documents to make modifications or changes in its method of operation, its sequence of Work or the duration of the activities in its Construction Schedule, it shall do so in accordance with the requirements of this Paragraph and the Contract Documents. The approved Detailed Construction Schedule may only be revised by written approval of the Construction Manager as provided herein.
- B. The Contractor shall submit requests for revisions to the Detailed Construction Schedule to the Construction Manager, using a Schedule Revision Form provided by the Construction Manager, together with written rationale for revisions and description of logic for rescheduling work, substantiating that the milestone and completion dates will be met as listed in the Contract Documents. Proposed revisions acceptable to the Construction Manager and County will be approved in writing and incorporated into the Detailed Construction Schedule.
- C. Requests for revision will be accompanied by evidence acceptable to the Construction Manager that the Contractor's suppliers, subcontractors and sub-subcontractors are in agreement with the proposed revisions.
- D. If there are separate contractors on the Project, the approval of the separate contractors shall be obtained to make the proposed schedule revisions. If accepted by the Construction Manager and County, the revisions shall be binding upon the Contractor and all separate contractors on the Project.

- E. The impact of all change orders to this Contract shall be included in the Detailed Construction Schedule.

1.8 FLOAT TIME

- A. Float or slack time associated with one chain of activities is defined as the amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as calculated as part of the currently approved construction schedule. Float or slack time shown on the currently approved construction schedule is not for exclusive use or benefit of either the County or the Contractor and is available for use by either of them according to whichever first needs the benefit of the float to facilitate the effective use of available resources and to minimize the impact of Project problems, delays, impact, acceleration or changes in the Work which may arise during performance. The Contractor specifically agrees that float time may be used by the County or Construction Manager in conjunction with their review activities or to resolve Project problems. The Contractor agrees that there will be no basis for any modification of the milestone or completion dates or an extension of the Contract Time, or a claim for additional compensation as a result of any Project problem, delay, impact, acceleration, or change order which only results in the loss of available float on the currently approved construction schedule.
- B. Float time shown on any construction schedule shall not be used arbitrarily by the Contractor in a manner which, in the opinion of the Construction Manager, unnecessarily delays separate contractors from proceeding with their work in a way which is detrimental to the interests of the County.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 32 20**CONSTRUCTION PROGRESS REPORTING****PART 1 - GENERAL****1.1 DAILY REPORTS**

- A. The Contractor's Superintendent shall prepare and submit Daily Reports throughout the construction phase of the Work. Daily Reports shall be kept in an orderly manner at the site, available for inspection or review when requested by the Construction Manager or the Architect. Copies of Daily Reports shall be accumulated and submitted to the Construction Manager on a weekly basis, on a regular day and time to be determined by the Construction Manager. Failure to submit Daily Reports or to comply with the format requirements below is cause for the Construction Manager to retain additional monies due the Contractor from the monthly Application(s) for Payment until such time as the reports have been brought up to date by the Contractor.
- B. Each Daily Report shall include the following information at a minimum:
1. Manpower by subcontractor, trade, and skill level
 2. Weather and temperatures (AM and PM)
 3. List of visitors to the jobsite
 4. Specific work performed with locations
 5. Situations or circumstances which could delay the Work or give cause for a time extension or additional cost
 6. Instructions requested (and of whom)
 7. Materials received
 8. Major equipment arrival/departure
 9. Total days accrued under the terms of the Contract Documents
 10. Accidents and incidents
 11. Safety issues
 12. Meetings
 13. Other significant events at the jobsite
- C. The Contractor shall take the necessary action required to specifically alert the Construction Manager to items which could result in impacts to the progress of the Work. Such items shall be clearly highlighted in the report.
- D. All Daily Reports shall be clearly handwritten or typed. Poor copies, reports in sloppy or illegible handwriting, or on wrinkled paper will not be accepted.

1.2 FIELD CONDITION REPORTS

- A. Field condition reports: Immediately on discovery of a difference between field conditions and the contract documents, prepare a detailed report. Submit with a request for information (RFI). Include a detailed description of the differing conditions, together with recommendations for changing the contract documents.

1.3 SPECIAL REPORTS

- A. General: Submit special reports to Construction Manager and Architect within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting unusual events: When an event of an unusual and significant nature occurs at project site, whether or not related directly to the work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Construction Manager and Architect in advance when these events are known or predictable.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 33

PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 CONSTRUCTION PHOTOGRAPHS, GENERAL

- A. Take color photographs on a weekly basis to show progress of the work. Submit photographs with contractor's monthly application for payment.
- B. Take photographs beginning at first month of construction activity and terminating at date of final acceptance.
- C. Take photographs on same day each week, weather permitting, and at same time of day.
- D. Take photographs of same standard locations each week, unless otherwise directed by Owner. Assign a letter to each of the standard photograph locations, for comparison with previous and future submittals.

1.2 SUBMITTAL OF PHOTOGRAPHS

- A. Submit photographs in duplicate with contractor's application for payment. Format may be Print or Digital.
- B. Print
 - 1. Size: 8" x 10"
 - 2. Paper: Glossy
 - 3. Label back of each photograph with project name, date, description and photograph number of location or element of the work and contractor's name.
- C. Digital
 - 1. Resolution: 5 megapixel
 - 2. Format: jpeg
 - 3. Time and date stamp each photograph
 - 4. File name to include Project Name, letter of photograph location.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 GENERAL INFORMATION

- A. This Section covers mandatory provisions for requests for product substitution during the bid period, and submission of product information and for submission of product information and for substitution procedures, after Contract award.
- B. Definitions:
 - 1. "Products" are defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for this Project or taken from the Contractor's stock of previously purchased products.
 - 2. "Materials" are defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form units of the Work.
 - 3. "Equipment" is defined as a product with operational parts, regardless of whether motorized manually operated, and particularly including products with service connections (wiring, piping, etc.).
 - 4. Definitions in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including specialties, systems, finishes, accessories, furnishings, special construction and similar terms which are self-explanatory and have recognized meanings in the construction industry.

1.2 PRODUCT SUBSTITUTION APPROVAL (BID PERIOD)

- A. As part of the bidding process, contractors, subcontractors or manufacturers may request approval for product substitutions for items that are specified allowing "or equal".
- B. Only products submitted following the proper procedure, detailed in this section, and submitted by the deadline for the last Request for Information, will be reviewed and considered.

1.3 INITIAL PRODUCT SUBMISSION (AFTER CONTRACT AWARD)

- A. As part of the Submittal Register specified in Section 01 33 23 of the General Requirements, provide a list showing names of products together with the names of manufacturer of each and, where applicable, the name of the installing subcontractor.
- B. Only specified products will be reviewed, except as herein below provided for substitutions.

1.4 PRODUCTS

- A. General Product Compliances

1. The compliance requirements for individual products as indicated by the Contract Documents are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details and other similar forms and methods of indicating requirements, compliance with all of same being a requirement.
2. The Contractor's options for selection of products are limited by the Contract Document requirements and by governing regulations, and are NOT controlled by industry traditions or procedures experienced by the Contractor on previous construction projects. Required procedures for the selection of product options include, but are not limited to, the following:
 - a. If material specified in the Contract Documents is not available on the current market, alternate materials may be proposed by the Contractor through the Construction Manager for Architect and County approval.
 - b. In the Contract Documents where a specific brand, make, or manufacturer is denoted, the intent is that it be considered the standard for establishing the style, type, character and quality level of the article desired, but not as a restriction in the selection process to the specific brand, make or manufacturer named.
 - c. Alternate brands, make of material, device or equipment which, in the opinion of the Architect, are recognized as the equal of that specified on the basis of quality, workmanship and economy of operation considerations and are suitable for the purpose intended may qualify for acceptance.
 - d. Standards, Codes and Regulations: Where only compliance with an imposed standard, code or regulation is required, selection from among products which comply with requirements including those standards, codes and regulations shall be at the Contractor's option.
 - e. Performance Requirements: Provide products which comply with the specific performances specified, and which are recommended by the manufacturer (in published product literature or by individual certification) for the application indicated. Overall performance of a product is implied where the product is specified with only certain performance requirements.
 - f. Prescriptive Requirements: Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing and similar operations during the manufacturing process.
3. Visual Matching: Where matching with an established sample is required, final judgment of whether a product proposed by the Contractor matches the sample satisfactorily lies with the Architect. Where no product within the specified cost range is available for a satisfactory match that complies with requirements, comply with the provisions in the Contract Documents related to "Substitutions" and "Change Orders" for the selection of a matching product outside the established cost category or of a product not complying with requirements.
4. Visual Selection: Except as otherwise indicated, where specified product requirements include "...as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product (complying with the requirements) is at the option of the Contractor with the subsequent selection of color, pattern and texture to be by the Architect.

B. Quality Assurance

1. Source Limitation: To the greatest extent possible for each unit of work, provide products, materials or equipment of a singular generic kind and from a single source.
2. Compatibility of Options: Where more than one choice is available as options for Contractor's selection of a product or material, select an option which is compatible with other products and materials already selected. Total compatibility among options is not assured by limitations within the Contract Documents, but must be provided by the Contractor. Compatibility is a basic general requirement of product and material selections.
3. Provide products and materials which are undamaged and unused at the time of installation, and which are complete with accessories, trim, finishes, safety guards and labels, maintenance instructions and other devices and details required for a complete installation and for the intended use and effect.
4. Standard Products: Where available, provide standard products of types which have been produced and used previously and successfully in similar applications on other projects.
5. Continued Availability: Where additional amounts of a product, by the nature of its application, are likely to be needed by the County at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to the County at such later date.
6. Warranties and Guarantees: Warranties are in several categories including those indicated in the General Requirements and in the Technical Specifications.

C. Certification

1. Certification of compliance with specification performance standards and manufacturers' specifications and directions shall be furnished for any portion of the Work for which specific performance requirements and/or manufacturers' specifications are listed. The Contractor shall be responsible for securing two (2) copies of each certification as required and transmitting same to the Construction Manager.
2. Each item requiring certification shall be so noted and an affidavit must be filed singly to cover each specified material, installation, application and the like.

D. Certification of Compatibility: If requested, the material and equipment manufacturers shall certify in writing that:

1. Other manufacturers' materials and/or equipment coming in contact with their product are compatible with their product in every way and that the intended performance of the system in which their product is incorporated will not be affected as a result of such contact. Also, that a physical breakdown of their product by chemical reaction or otherwise will not occur as a result of such contact.

2. The combination of products by one manufacturer to make up the manufacturer's specified system will contribute to the performance of the system as intended, and will remain operational, reliable and durable. The manufacturer will be the source of routine maintenance and replacement parts.
- E. Nameplates: Except as otherwise indicated for required approval labels, and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on the exterior of the Work.
1. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.
 2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings and similar essential operating data. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.
- F. Reuse of Existing Material
1. Except where specified or approved in writing, materials and equipment removed from an existing structure shall not be used in the Work.
 2. Where use of existing materials and/or equipment is specified or approved in writing, use special care in removing, handling, storing and reinstallation to assure proper function of same in the completed Work.

1.5 CONSIDERATION OF SUBSTITUTIONS

- A. The requirements for substitutions do not apply to specified Contractor options on products and construction methods. Revisions to Contract Documents, where requested by the County or the Architect, are "changes" and not "substitutions." The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions", nor do they constitute a basis for change orders, except as provided for in the Contract Documents. Otherwise, the Contractor's requests for changes in products, materials and methods of construction required by the Contract Documents are considered requests for "substitutions", and are subject to the requirements herein.
- B. Substitutions for a specified product, after contract award, will be considered only if the specified product is not obtainable, or if delivery date of all such specified products is such that the scheduled date of Substantial Completion of the Work will be delayed if the specified product remains a requirement. The latter cause shall only be considered if the Construction Manager is notified of this condition within thirty (30) days of the Notice to Proceed for the Contract, or if after order has been placed, circumstances beyond the Contractor's control, such as labor disputes affecting manufacture or delivery of product cause such a delay. Under no circumstances will a substitution be allowed for reasons of potential delay due to Contractor's failure to execute timely purchase orders with the vendor or subcontractor, or due to Contractor's failure to submit product data or shop drawings in adequate time to allow

for review and possible re-submittal prior to the required delivery date.

- C. Qualifications (during Bid Period): Substitutions will only be considered if the specifications denote “or equal” acceptance, and based upon the Contractor's, Subcontractor's or Manufacturer's representation that by submitting any Request for Substitution, they:
 - 1. Have researched the proposed substitution and has determined that it is equivalent to or superior in all respects to that specified.
 - 2. Confirm that the same warranties or bonds apply for the substitution as for the specified product, material, system and/or construction method.
 - 3. Identify all coordination issues resulting from the installation of any accepted substitution into the Work.
- D. Qualifications (after Contract Award): Substitutions will only be considered for the reasons noted above, based upon the Contractor's representation that by submitting any Request for Substitution, the Contractor:
 - 1. Has researched the proposed substitution and has determined that it is equivalent to or superior in all respects to that specified.
 - 2. Confirms that the same warranties or bonds apply for the substitution as for the specified product, material, system and/or construction method.
 - 3. Has determined by its best judgment and experience that the proposed substitution is either necessary or in the County's best interest.
 - 4. Will coordinate the installation of any accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.
 - 5. Waives claims for additional costs caused by the substitution which may subsequently become apparent.
 - 6. Has submitted complete cost data which includes all related costs under its Contract.
- E. Disqualifications: No consideration will be given to proposed substitutions when:
 - 1. They are indicated or implied on shop drawing submittals without having been formally requested in accord with provisions specified herein.
 - 2. For their implementation they require a major revision in the Work in order that their use may be accommodated.
 - 3. They materially alter the design concept including color or function originally intended by the specified product.

1.6 SUBMITTAL PROCEDURES ON SUBSTITUTIONS

- A. Substitution Request Form: The attached form must be filled out in its entirety and submitted in addition to the submittal information and data noted below. Submit a separate Substitution Request Form for each proposed substitution.

- B. Submittals: Submit three (3) copies of each Substitution Request Form and of each of the following related support items:
1. Identify product for which substitution is proposed by description, brand name and catalog number, giving specification section number where specified.
 2. Identify in similar manner the proposed substitution and include the manufacturer's name, address and telephone number.
 3. Itemize differences between product specified and proposed substitution, including but not limited to physical, color, function and guarantee considerations.
 4. Itemize changes in adjacent work occasioned by proposed substitutions.
 5. Accompany request with test data from independent laboratory substantiating quality and performance of proposed substitution.
 6. Attach manufacturer's complete instructions on storage, handling and installation.
 7. Provide list of three projects giving names, addresses and phone numbers of owners, general contractors, and architects where proposed product has been used.
 8. State proposed change to the Contract Sum and proposed change to the Contract Time if substitution is accepted and confirmed by Change Order. If the proposed substitution involves a change to the Contract Sum, any change in cost of adjacent or related Work shall be included also.
 9. State the number of days (not less than 15) during which the substitution as submitted is subjected to acceptance.
 10. Include any cost savings to the County which might result from this substitution.

1.7 ACCEPTANCE OR REJECTION

- A. The Architect and/or the Construction Manager have the authority to reject any substitution submittals due to incompleteness or for other good reason.
- B. The Architect will be the sole judge of the acceptability of the proposed substitution.
- C. Only the Architect, with the County's approval, will have the authority to change the specified standards of quality. However, neither this authority to act under this provision, or any decision made in good faith either to exercise or not to exercise this authority, shall give rise to any duty or responsibility of the Architect to the Contractor, subcontractor of any tier, any or their agents or employees or other persons performing the Work or offering to perform the Work.
- D. The Construction Manager will attain a prompt review from the Architect of the Request for Substitution which complies with the above provisions.
- E. If no exceptions are taken, approval will be granted in writing. If the substitution represents a

change to the Contract Documents, the substitution will be confirmed by Change Order.

- F. If accepted, the Contractor explicitly assumes all liability for the fit and function of all surrounding assemblies, and all interfacing devices.
- G. If rejected, the Contractor will be promptly notified, and the Contractor shall proceed with the Work in accordance with the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

SUBSTITUTION REQUEST FORM (For use by Architect)

For Use During Bid Period

- ☐ Accepted
☐ Accepted as Noted
☐ Not Accepted
☐ Received Too Late

From: _____

To: Williams-Russell and Johnson, Inc.

Project: _____ ITB No. _____

We hereby submit for your consideration the following proposed substitution in lieu of the specified item for the above-named project:

Proposed Substitution:

Specified Item:

Reference Drawing No(s). Reference Specification Section/Paragraph

1. Attach complete information and technical data on any changes to the program, drawings, specifications, or other Contract Documents which the proposed substitution will necessitate for its proper incorporation.
2. Accompany this request with all samples and substantiating data necessary to prove equal quality and performance levels of the proposed substitution to those of the specified item. Clearly mark manufacturer's literature to highlight the indicated equality in performance.
3. Respond to each of the following questions (use additional sheets if necessary):
 - A. What is the quality level of the proposed substitution versus that of the specified item?
 - B. What are significant variations between the proposed substitution and the specified item?
 - C. What affect(s) would the proposed substitution have on the operation and maintenance of the completed facility?

SUBSTITUTION REQUEST FORM (continued)
For Use During Bid Period

D. Are manufacturer's warranties for the proposed substitution and the specified item the same?

Yes _____ No _____

If no, explain:

E. What effect would the proposed substitution have on other trades?

F. How would the proposed substitution affect the project schedule?

G. What reason(s) justifies this request for a substitution?

The undersigned states and certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item and assumes the liability for the provision of equal performance of same as a minimum. THIS FORM MUST BE SIGNED.

SIGNATURE: _____ DATE: _____

NAME (type or print): _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: _____

NOTE: Signature shall be by a person having authority to legally bind his/her firm to the above terms. Failure to provide a legally binding signature will result in the retraction of any approval of this proposed substitution.

SUBSTITUTION REQUEST FORM *(For use by Architect)**For Use Only After Contract Award*

☐ Accepted
☐ Accepted as Noted
☐ Not Accepted
☐ Received Too Late

From: _____

To: Williams-Russell and Johnson, Inc.

Project: _____ Contract No. _____

We hereby submit for your consideration the following proposed substitution in lieu of the specified item for the above-named project:

Proposed Substitution:

Specified Item:

Reference Drawing No(s).

Reference Specification Section/Paragraph

1. Attach complete information and technical data on any changes to the program, drawings, specifications, or other Contract Documents which the proposed substitution will necessitate for its proper incorporation.
2. Accompany this request with all samples and substantiating data necessary to prove equal quality and performance levels of the proposed substitution to those of the specified item. Clearly mark manufacturer's literature to highlight the indicated equality in performance.
3. Respond to each of the following questions (use additional sheets if necessary):
 - A. What is the quality level of the proposed substitution versus that of the specified item?

 - B. What are significant variations between the proposed substitution and the specified item?

 - C. What affect(s) would the proposed substitution have on the operation and maintenance of the completed facility?

SUBSTITUTION REQUEST FORM (continued)

For Use Only After Contract Award

D. Are manufacturer's warranties for the proposed substitution and the specified item the same?

Yes _____ No _____

If no, explain:

E. What effect would the proposed substitution have on other trades?

F. How would the proposed substitution affect the project schedule?

G. What are accurate comparative cost figures between the proposed substitution and the specified item?

H. What reason(s) justifies this request for a substitution?

The undersigned states and certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item and assumes the liability for the provision of equal performance of same as a minimum. THIS FORM MUST BE SIGNED.

SIGNATURE: _____ DATE: _____

NAME (type or print): _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: _____

NOTE: Signature shall be by a person having authority to legally bind his/her firm to the above terms. Failure to provide a legally binding signature will result in the retraction of any approval of this proposed substitution.

END OF SECTION

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SECTION 01 33 23**SHOP DRAWINGS, PRODUCT DATA AND SAMPLES****PART 1 - GENERAL****1.1 GENERAL**

- A. This Section covers provisions for the submittal of shop drawings, product data, and samples prior to construction, and supplements the Owner-Contractor Agreement.
- B. The Contractor is required to make all submittals in accordance with the Contract Documents. Refer to the individual Technical Specifications for identification of equipment and materials for which submittals are required.
- C. Provisions in this Section are mandatory procedures for preparing and submitting shop drawings, product data, and samples.
- D. Required shop drawings, product data, and samples shall be coordinated, prepared, and submitted so as not to impact the project schedule. Submittals for interfacing units of work, and different categories of submittals for the same work, shall be coordinated and sequenced so that one will not be delayed by another. Adequate time shall be allowed for review by the Architect, and for possible resubmittal. Delays or impacts due to the Contractor's failure to make or process submittals in a timely fashion are solely the responsibility of the Contractor. The Contractor has an obligation to notify the Construction Manager in a timely manner if the submittal review process, with respect to reviews by the Architect might cause a schedule impact on the required delivery of any materials or fabricated assemblies required to execute the Work.
- E. Project delays or delays in the purchasing of materials or equipment occasioned by the requirement for resubmission of shop drawings, product data, and samples not in accordance with the Contract Documents are the Contractor's sole responsibility and will not be considered valid justification for time extensions.
- F. No portion of the Work requiring the submittal of shop drawings, product data, or samples shall be commenced until each such submittal has been reviewed by the Architect, and the action required on the returned submittal does not require a correction and resubmittal (i.e., "No Exceptions Taken" or "Make Corrections Noted," or similar notation); and further, each installer shall have possession of such final reviewed submittal prior to commencing its portion of the Work.
- G. The Contractor shall be responsible for distribution of all copies of initial and approved submittals required for coordination with others concerned with the Work.
- H. Submittals requiring review by the Architect shall be delivered to the Construction Manager's office, unless directed otherwise by the Construction Manager. Submittals are to be scheduled and submitted to allow adequate time for review.

1.2 DEFINITIONS

- A. "Shop Drawings" are drawings, diagrams, illustrations, schedules, performance charts, manufacturer's data sheets, brochures and other data which are prepared and submitted by

the Contractor and its subcontractors to illustrate in detail some portion of the Work. The Architect's drawings are not acceptable as shop drawings.

- B. "Product Data" are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor and its subcontractors to illustrate a material, product, or system for some portion of the Work.
- C. "Samples" are physical examples prepared for submission by the Contractor and its subcontractors to illustrate materials, equipment, or workmanship, and to establish standards by which the work will be judged as complying with the Contract Documents. Mock-ups are a special form of samples, too large or otherwise inconvenient for transmittal in the manner specified. Mock-up requirements are specified elsewhere in the Contract Documents.

1.3 SUBMITTAL REGISTER

- A. Within ten (10) days of the Contractor's receipt of the Notice of Award, the Contractor shall submit a comprehensive Submittal Register to the Construction Manager, showing all items requiring submission as defined in the General Requirements and the Technical Specifications.
- B. No submittals will be accepted or reviewed until the Submittal Register has been submitted, reviewed, and approved by the Architect and the Construction Manager as to content and format.
- C. The Submittal Register shall be updated by the Contractor and resubmitted on a monthly basis, or as otherwise required by the Construction Manager.
- D. The initial format of the Submittal Register shall be determined by the Contractor. If any aspect is lacking, the Submittal Register shall be reworked and resubmitted in a format as prescribed by and to the level of detail required by the Construction Manager.
- E. The Submittal Register shall be organized by Specification Section, and shall be further broken down as submittals from subcontractors will be structured.
- F. The Submittal Register shall include all required submittals for test procedures, training programs, operation and maintenance manuals, and any other submittals required by the General Requirements.
- G. The Submittal Register shall include the following information at a minimum:
 - 1. Submittal breakdown by Specification Section and Paragraph number.
 - 2. Scheduled date for initial submittal of each item.
 - 3. Number of calendar days required after review to fabricate and deliver the specified item to the jobsite (if applicable).

1.4 PREPARATION OF SUBMITTALS

- A. General Identification: All shop drawings, product data, and samples submitted for review shall have the following identification data, as applicable, contained thereon or permanently affixed thereto.

1. Date of submission and the dates of any previous submissions
2. Project title and location
3. Job number
4. Contract identification
5. Names of the Contractor, subcontractor, installer, supplier, and manufacturer
6. Identification of product (brand name, model number), use, and location
7. For each shop drawing: drawing number, drawing title, revision number, and date of drawing and all subsequent revisions
8. Corresponding Specification Section and Paragraph reference from Contract Documents
9. Field dimensions, clearly identified as such
10. Relation to adjacent or critical features of Work or materials
11. Applicable standards, such as ASTM or Federal Specification numbers
12. Identification of deviations from the Contract Documents
13. Identification of revisions from previous submittals (if a resubmittal)
14. Contractor's stamp, initialed or signed, and dated

B. Shop Drawing Preparation

1. Provide newly-prepared information with graphics at accurate scale (except as otherwise indicated).
2. Number all sheets consecutively.
3. Indicate all working and erection dimensions. Identify all dimensions based on field measurement.
4. Show arrangements and sectional views.
5. Indicate kinds of materials and finishes, anchoring and fastening details, including information for making connections to other Work. Furnish installation instructions to be followed in the field to achieve manufacturer's designed and planned intentions.
6. Indicate corresponding detail numbers from Contract Drawings in addition to numbering systems used on shop drawings.
7. Form:
 - a. Up to 11" x 17" in size may be either prints on opaque paper, or reproducible transparency. The use of 8-1/2" x 14" size shall not be acceptable.
 - b. Prepare submissions larger than above on reproducible, correctable transparent sheets between 18" x 24" (minimum) and 30" x 45" (maximum) in size.
8. Number of copies to be submitted:
 - a. The Contractor shall submit one (1) reproducible copy and five (5) print copies for review.
 - b. Copies shall be grouped together such that one set of all copies can be removed immediately without the necessity to remove and re-sequence the remaining copies.
9. Associated drawings relating to a complete assembly shall be submitted simultaneously to the greatest extent possible, so that each may be checked in relation to each other and the total assembly.

C. Product Data Preparation

1. Product data submittals shall be made by Specification Section. All items within a Specification Section requiring submissions shall be submitted together. If two or more Sections require inter-coordination (e.g. Air Handling Unit and Vibration Isolation, or Emergency Generator and Transfer Switch), they shall be submitted at the same time. Each individual submittal item shall be marked to show the Specification Paragraph number which pertains to that item.
2. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and coordination requirements.
3. Clearly mark each copy to identify pertinent products, brand names, or models, and to indicate which choices and options are applicable to the Work.
4. Modify each copy to delete information which is not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work and to job conditions.
5. Include performance characteristics and capacities.
6. Include dimensions and clearances required.
7. Include wiring or piping diagrams and controls.
8. Form:
 - a. Submit all items within a Specification Section in a tabbed binder, with an index.
 - b. Submittals for multiple but related Specification Sections may be grouped in the same binder, if adequately indexed and tabbed for easy reference.
 - c. If product submittals bound together exceed the capacity of one binder, two or more binders shall be used, and notations shall be made on the covers of each indicating the number of binders in the set and the number of each binder (i.e., 2 of 3).
9. Number of copies to be submitted: five (5).

D. Sample Preparation

1. Provide samples which are identical with the final condition of proposed materials or products for the Work.
2. Provide "range" samples (not less than three (3) units) where unavoidable variations must be expected, and describe or identify variations between units of each set.
3. Provide a full set of optional samples where selection is required.
4. Provide information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards.
5. Number of samples to be submitted: three (3).
6. Maintain one set of all approved samples at the jobsite, in suitable condition, for quality control comparisons by the Construction Manager. Jobsite quality control samples shall become the property of the County.
7. Returned submittals which are intended or permitted to be incorporated into the Work shall be so indicated in the individual Specification Sections, and shall be in a suitable and undamaged condition at the time of incorporation.

E. Other Submittals

1. Inspection and Test Reports: Classify each as either a "shop drawing" or "product data," depending on whether report is uniquely prepared for the Project or a standard publication of workmanship control testing at point of production, and process accordingly.
2. Letters of Material Certification: Submit for specified materials, items, or

equipment, and when requested. Letters of certification shall certify that material or equipment submitted complies with the Contract Documents and shall be submitted with substantiating supporting data (i.e., test reports from approved independent testing laboratory or other approved source). Classify as “product data.”

3. Fire Rating and Acoustical Rating Certifications: Submit notarized certifications with shop drawings and material samples which are required to show or have a fire or acoustical rating.

1.5 TRANSMITTAL

- A. Transmit all shop drawings, product data, and samples to the Construction Manager for transmittal to the Architect.
- B. Accompany each submittal to the Construction Manager with a transmittal letter, in duplicate, containing the Project name, Contractor’s name, contract number and description, and brief description of submittal, including the number of drawing sets, data sets, and/or samples included. Include an outline of deviations, if any, from the requirements of the Contract Documents, and itemize proposed changes in the Contract Sum or Contract Time, if any. Where no change in the Contract Sum or Contract Time is indicated by the Contractor, it shall be concluded that no such change is involved for making the change.

1.6 CONTRACTOR’S RESPONSIBILITIES

- A. The Contractor shall prepare and submit all submittals with promptness and in accordance with the project schedule.
- B. The Contractor shall determine and verify prior to submittal of any shop drawing, product data, or sample, the following:
 1. Field measurements
 2. Field construction criteria and job conditions
 3. Catalog numbers and similar data
 4. Conformance with Specifications
- C. Any deviation in a submittal from the requirements of the Contract Documents shall be called to the attention of the reviewing party in writing at the time of the submittal.
- D. The Contractor shall affix its stamp, with initials or signature, and date, prior to submittal to the Construction Manager, indicating its review and concurrence that the submittal conforms to the Contract Documents.
- E. All copies of submittals shall include the stamp indicated above, and previous revisions, if any, shall be clouded and noted. Failure to adhere to these requirements will result in the return of the unreviewed submittal to the Contractor for re-submittal, with the Contractor responsible for any impact to the project schedule resulting there from.
- F. If re-submittals are necessary, they shall be made as specified above for initial submittals. Re-submittals shall highlight all revisions made and the cover shall include the phrase, “Re-submittal No. _____.”
- G. All re-submittals shall carry the same submittal number but shall have a suffix designation

which is designed to signify that the package is a re-submittal. This suffix designation shall be changed for each subsequent re-submittal.

1.7 CONSTRUCTION MANAGER’S RESPONSIBILITIES

- A. The Construction Manager will provide a general review of all submittals for completeness and compliance with submittal procedures as outlined herein.
- B. The Construction Manager will return to the Contractor, without review, all submittals not bearing the Contractor’s review stamp or not indicating that the submittal has been reviewed by the Contractor. All costs resulting from unnecessary delays of this type will be the responsibility of the Contractor.
- C. The Construction Manager will forward acceptable submittals to the Architect for review.
- D. After the Architect review, the Construction Manager will forward reviewed submittals to the Contractor and retain one copy for the County. The Contractor will provide additional distribution copies to the Construction Manager of any submittals in a “No Exceptions Taken” status as directed by the Construction Manager at any time during execution of the contract.

1.8 ARCHITECT’S RESPONSIBILITIES

- A. Shop drawings, product data, and samples will be examined by the Architect with reasonable promptness and returned to the Construction Manager. Allow a reasonable time for processing by the Architect and the Construction Manager in addition to transit time.
- B. Shop drawings, product data, and samples will be returned to the Contractor noted for action as follows:

Action

Meaning

Reviewed:

Architect finds no contract deviations on/of the submittal. Contractor may incorporate the submittal into the work. Contractor in doing so has full responsibility for complying with the contract. Architect will endeavor to identify any deficiencies with submittal but takes no responsibility for oversight.

Reviewed and noted:

Architect finds minor deficiencies with submittal and so notes on the submittal. Contractor may incorporate corrected work into the project and provide corrected submittal for project record.

Resubmit:

Architect finds submittal in non-conformance or there are sufficient deviations from the contract documents that require revisions and resubmittals prior to incorporation into the work.

Reviewed for Information only:

Architect reviewed the document only to further understand the Contractor’s intent.

- C. The Architect will apply its document review stamp, with signature or initials, on all reviewed copies of submittals. Through the Construction Manager, one copy of all reviewed submittals will be returned to the Contractor; for shop drawings where reproducible copies are submitted, one print and one reproducible copy will be returned.
- D. The Technical Specifications for structural, mechanical and electrical work may modify the above requirements and shall govern in the event of conflict.
- E. If the Contractor has a complaint with either the time required or the information provided by the Architect's review, it shall be expressed in writing at the time the submittal is returned. Failure by the Contractor to file such complaints at that time will prevent attempting to allege delays or impacts resulting there from at a later date. Such complaints must be fully detailed, and if additional information is requested by the Construction Manager, it shall be provided as soon as becomes available, but in no case later than ten (10) days from the return of the submittal in question.
- F. The Architect's review of a submittal shall not be construed as an indication that it is correct or suitable, nor that Work represented by a submittal complies with the Contract Documents, except as to matters of finish, color, and other aesthetic matters left to the Architect's decision by the Contract Documents. Further, reviews by the Architect of submittals of details for any material, apparatus, device, etc., will not relieve the Contractor from responsibility for furnishing same of proper dimension, size, quantity, and quality to efficiently perform the Work and carry out the requirements and intent of the Contract Documents.

1.9 RECORD SUBMITTALS

- A. At Substantial Completion of the Work, the Contractor shall deliver to the Construction Manager one copy of all final, approved submittals for the County's record.
- B. Record submittals not in the form of drawing rolls shall be neatly labeled and organized by Specification Section and boxed in a "Banker's Box" or equivalent. Rolls of shop drawings shall be labeled appropriately for easy reference.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 35 00

SPECIAL PROCEDURES

PART 1 - GENERAL

1.1 ONGOING CONSTRUCTION MANAGER OPERATIONS/SITE ACCESS

- A. Construction Parking: Area available for construction parking shall be coordinated with and as directed by the facility manager. Construction parking shall be limited only to those areas designated for construction parking by the facility manager. No parking is allowed in any of the permanent spaces available for the facility's employees or visitors. Contractor shall be responsible for providing off-site parking and worker transportation to the site as required meeting this condition.
- B. Normal Business Hours: The County Government's normal business hours are 8 AM to 5 PM on Monday through Friday.
- C. Construction Manager Notifications: Contractor shall coordinate with Construction Manager prior to any construction operations that interfere, alter or otherwise impact ongoing business operations. Such notice shall be provided in writing and, unless otherwise specified, with not less than seven (7) days advance notice. Examples requiring notification include work in existing buildings, high noise levels, shut down of existing buildings, temporary interruption of utilities, and work outside of normal business hours.
- D. Access to Existing Buildings: Access shall be coordinated with the Construction Manager. All work in the existing buildings shall be performed during the hours specified by Construction Manager. Construction Manager notification shall be provided in writing not less than seven (7) days prior to commencing work in existing buildings. Contractor shall comply with any reasonable Construction Manager security procedures for work in existing buildings.
- E. Temporary Offices and Storage for the Contractor shall be located within the zone designated by Construction Manager and Facilities Management.

1.2 LIMITS OF CONSTRUCTION

- A. Maintaining the site in its existing condition is of the highest priority to the Construction Manager. This includes retaining existing sidewalk, curb and landscape. Strict limits of construction for work on the site must be observed. The limits of construction define an area for site access, staging, parking, building access and all other construction related activities. These limits shall be clearly defined on the site through temporary fencing or other means acceptable to the Construction Manager and shall be strictly enforced by the Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 35 29**HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES****PART 1 GENERAL****1.1 DESCRIPTION**

- A. The work of this section consists of establishing an effective accident prevention program and providing a safe environment for all personnel and visitors.

1.2 SUBMITTALS

- A. Accident Prevention Program: Before on-site work begins, submit for approval an accident prevention program. The Project Manager will review the proposed program for compliance with OSHA and project requirements. If the program requires any revisions or corrections, the Contractor shall resubmit the program within 10 days. No progress payments will be made until the program is approved. The program shall include:
1. Name of responsible supervisor to carry out the program.
 2. Weekly and monthly safety meetings.
 3. First aid procedures.
 4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to ensure property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase by reference to specification section or division numbers.
 5. Training, both initial and continuing.
 6. Planning for possible emergency situations, such as floods, fires, cave-ins, slides, explosions, power outages, and wind storms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.
 7. Cleaning.
 8. Fire Protection.
- B. Submit a copy of test reports, as required by OSHA, for personnel working with hazardous materials.
- C. Submit a report of safety meetings and of inspections.
- D. Upon request, submit proof of employees' qualifications to perform assigned duties in a safe manner.

1.3 QUALITY ASSURANCE

- A. Clauses entitled "Accident Prevention" and "Permits and Responsibilities" of the contract. In case of conflicts between Federal, state, and local safety and health requirements, the most stringent shall apply. Equipment or tools not meeting OSHA requirements will not be allowed on the project sites. Failure to comply with the requirements of this section and related sections may result in suspension of work.
- B. Qualifications of Employees:
1. Ensure that employees are physically qualified to perform their assigned duties in a safe manner.

2. Do not allow employees to work whose ability or alertness is impaired because of drugs, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.
3. Operators of vehicles, mobile equipment, hoisting equipment, and hazardous plant equipment shall be able to understand signs, signals, and operating instructions, and be capable of operating such equipment. Provide operating instructions for all equipment. Newly hired operators shall be individually tested by an experienced operator or supervisor to determine if they are capable of safely operating equipment.

1.4 ACCIDENT REPORTING

- A. Reportable Accidents: A reportable accident is defined as death, occupational disease, traumatic injury to employees or the public, property damage by accident in excess of \$100, and fires. Notify Project Manager immediately in the event of a reportable accident. Within 7 days of a reportable accident, fill out and forward to Project Manager an Accident/Property Damage Report.
- B. All Other Accidents: The Contractor shall report all other accidents to the Project Manager as soon as possible and assist the Project Manager and other officials as required in the investigation of the accident.

PART 2 PRODUCTS

2.1 FIRST AID FACILITIES

- A. Provide adequate facilities for the number of employees and the type of construction at the site.

2.2 PERSONNEL PROTECTIVE EQUIPMENT

- A. Meet requirements of NIOSH and MSHA.

PART 3 EXECUTION

3.1 EMERGENCY INSTRUCTIONS

- A. Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

3.2 FIRE AND LIFE SAFETY

- A. Provide and maintain the fire and life safety requirements in NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations).
- B. Contractor shall have a Hazard Communications Plan; store hazardous materials in accordance with manufacturer's and OSHA recommendations; immediately report all spills of hazardous materials to the park; and maintain a spill emergency response kit.

3.3 PROTECTIVE EQUIPMENT

- A. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repair, as appropriate, personal items before issuing them to another individual.
- B. Inspect and maintain other protective equipment and devices before use and on a periodic basis to ensure safe operation.

3.4 SAFETY MEETINGS

- A. As a minimum, conduct weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by a foreman and attended by all construction personnel at the worksite.
- B. Conduct monthly safety meetings for all levels of supervision. Notify the Project Manager of meeting dates and times. These meetings shall be used to review the effectiveness of the Contractor's safety effort, to resolve current health and safety problems, to provide a forum for planning safe construction activities, and for updating the accident prevention program. The Project Manager will attend the meeting and enter the results of the meetings into the daily log.

3.5 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

- A. A hard hat area will be designated by the Project Manager. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Project Manager.
- B. It is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary protective equipment at all times. As a minimum, provide six hard hats for use by visitors. Change liners before reissuing hats.

3.6 TRAINING

- A. First Aid: Provide adequate training to ensure prompt and efficient first aid.
- B. Hazardous Material: Train and instruct each employee exposed to hazardous material in safe and approved methods of handling and storage. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

END OF SECTION

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SECTION 01 42 19

REFERENCE STANDARDS

PART 1 - GENERAL

1.1 APPLICABILITY OF STANDARDS

- A. Where reference is made to standards or specifications published by various organizations ("standards"), the Work shall conform to latest edition of such standards as amended and revised in effect at the date of Contract, unless a specific date is indicated.
- B. Where material is designated for certain applications, material shall conform to standards designated in the applicable building code governing the Work. Similarly, unless otherwise specified, installation methods and standards of workmanship shall also conform to standards required by such code. Where no particular material is specified for a certain use, the Contractor shall select from choices offered in the governing code.
- C. Where a standard does not provide all information necessary for the complete installation of an item, comply with manufacturer's instructions for installation and workmanship.
- D. Where specific articles, sections, divisions or headings for standards are not given, such standards shall apply as appropriate. Standards when included in the Contract Documents by abbreviations or otherwise, shall form a part of Contract Documents. In the event of conflicts between cited standards and/or the Contract Documents, the more stringent shall govern.

1.2 ABBREVIATIONS AND ACRONYMS

- A. Abbreviations and acronyms used throughout the Contract Documents refer to associations, institutes, societies and other public bodies who publish standards which are readily available to the public, and to the titles of the standards which they publish. Where such abbreviations or acronyms are used in the Contract Documents, they shall mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.
- B. Whenever initials representing such a body are shown, followed by a number or a combination of numerals and letters, reference is to a particular standard to which Contractor shall conform. The number or combination of numerals and letters following abbreviation designates the particular standard to be followed.

1.3 CONTRACTOR'S DUTIES AND RESPONSIBILITIES

- A. The Contractor shall be responsible when required by Contract Documents, or upon written request from the Construction Manager, to deliver required proof that materials or workmanship, or both, meet or exceed the requirements of a reference standard.

1.4 CONFLICTING STANDARDS

- A. Where compliance with two or more standards is specified and where the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different but apparently equal and other uncertainties to the Architect, through the Construction Manager, for a decision before proceeding.

1.5 COPIES OF STANDARDS

- A. Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.

END OF SECTION

SECTION 01 45 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Refer to the Technical Specifications for specific quality control activities to be performed, and for the inspection and testing required by public authorities having jurisdiction.
- B. The Contractor shall furnish all labor, materials, tools, equipment and services for quality control of materials, components and systems incorporated or to be incorporated the Work, so as to adequately and acceptably perform the Work as required by the Contract Documents. All testing and inspection, whether required by the Contract Documents; by laws, ordinances, rules, regulations, codes or orders of any public authority having jurisdiction; or whether performed by the Contractor for qualification of materials or its convenience, shall be at the Contractor's expense unless otherwise indicated in the Contract Documents.
- C. The Contractor shall be fully responsible for quality control. The Contractor shall employ an individual on its staff who shall be primarily responsible for ensuring an acceptable level of quality on the Project. This individual shall not be the Contractor's Project Superintendent.
- D. The Contractor shall completely coordinate its Work internally and with the work of any separate contractors. Although such Work may not be specifically indicated in the Contract Documents, the Contractor shall furnish and install all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation.
- E. At any time during the execution of the Contract, the Construction Manager may notify the Contractor that some aspect of quality control is not being correctly performed. If the Contractor fails to respond to a request for quality control surveys or reports, or to a second request for proper preparatory work in an area for the purpose of a test or inspection, including a punch list inspection, the Construction Manager or the County may provide this work and deduct the cost of such work from the value of the Contract.

1.2 SPECIAL INSPECTIONS NOT USED

1.3 OTHER REQUIRED TESTING AND INSPECTION

- A. The Contractor shall be responsible for all other tests and inspections which may be required, any of which may or may not require the use of an independent testing and inspection agency.

1.4 JOB CONDITIONS

- A. Employment of an independent testing and inspection agency shall not relieve the Contractor of its obligation to comply with the Contract Documents.
- B. Where operating tests are specified, the Contractor shall test its Work as it progresses, at its own expense, and shall make satisfactory preliminary tests in all cases prior to applying for official tests. Tests shall be in the manner specified for the appropriate type of Work.
- C. Each test shall be made on the entire system for which such test is required wherever practical. In case it is necessary to test portions of the Work independently, the Contractor shall do so without additional compensation. Should defects appear, they shall be corrected by the Contractor and the test repeated until the installation is acceptable to the Architect and the Construction Manager. No Work of any kind shall be covered or enclosed before it has been tested and approved.

1.5 PROCEDURES AND REPORTS

- A. Prior to the start of construction, submit to the Construction Manager a complete list of proposed tests and inspections according to specification section and Schedule of Special Inspections.
- B. Perform, or cause to be performed, all required inspections, sampling and testing of materials and methods of construction, utilizing methods required by the specifications and applicable standards. The Contractor's quality assurance specialist shall observe all sampling and testing and shall review all test results.
- C. Test procedures:
 - 1. Each test to be performed shall have a test procedure which shall include a detailed description of the specific steps which will be taken by the testing technician.
 - 2. Each test procedure shall be submitted to the Construction Manager for review at least four (4) weeks prior to the time that the Contractor wishes or is required to perform the test.
 - 3. No formal acceptance test will be performed without an approved test procedure being utilized.
- D. Report each test/inspection/sampling in the form specified below. All reports shall be submitted promptly after completion of the test.
- E. Retest all failed materials, components, and systems.
- F. Record all test and inspection results and maintain a complete log of the testing and inspection program. This log shall be submitted for the Architect's or the Construction Manager's review upon request.
- G. Equipment testing:
 - 1. All pieces of rotating mechanical equipment and electrical equipment shall be formally tested prior to acceptance by the Architect, the Construction Manager and the County. This requirement will not be waived by temporary or permanent occupancy of some or all parts of the finished construction.
 - 2. The Construction Manager shall have the final determination as to whether or not a piece of equipment shall require a formal acceptance test.

3. No equipment warranty period shall be started until a formal acceptance test has been successfully completed.
4. No final payment for any such equipment shall be made until a formal acceptance test has been successfully completed.

H. Test / inspection procedures and reports shall include the following information at a minimum:

1. Project name and number
2. Project location
3. Applicable specification section and paragraph
4. Type of test or inspection
5. Name of testing/inspecting agency (if used)
6. Name(s) of testing/inspecting personnel
7. Date of test/inspection
8. Record of field conditions encountered, including weather
9. Observations regarding compliance
10. Test method used
11. Results of test/inspection
12. Date of report
13. Signature of testing/inspecting personnel

I. Where test/inspection reports indicate non-compliance, provide report on colored bond paper.

J. All testing/inspection reports produced by an independent testing and inspection agency shall be submitted to the Construction Manager directly from the independent testing and inspection agency, with copies to the Contractor.

1.6 SPECIAL INSPECTION TESTING AGENCY DUTIES AND LIMITATIONS OF AUTHORITY

- A. Provide qualified personnel at site after due notice; cooperate with the Contractor, the Architect, and the Construction Manager in performance of services.
- B. Promptly notify the Construction Manager of irregularities or non-conformance of Work which are observed during performance of services.
- C. Attend preconstruction conferences and progress meetings if an as requested by the Construction Manager.
- D. An independent testing and inspection agency is not authorized to:
 1. Release, revoke, alter, or enlarge on requirements of the Contract Documents.
 2. Approve or accept any portion of the Work.
 3. Assume any duties of the Contractor.
 4. Stop the Work.

1.7 CONTRACTOR'S DUTIES TO SPECIAL INSPECTION OR INDEPENDENT TESTING AND AGENCY

- A. The Contractor shall be responsible to coordinate all work of the testing and inspection agency including notifications, coordination on and off site and distribution of test reports.

- B. The Contractor shall cooperate with testing and inspection agency personnel, and provide access to Work.
- C. The Contractor shall provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.
- D. The Contractor shall notify the testing and inspection agency and the Construction Manager of any test or inspection 48 hours in advance to allow for proper coordination,
- E. Unless noted otherwise, field testing procedures shall be performed by the Contractor under the direction and observation of the independent testing and inspection agency.

1.8 PUNCH LIST INSPECTIONS

- A. The preparation of the Work or a portion thereof prior to a punch list inspection shall be solely the Contractor's responsibility. The Contractor shall first verify, and then certify that the Work for which a punch list inspection is being requested is in such a state that it may be easily punched out for acceptance by the Architect, the Construction Manager and/or the County. Failure to properly prepare the Work for a punch list inspection shall constitute a failure to perform a quality control duty, and the Construction Manager may take appropriate action as defined in Paragraph 1.1E above.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

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SECTION 01 50 00

CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 INTRODUCTION

- A. The Contractor shall provide all construction facilities and temporary controls throughout the construction period unless otherwise indicated in the Contract Documents.
- B. The Contractor shall pay all costs for providing, maintaining, and removing all construction facilities and temporary controls unless otherwise indicated in the Contract Documents.

1.2 QUALITY ASSURANCE

- A. All work specified herein shall be performed in a workmanlike manner and shall be in accordance with applicable codes, OSHA regulations, utility company rules and regulations, and other rules and regulations of any other authorities having jurisdiction.

1.3 JOB CONDITIONS

- A. The Contractor shall establish and initiate use of each construction facility or temporary control at the time first reasonably required for proper performance of Work. Terminate use and remove facilities and controls at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.
- B. The Contractor shall install, operate, maintain and protect construction facilities and temporary controls in a manner and at locations which will be safe, non-hazardous, sanitary and protective of persons and property, and free of deleterious effects.
- C. Conservation: In compliance with County policy on energy/materials conservation, install and operate construction facilities and temporary controls and perform construction activities in a manner which reasonably will be conservative and avoid waste of energy and materials, including water and electric power.

1.4 TEMPORARY UTILITIES - GENERAL

- A. The Contractor shall provide and pay all costs for temporary utilities, including consumption costs. Do not use utilities of any existing, permanent operations at site.
- B. Make all temporary connections to utilities and services in locations acceptable to the local authorities having jurisdiction. Furnish all necessary labor and materials, and make all installations in a manner subject to the acceptance of such authorities.
- C. Maintain all temporary utility installations connections and remove them when no longer required. Restore the services and sources of supply to proper operating condition.

- D. The Contractor may extend and use permanent utilities installed for the Project for temporary facilities. Prior to Substantial Completion, remove temporary connections, replace lamps, filters, etc., and restore permanent utilities to specified condition.
- E. Metering: Comply with requirements of local utilities for installation of meters for water and electrical power services.

PART 2 – PRODUCTS

2.1 TEMPORARY POWER DISTRIBUTION

- A. Temporary electrical power service shall be installed and maintained such that power can be secured at any desired point with no more than a 60 foot extension cord.
- B. Service shall be sufficient for the following items:
 - 1. Power centers for miscellaneous tools and equipment used in the construction work, each with a minimum of four 20-amp, 120 volt grounding type outlets. Each outlet shall provided with ground fault detecting circuit breaker protection.
 - 2. Adequate lighting for safe working conditions, provided and maintained on a 24-hour basis, throughout the building including stairways. At least 0.25 watts of incandescent lighting per square foot for general use must be installed and maintained in all areas where work is in progress. Each lamp must be rated at least 100 watts. Voltage of each socket must be at least 110 volts.
 - 3. Power for any equipment used for temporary heating and ventilation, and for start-up testing of any permanent electric-powered equipment prior to its connection to permanent electrical system.
- C. Power for electric welding shall be provided via the temporary electrical system or engine-driven power generator sets. Coordinate all connections for welding equipment with the Construction Manager.
- D. Regulatory Agency Requirements:
 - 1. The Contractor shall obtain any and all permits required by local authorities having jurisdiction, as applicable to any temporary power work performed.
 - 2. The temporary electrical service shall comply with the National Electrical Code as currently adapted by local authorities, and all other applicable local codes and utility regulations.
- E. Materials:
 - 1. The materials may be new or used, but must be adequate in capacity for the purposes intended and must not create unsafe conditions or violate the requirements of applicable codes.

2. Use wire, cable, or busses of appropriate type, sized in accordance with the National Electrical Code for the applied loads. Use only UL-labeled wire and devices.

- F. Equipment: Provide appropriate enclosures for the environment in which equipment is placed and used, in compliance with NEMA standards.

2.2 TEMPORARY LIGHTING

- A. Provide task lighting of sufficient level for installation of the Work. If the Construction Manager does not deem the amount of task lighting to be adequate in a given area, the Contractor shall immediately increase the amount of task lighting at no additional cost. Verbal direction for the Construction Manager shall be adequate in this situation.
- B. Lighting for field offices, storage trailers, shops and outdoor work areas shall be provided by the Contractor as necessary.
- C. Outdoor area lighting, in excess of any existing streetlight levels, of any site staging areas shall be provided by the Contractor. This lighting shall be in the form of dusk-to-dawn mercury vapor fixtures. Lighting shall be of sufficient levels to permit security checks of the areas and provide for minimal access. If the Construction Manager does not deem the amount of area lighting to be adequate in a given area, the Contractor shall immediately increase the amount of area lighting at no additional cost.

2.3 TEMPORARY WATER

- A. Water for Construction: Construction water may be provided from available existing water mains or by use of temporary tanks. When connecting to existing water service lines, perform all work according to the requirements of, and obtain any and all permits required by, local authorities having jurisdiction. Remove all temporary installations and equipment upon completion of construction.
- B. Drinking Water: Provide drinking water adequate in quantity, quality and locations for all personnel at the project site. Furnish paper drinking cups and waste receptacles at each drinking water dispensing location.

2.4 TEMPORARY FIRE PROTECTION

- A. Specific administrative and procedural minimum actions are specified in this Paragraph, as extensions of provisions in the Owner-Contractor Agreement and other Contract Documents. These requirements have been included for special purposes as indicated. Nothing in this Paragraph is intended to limit types and amounts of fire protection required, and no omission from this Paragraph will be recognized as an indication by the County or Construction Manager that such temporary activity is not required for successful completion of the Work and compliance with requirements of Contract Documents.
- B. Quality Assurance
 1. NFPA Code: Comply with NFPA Code 241 "Building Construction and Demolition Operations."

2. The Contractor shall also comply with all applicable state, city and local fire codes.
- C. The Contractor shall take all necessary precautions to guard against all possible fire hazards and to prevent damage to any construction Work, building materials, equipment, field offices, storage sheds and all other property, both public and private, in accordance with all fire protection and prevention laws and codes. The Contractor will assume full responsibility for damage caused by fire to construction and building, building materials, equipment and all property, both public and private.
 - D. The location of the nearest corporation or public fire alarm box and the number of the local fire department shall be conspicuously posted by the Contractor in its field office and in the construction area.
 - E. The Contractor's superintendent in charge of the Work shall review the Project at least once a week to make certain that it adheres to the conditions and requirements set forth herein.
 - F. No open fires shall be permitted. The Contractor and its subcontractors will not be allowed to start fires with gasoline, kerosene or other flammable materials. The bulk storage of all flammable liquids shall be located at least 75 feet from any inhabited trailer or office and from the yard storage of flammable building materials. All flammable liquids having a flash point of 100 degrees F or below, which must be brought into any building, shall be confined to the Underwriter's Laboratories' labeled safety cans. Drums containing flammable liquids are to be equipped with approved vent pumps and located per direction of the Construction Manager. Drums with spigots are prohibited for the storage of flammable liquids on the project site.
 - G. Welding, flame cutting or other operations involving the use of flame, arcs or sparking devices will not be allowed without adequate protection and shielding. All combustible and flammable material shall be removed from the immediate working area. If removal is impossible, all flammable or combustible material shall be protected with a fire blanket or suitable noncombustible shields to prevent spark, flames or hot metal from reaching the flammable or combustible materials. The Contractor shall provide the necessary personnel and fire fighting equipment to effectively control incipient fires resulting from welding, flame cutting or other operations involving the use of flame, arcs or sparking devices.
 - H. Only fire resistant tarpaulins with UL label and flame spread of 15 or less shall be used on this project.
 - I. Use of only Underwriters Laboratory approved heaters and/or stoves is permitted in field offices or storage sheds and they shall have fire resistive material underneath and at the sides near partitions and walls. Pipe sleeves and covering shall be used where stove pipe runs through wall or roof.
 - J. Smoking shall be prohibited around concentrations of combustibles and in particularly hazardous areas. Restricted areas must be plainly marked, with signs posted. No smoking rules must be strictly enforced.
 - K. Fire Extinguishers
 1. The Contractor shall provide and maintain in working order during construction, an adequate number of fire extinguishers for use by all trades in each area of work. Two (2)

- fire extinguishers shall also be placed in the vicinity of Contractor's construction office.
2. In areas of flammable liquids, asphalt or electrical hazards, extinguishers of the 15 lb. carbon dioxide type or 20 lb. dry chemical type shall be provided.
 3. The Contractor shall maintain and inspect all fire extinguishers periodically. Fire extinguishers must be mounted in plain view and sealed, so that operation of the fire extinguisher will break the seal. In the event a fire extinguisher is discharged or damaged, it shall be removed from service and be replaced with a charged unit.
 4. The Contractor shall post warnings and quick instructions at each extinguisher location. The Contractor and all of its subcontractors shall instruct their personnel at the project site, at the time of their first arrival, on proper use of extinguishers and other available facilities at the project site.

2.5 TEMPORARY ENCLOSURES

- A. Provide temporary enclosures reasonably required to ensure adequate workmanship and protection from the weather and unsatisfactory ambient conditions for the Work, including those enclosures inside which temporary heat is used.
- B. Provide fire-retardant treated lumber and plywood where used for temporary enclosures.

2.6 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain sanitary toilet facilities for use of all personnel at the project site. Either piped (wet) toilet facilities or self-contained chemical toilet units may be used.
- B. The number of sanitary facilities required shall be based on the total number of workers employed on the site and shall be in accordance with the provisions of the applicable code. Separate toilet facilities for men and women shall be provided when both sexes are working in any capacity on the project site.
- C. All sanitary facilities shall be maintained by the Contractor in a safe, clean, and sanitary conditions at all times.

2.7 TEMPORARY SIGNAGE

- A. Project Sign: The Contractor shall construct, erect and maintain one (1) 4 foot by 8 foot project sign of $\frac{3}{4}$ inch (minimum) exterior grade plywood, given two coats of paint and mounted securely on two 4 inch by 4 inch posts set 30 inches (minimum) into the ground. The sign shall be clearly lettered by one skilled in the sign trade with the facility name, address, County logo, names of County Commissioners, the County Manager and other County representatives, Contractor name, major subcontractors' names, and the jobsite telephone number. Locate the project sign as designated by the Construction Manager. Avoid a placement that may inhibit safe entry or exit from the site. Verify sign content with County, through the Construction Manager, prior to procuring and erecting the sign.
- B. No other signs or advertising shall be displayed on the premises without the approval of the Construction Manager, other than the posting of required notices and cautionary signage by the Contractor, and signage on equipment and trailers to designate ownership.

2.8 TEMPORARY FIELD OFFICE AND TOOL STORAGE FACILITIES

- A. The Contractor shall provide a trailer or other suitable temporary building for a field office, which shall contain office space required for the Contractor's operations, a conference room of suitable size for regular progress meetings, toilet facilities, and a separate spare office for a County, Architect, or Construction Manager representative to use when onsite. Ample space shall be provided for storage of all construction documentation. The trailer shall have telephone service for use by the Contractor and its subcontractors, and shall also have a working intrusion alarm system. One sign with the Contractor's name may be placed on the trailer.
- B. The Contractor may provide other temporary trailers or buildings for storage and maintenance as required and as space permits.
- C. All field office and storage structures shall be placed or constructed in accordance with the regulations of the local Fire Marshal having jurisdiction.
- D. Field offices and sheds shall be of suitable design, maintenance, and appearance.
- E. The Contractor shall provide power and heat to its field office, and to storage sheds if storing climate-sensitive materials or equipment.
- F. The Contractor shall adequately maintain the designated space designated for its field office and storage sheds, including the removal of weeds, debris, and trash.
- G. Temporary field offices and sheds shall not be used for living quarters.
- H. If the Construction Manager, for good reason, directs that any or all field offices or storage sheds on the site must be removed, the Contractor shall do so within ten (10) days of written notice of same. Structures not removed in a timely manner will be removed by the Construction Manager at the Contractor's expense.

2.9 FIRST AID STATION

- A. The Contractor shall provide and maintain at least one unmanned first aid station for its personnel and subcontractors.

PART 3 – EXECUTION

3.1 TEMPORARY SYSTEMS INSTALLATION

- A. Install all work with a neat and orderly appearance.
- B. Make the work structurally sound throughout.
- C. Maintain the system to give continuous service and to provide safe working conditions.
- D. Modify temporary power and lighting installation as job progress requires.
- E. Locate work such that interference with storage areas, traffic areas and other work is avoided.

- F. Remove all temporary equipment and materials completely upon completion of construction.
- G. Repair all damage caused by the installation and restore to satisfactory condition.

3.2 CONSTRUCTION TRAFFIC INGRESS TO AND EGRESS FROM SITE

- A. Routes to Construction Site: The Contractor shall inform and insure compliance of its subcontractors and suppliers regarding the recommended traffic route(s) from major highways to the jobsite. For all traffic off of the jobsite, the Contractor shall coordinate with, and obtain any necessary permits from, appropriate authorities having jurisdiction.
- B. Construction Site Access: All construction traffic, including deliveries of materials and equipment, shall enter and exit the site only by the routes prescribed on a site access and parking plan submitted by the Contractor and approved by the Construction Manager prior to start of construction (see Subparagraph 14.I below).
- C. Cleaning: The Contractor shall take all precautions necessary to prevent the tracking of mud and debris onto paved roads adjacent to the jobsite. The Contractor shall immediately clean any affected area if directed by the Construction Manager. The utilization of wheel wash areas located at all site entrance/exit points is mandatory for all vehicles leaving the site if the tracking of mud or debris onto adjacent streets would result otherwise.

3.3 SITE ACCESS ROADS AND PARKING AREAS

- A. Provide and maintain vehicular access to and within the site for use by all persons and equipment involved in construction of the Project.
- B. New temporary access roads shall be constructed across designated easements from public thoroughfares only as allowable by local authority having jurisdiction.
- C. Provide adequate access for emergency vehicles.
- D. Provide and maintain temporary parking areas for use by construction personnel. Do not use any existing parking lots which may exist at existing facilities on the site unless specific authorization is given by the County. If parking needs exceed onsite capacity, provide offsite parking as necessary, as well as transportation to and from the site if distance dictates.
- E. All traffic and parking areas shall be filled, compacted, and graded as necessary to provide suitable support for vehicular traffic under anticipated loadings.
- F. Maintain all onsite traffic and parking areas free of excavated materials, construction equipment, construction materials, debris, snow and ice. Provide for surface drainage for all traffic and parking areas, and implement and maintain dewatering if and as necessary.
- G. Keep fire hydrants, water control valves, and all other utilities requiring possible access free from obstructions.

- H. Provide temporary directional signage as necessary.
- I. Prior to the start of construction, submit to the Construction Manager for approval a complete site access/utilization and parking plan, incorporating the requirements described above.

3.4 STORAGE AREAS

- A. The Contractor shall be responsible for all onsite and offsite storage of materials and equipment required for the Project. Onsite storage is subject to the review and approval of the Construction Manager.
- B. All combustible or flammable materials shall be safely stored in a secured area in strict accordance with regulations, codes, and laws enforced by local, State, or Federal agencies, whatsoever is the most stringent.
- C. If the Construction Manager, for good reason, directs that any or all materials stored on the site must be removed, the Contractor shall do so within ten (10) days of written notice of same. Stored materials not removed in a timely manner will be removed by the Construction Manager at the Contractor's expense.

3.5 SECURITY

- A. Neither the County or any of its agents assumes any responsibility for loss, theft or damage to the Work, tools, equipment and/or construction. In the instance of any such loss, theft or damage, the Contractor shall be responsible to renew, restore or remedy the Work, tools, equipment and construction in accordance with requirements of the Contract Documents without additional cost to the County.
 - 1. The Contractor shall immediately advise the Construction Manager of any theft or damage which may delay the execution of the Work.
 - 2. The Contractor shall furnish the Construction Manager with a copy of any theft report filed with appropriate law enforcement agencies.
- B. Site parked equipment, operable machinery and hazardous parts of the new construction subject to mischief and accidental operation shall be inaccessible, locked or otherwise made inoperable when left unattended.
- C. The Contractor shall utilize specific entrances for material deliveries, equipment deliveries, and worker access to the construction site as indicated on its site access/utilization plan and approved by the Construction Manager.
- D. The County or Construction Manager, as the Project progresses, may establish additional security policies and procedures. The Contractor shall cooperate with the County and/or Construction Manager in implementing such additional procedures.

3.6 TRASH / DEBRIS DISPOSAL

- A. The Contractor shall provide dumpsters sufficient to hold site waste from its operations and that of its subcontractors, and shall remove same from the jobsite on a regular basis.

- B. Debris such as soil waste, concrete, steel, or other bulky items from excavation and/or demolition work not disposed of in dumpsters shall be removed and disposed off-site by appropriate means. Methods of debris removal and disposal shall be reviewed with the Construction Manager.

3.7 SITE CLEANING

- A. The Contractor shall be responsible for the maintenance of a clean, neat and safe project site. The Construction Manager is hereby placing the Contractor on notice that failure to clean up on a weekly basis will immediately result in the Construction Manager bringing in labor to perform this task and deducting the cost of such measures from the Contract Sum. The Construction Manager shall be the sole authority which shall determine the amounts to be deducted from the Contractor's contract for this type of cleaning.
- B. The Contractor shall assign at least five (5) percent of his own and his subcontractors' work forces to clean-up activities for at least four (4) hours per week, or as deemed necessary by the Construction Manager.
- C. No exceptions to these rules will be allowed. Failure to immediately adhere to all of the Construction Manager's directions in this regard will result in the holdup of Contractor's progress payments until compliance with these rules are obtained.

3.8 MISCELLANEOUS CONSTRUCTION FACILITIES

- A. The Contractor shall be responsible for providing and maintaining its own scaffolding and for conforming with all safety regulations related thereto.
- B. The Construction Manager retains the right to inspect all erected scaffolding, and to request written verification from an inspection agency as to the soundness of erected scaffolding to perform its intended function. However, the Construction Manager assumes no responsibility to do so, or of the results of such inspections.
- C. Except as otherwise provided, the Contractor shall provide and maintain all necessary temporary stairs, ladders, ramps and runways to facilitate conveyance of men, materials, tools, and equipment for proper execution of the Work.
- D. All protection and safety barricades, devices, covers, etc., shall be provided by the Contractor as it relates to the safe conduct of his work in accordance with OSHA requirements.
- E. The Contractor shall maintain safe temporary access to the work as construction progresses.
- F. All barriers and barricades shall comply with OSHA or other applicable safety requirements of the Project. All barriers and barricades shall be installed in a manner that will allow for the continued progress of the Work. Installation and removal of barriers, barricades and railings will be monitored by the Construction Manager.
- G. If the Contractor or any subcontractor, who in the course of its work, creates a hazard, it is responsible for providing, at its own expense, all required protection, including all safety barriers, barricades and perimeter protection as necessary.

- H. If any safety protection is required to be temporarily removed during the progress of the Work, it shall be reinstalled at the completion of the specific activity requiring such removal, and in a manner that provides a level of compliance equal to the initial installation.
- J. The Contractor shall enclose all construction areas in such a manner so as to protect the public from injury and in accordance with authorities having jurisdiction
- K. Provide any other types of construction facilities as may be reasonably required for performance of the Work and accommodation of personnel at the project site, including the County's and Construction Manager's personnel.

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SECTION 01 57 19

ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide all facilities, establish procedures, and conduct construction activities in a manner which will ensure compliance with the County's environmental requirements and other regulations controlling construction activities at the Project site.

1.2 DEFINITIONS

- A. Sediment: Soil that has been eroded and transported by runoff water.
- B. Degradable Debris: Debris which can undergo biodegradation or combustion, or which can be dissolved in or suspended by water.
- C. Non-degradable Debris: Inorganic debris which will not disintegrate nor dissolve when exposed to moisture or water.
- D. Chemicals: Petroleum or cementitious products, bituminous materials, salts, acids, solvents, alkalis, herbicides and pesticides.
- E. Waste: Sewage, including domestic sanitary sewage, garbage and trash resulting from food and food packaging.

PART 2 - PRODUCTS

- 2.1 General: Products, devices and materials shall be approved by authorities having jurisdiction.

PART 3 - EXECUTION

3.1 ENVIRONMENTAL PROTECTION PROCEDURES

- A. General
 - 1. In the means and methods of construction, and in the coordination and control of the Work at the site, establish and enforce ecological preservation standards which avoid pollution of the atmosphere, waterways and vegetation.
 - 2. Conform to laws, ordinances, restrictions, and rules of governmental bodies having enforcement power in regard to site preservation and erosion control.
 - 3. Prevent droppings of petroleum products, cementitious waste and chemical substances on the ground or into storm, sanitary drains or waterways.
 - 4. This Section may be supplemented by notes on drawings relative to environmental protection.

5. The Contractor shall designate one person, the Superintendent or other, to enforce strict discipline on activities related to generation of wastes, pollution of air/water, generation of noise and similar harmful or deleterious effects which might violate regulations or reasonably irritate persons at or in vicinity of the Project site.
 6. Take special precautions when working on roofs directly above any occupied floors and adjacent to circulation or vehicular circulation. Minimize noise, dust, or other environmental hazards to spaces.
- B. Noise Control
1. Provide mufflers on combustion engine powered equipment to minimize noise.
 2. Blasting is strictly prohibited without written permission from first the Construction Manager and then all applicable State and Local regulatory agencies.
- C. Air Quality Control: Maintain acceptable air quality at all times. Acceptable air quality shall also be maintained in any existing, operating buildings or structures during construction operations that require physical connection to such buildings or structures so as to not interfere with any existing operations.
- D. Water Control
1. Keep the building or portions thereof free from water ingress due to construction operations at all times until Final Completion of the Work.
 2. Provide all pumping necessary to keep the roof dry and free from water.
 3. Dispose of water in such a manner as will not endanger public health or cause damage or expense to public or private property. Abide by the requirements of all public authorities having jurisdiction.
- E. Dust Control
1. Effectively confine dust, dirt and noise to the actual construction area(s) until Substantial Completion of the Work.
 2. Clean up operations shall be by vacuuming, wet mopping, wet sweeping, or wet power brooming.
 3. Keep dust down at all times, including non-working days, weekends and holidays. Temporary methods consisting of water sprinkling or similar methods will be permitted to control dust. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.
 4. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.
- F. Snow and Ice Removal
1. Arrange for removal of snow and ice in and about the premises, as necessary to conform with local regulations on public sidewalks adjacent to the site, and as necessary on and about the site and the Work to permit safe access to continue or perform work.
 2. When performing work under exposed conditions, remove snow and ice for the protection and execution of the Work.
- G. Vermin Control: Control vermin during the construction period. If vermin are encountered, provide extermination arrangements as necessary.
- H. Disposal of Debris, Chemicals and Waste
1. Dispose of debris, chemicals, and waste off the site in compliance with Federal, State and

- local laws and regulations.
 - 2. Collect and contain materials before disposal in an orderly fashion and by means which prevent contamination of air, water and soil.
 - 3. Store chemicals in watertight containers.
 - 4. Non-degradable and degradable debris shall be disposed of off the site.
 - 5. Do not burn materials on the site.
- I. Clean-Up and Restoration of the Site
- 1. Maintain the site in good order through periodic pick up and clean-up of construction waste and wind-borne trash. Dispose of all waste and trash in tightly covered containers and schedule regular removal of trash and waste from the site.
 - 2. Existing sitework damaged during construction shall be restored to good and acceptable condition.
- J. Damage from Storms: Secure the site to avoid damage to the Work and stored materials, as well as damage to adjacent property.

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SECTION 01 66 00**PRODUCT STORAGE AND HANDLING REQUIREMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Deliver, handle and store materials and equipment in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration and loss, including theft. Provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged or sensitive to deterioration, theft and other sources of loss.
- B. Prior to starting work, the Contractor shall meet with the Construction Manager to determine the use of available areas for site offices and storage.
 - 1. The Contractor shall confine his equipment, the storage of material and the operations of his workmen to limits indicated by the Contract Documents, laws, ordinances, permits or directions of the Construction Manager.
 - 2. Neat and orderly stockpiling of all materials shall be maintained.
 - 3. Materials which require significant amounts of storage space, as determined by the Construction Manager, shall be brought to the site in quantities no greater than required for two (2) weeks work.
 - 4. Delivery of materials shall be scheduled so as not to encumber the site with items which will not be required for a significant length of time.
- C. If at any time it becomes necessary to move material or equipment which have been stored during construction, the Contractor, when directed by the Construction Manager, shall move them to another location without charge.
- D. The Contractor shall not load or permit any part of the site or structures to be loaded with a weight that will endanger its safety.
- E. Storage of materials outside the limits of construction, but on the County's property, is strictly prohibited without written permission from the County through the Construction Manager.
- F. All costs relating to temporary storage and protection shall be borne by the Contractor or subcontractor requiring such storage and protection. The Contractor shall retain full responsibility for any form of damage or deterioration to stored materials and any form of damage or deterioration caused by materials to surrounding surfaces.

1.2 MATERIALS HANDLING PLAN

- A. The Contractor shall develop and submit to the Construction Manager for approval, at least ten (10) days prior to the start of construction on the site, a comprehensive materials handling plan. This plan shall take into consideration the following:
 - 1. Control delivery of materials to maintain the construction schedule.
 - 2. Coordination with any separate contractors.
 - 3. The County's operation of adjacent facilities, if any.

4. Provisions for both vertical and horizontal transportation and utilization of material and personnel hoists, if required.
5. Limitations on space available for storage.
6. Requirements for handling and installation of large equipment.

1.3 VERTICAL TRANSPORTATION

- A. The Contractor shall be responsible for providing vertical transportation for materials, equipment, and personnel if and as required for multi-story buildings or significant heights. Cranes, hoists, conveyors, and other equipment used for this purpose shall be placed/installed and maintained according to applicable codes and regulations of authorities having jurisdiction.
- B. Temporary hoists and permanent elevators used as construction lifts shall be provided with an operator at all times such equipment is in use.
- C. The Contractor shall cooperate with the County, the Construction Manager and any separate contractors in the event that hoists or elevators are required for use by such entities during the course of the Project.

1.4 MATERIAL AND EQUIPMENT REMOVAL

- A. Any required cranes, hoists, conveyors and other equipment mobilized and utilized by the Contractor shall be removed from the site within ten (10) days after completion of the Work.
- B. Upon completion of the Work, or sooner if directed by the Construction Manager, the Contractor shall remove his temporary structures and sheds and place the areas in a clean and orderly condition.
- C. No materials or equipment shall be removed from the site without the permission of the Construction Manager.

1.5 PASSAGE OF MATERIALS AND EQUIPMENT

- A. Establish passage clearances required to deliver and install materials and equipment.
- B. In case of insufficient clearance for passage of materials and equipment, deliver and protect such equipment before confining construction is installed.
- C. If existing structures, equipment and systems must be removed or altered to provide access for new materials and equipment, engage those skilled in the respective trade to restore structures, equipment and systems to their original condition at no additional cost. Do not alter structure, equipment or systems without written approval of the Construction Manager.
- D. In lieu of altering structures to provide passage of materials and equipment, provide materials and equipment that can be disassembled, brought into the building, and reassembled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 71 23

CONSTRUCTION LAYOUT

PART 1 - GENERAL

1.1 PROJECT LAYOUT REQUIREMENTS

- A. The Contractor shall be responsible to accurately establish and maintain all principal lines, and levels for the Work.
- B. Establish lines and levels, similar appropriate means, the following:
 - 1. Controlling lines and levels required for roof slope, flashing and crickets.
- C. Protect and preserve the established control points. The Contractor shall not make any change in location without the written approval of the Construction Manager. Any control points lost or displaced through the neglect of the Contractor shall be replaced at no additional cost to the County.
- D. Verify the overall and critical dimensions and elevations for the Work prior to commencement of construction. Submit a written statement to the Construction Manager of the acceptance of the location of all existing conditions and previously completed construction, if any, as it relates to the Work of this Contract.
- E. Verify all drawing dimensions and existing measurements as the Work progresses at the site. No extra charges shall be allowed for differences between actual field measurements and any dimensions shown on the Contract Documents. Do not provide filler pieces or closures without approval from the Construction Manager.
- F. Verify and maintain layouts during construction operations, using the same methods as were used to establish original layouts.

1.2 QUALITY ASSURANCE / QUALITY CONTROL

- A. The Contractor shall employ qualified personnel locate the reference points as needed to properly locate the Work of the Contractor and all subcontractors.
- B. The Contractor shall be responsible for transferring all required measurements from the control points to the required locations throughout the Project. If, at any time, the Construction Manager questions the transference of such dimensions, the Contractor shall, at no additional cost to the County, verify the transference of questionable dimensions to the Construction Manager.

1.3 COORDINATION

- A. Upon Notice to Proceed, and again prior to commencement of construction, examine the site and the conditions under which the Work is to be installed, and notify the Construction Manager in writing of any discrepancies or conditions detrimental to the proper performance of the Work. The Contractor is not to proceed until any such discrepancies or detrimental conditions are corrected.

- B. Obtain accurate field dimensions in ample time to permit fabrication of items requiring same, and allow for delivery and installation in time to maintain the project schedule. The Contractor and all subcontractors shall cooperate and coordinate in completing the work phases to accommodate the schedule for obtaining dimensions and to prevent fabrication delay. In the event it is impractical to have work in place to permit field dimensions to be taken, the Contractor shall guarantee necessary dimensions to fabricators and be responsible to ensure those dimensions will be accurate.
- C. The Contractor shall furnish approved copies of all relevant information (shop drawings, diagrams, templates, technical data, etc.) to the County or to separate contractors, as required for coordination with any work of the Project by others.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 73 29

CUTTING, CORING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. "Cutting, Coring and Patching" is hereby defined to include, but not necessarily be limited to, removal, cutting (including excavation), coring, fitting and patching of nominally completed and previously existing Work, as shown or required in order to accommodate the coordination of Work, installation of new Work, to uncover other Work for access or inspection, remove and replace defective Work or Work not conforming to the Contract Documents, or to obtain samples for testing or for similar purposes.
- B. For existing buildings, the sizes, dimensions, and elevations shown on the drawings represent measurements which should be regarded as typical dimensions; actual dimensions may and will vary due to prevailing building practices at the time of construction, and building settlement over time.
- C. The requirements of this section apply generally to all aspects of the Work, including mechanical, electrical and special systems work, unless otherwise indicated. The Technical Specifications may include additional or more specific requirements or limitations applicable to individual units of work.
- D. The Contractor shall note that it is its responsibility to coordinate the locations and sizes and to cut or core all openings and penetrations for all trades involved in the Work of this Contract. Any openings and penetrations which may be shown on drawings provided by the County are intended only to assist the Contractor in coordinating the major openings and penetrations and are not representative of all openings which will be required to complete the work.

1.2 QUALITY ASSURANCE

- A. The Contractor shall not cut, core and patch structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio. Prior to cutting, coring and patching structural work, obtain Architect's approval to proceed with cutting and patching as proposed in a written submittal by the Contractor.
- B. The Contractor's submittal requesting consent to proceed with cutting, coring and patching structural work must include:
 - 1. Identification of the Project
 - 2. Description of the affected Work
 - 3. Necessity for cutting or coring
 - 4. Affects on other Work, and on the structural integrity of the Work
 - 5. Description of the proposed Work, which designates:
 - a. Scope of cutting, coring and patching
 - b. Subcontractor who will execute the work
 - c. Products proposed to be used

- d. Extent of refinishing required
 - 6. Alternates to cutting, coring and patching
 - 7. Designation of the responsibility for the costs associated with the cutting, coring and patching
- C. Prior to performing any cutting, coring and patching as extra work, the Contractor shall have submitted a written cost proposal and received written direction from the Construction Manager.
- D. The Contractor shall be responsible for providing, locating, and installing all embeds necessary for the completion of the Work, so as to avoid unnecessary cutting and patching.

1.3 OPERATIONAL AND SAFETY LIMITATIONS

- A. The Contractor shall not cut and patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in the manner intended including energy performances, or resulting in decreased operational life, increased maintenance, or decreased safety.
- B. The Contractor shall not cut, core drill or otherwise penetrate any post-tensioned cast-in-place concrete elements.

1.4 VISUAL REQUIREMENTS

- A. The Contractor shall not cut and patch work which is exposed on the exterior, or exposed on the interior in occupied spaces of the building, in a manner resulting in a reduction of visual qualities, or resulting in substantial evidence of cut and patch work, as judged solely by the Architect. The Contractor shall remove and replace work judged by the Architect to be cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The Contractor shall provide materials for cutting and patching which will result in equal or better work than work being cut and patched, in terms of performance characteristics and including visual effect where applicable. The Contractor shall comply with requirements, and use materials identical with original materials where feasible and where recognized that satisfactory results can be produced thereby.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Inspection of Concealed Conditions (for construction existing prior to this Contract, if

applicable) - Prior to beginning installation or preparation of shop drawings for each unit of work involving exposure of existing concealed construction, the Contractor shall remove the minimum of finishes, substrates and other existing construction as necessary to expose existing conditions where work is required behind existing surfaces. The Contractor shall verify that work can proceed in accordance with the requirements of the Contract Documents. The Contractor shall prepare detailed drawings of any existing conditions which differ substantially from conditions indicated or implied by the Contract Documents and the existing construction visible prior to exposure of concealed conditions. Submit drawings and a cost proposal to the Construction Manager for transmittal to the Architect a minimum of fourteen (14) calendar days prior to the scheduled installation of work in that area or the preparation of any required submittals relating to the area in question.

- B. Inspection of Concealed Conditions (for Work installed under this Contract) – In the event work is required behind existing surfaces previously installed under this Contract, the Contractor shall remove the minimum of finishes, substrates and other existing construction as necessary to expose existing conditions where work is required behind existing surfaces. Inspect and assess all conditions affecting the continued performance of the Work, and immediately report any circumstances which could have an adverse effect on the performance of the Work to the Construction Manager.
- C. Temporary Support - The Contractor shall provide shoring and protection and/or temporary support for work to be cut, to prevent failure. Do not endanger other work.
- D. Protection - The Contractor shall provide protection of other work during cutting and patching, to prevent damage and provide protection of the Work from adverse weather conditions. The Contractor shall not cut or alter work of another contractor without written consent of the Construction Manager.

3.2 CUTTING AND PATCHING

- A. The Contractor shall employ skilled tradesmen to perform all cutting, coring and patching and who have experience working with the materials involved. Except as otherwise indicated or approved by the Construction Manager or the Architect, the Contractor shall proceed with cutting and patching at earliest feasible time in each instance, and complete work without delay.
- B. The Contractor shall cut work by methods least likely to damage work to be retained and work adjoining. Employ the original installing subcontractor to perform cutting and patching for weather-exposed or moisture-resistant elements, and for exterior or interior surfaces exposed to view.
- C. In general, where physical cutting action is required, the Contractor shall cut work with sawing and grinding tools, not with hammering and chopping tools. Make cuttings to neat, straight lines and only to the size required to accommodate the construction to be installed. Core drill openings through finished concrete work.
- D. The Contractor shall patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work. Where feasible, inspect and test patched areas to demonstrate integrity of work.
- E. The Contractor shall restore exposed finishes of patched areas and extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching and refinishing.

Where a patch occurs in a smooth painted surface, the Contractor shall extend the final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coats.

END OF SECTION

SECTION 01 74 23

FINAL CLEANING

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Periodic clean-up during construction - See General Requirements Section 01 50 00 for additional details of these requirements.
- B. Refer to appropriate sections of the Technical Specifications for special cleaning instructions for specific work. Lacking such specific instructions, provide final cleaning on all delivered materials and equipment as specified herein.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The Contractor is to use only cleaning materials as recommended by manufacturer of surface to be cleaned.
- B. The Contractor is to use cleaning materials only on surfaces as recommended by the manufacturer of the cleaning material.

PART 3 - EXECUTION

3.1 FINAL CLEANING WORK

- A. At the completion of the Work, the Contractor will remove all trash and debris and clean all surfaces associated with his work, and leave the project ready for occupancy by the County.
- B. Experienced workmen only are to be employed for final cleaning.
- C. All masonry and non-porous surfaces shall be wiped clean.
- D. All surfaces shall have all stains removed.
- E. Prior to acceptance of any area of the project by the County, the Contractor is to notify the Construction Manager as each area becomes ready for inspection. The final clean-up will be inspected by the Construction Manager with the Architect and the County as required.
- F. The Construction Manager will notify the Contractor in writing if any clean-up is unacceptable. If the Contractor fails to comply after receiving written notice from the Construction Manager, the Construction Manager will perform whatever corrective action is necessary, with the resultant costs to be borne by the Contractor.

- G. The Contractor will maintain cleaning services until the Project or portion thereof is accepted by County.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Comply with requirements for administrative procedures stated in this and other sections of the Project Manual in closing out the Work. Closeout procedures are summarized in this Section.
- B. Contract requirements shall be met when construction activities have successfully produced, in order, completion of these three closeout stages:
 - 1. Substantial Completion
 - 2. Final Completion
 - 3. Final Payment
- C. The Contractor shall provide all written notices and supporting documentation as described in Paragraphs 2 and 3 below when requesting Substantial Completion and Final Completion, respectively. Partial submittals of the required documents shall not represent a valid request, and the County, Architect, and Construction Manager shall not be liable for any delays in the Substantial and Final Completion dates arising there from.

1.2 SUBSTANTIAL COMPLETION

- A. Reference the *Owner-Contractor Agreement*, Article 9, regarding Substantial Completion.
- B. When the Work is substantially complete, the Contractor shall submit to the Construction Manager:
 - 1. a written notice that the Work, or designated portion thereof, is substantially complete.
 - 2. an original Certificate of Occupancy for the Project.
 - 3. a list of items to be completed or corrected (hereinafter referred to as a "Punch List").
 - 4. a request for a Substantial Completion inspection on a date acceptable to the Architect and the Construction Manager.
 - 5. Project record documents, operation & maintenance manuals, warranties, and certificates for review and approval.
- C. Within a reasonable time after receipt of such notice, the Architect, the Construction Manager, the Contractor, and the County will make a joint inspection to determine the status of completion. County representatives for this inspection shall include, but not be limited to, the user department(s) and the Department of Personnel, Workers Compensation & Office Services Division. The Punch List submitted by the Contractor will be reviewed in detail during the inspection, with items added or deleted to indicate Work to be corrected or completed.

- D. After completion of the joint inspection described in Paragraph 1.2-C above, the Construction Manager will consolidate all Punch List comments and transmit them to the County Department of Public Buildings & Grounds (DPB&G). Within a reasonable amount of time after receipt of such consolidated Punch List, DPB&G shall conduct its own inspection, to include, but not be limited to, the installation and operation of all mechanical, electrical, plumbing, and other building systems. The consolidated Punch List will be reviewed in detail during the inspection, with items added or deleted to indicate Work to be corrected or completed.
- E. The County, the Architect, and/or the Construction Manager reserve the right to issue a revised Punch List based on the inspections described in 1.2-C and 1.2-D above. The Construction Manager will reproduce and distribute copies of any revised Punch List to the Contractor and see that the items requiring correction or completion are given prompt attention by the Contractor. Depending on the number and type of items on the Punch List, the Construction Manager may withhold the issuance of the Certificate of Substantial Completion until corrections required by said Punch List are made or all parties are satisfied that they will be made.
- F. Should the Architect and/or the Construction Manager determine that the Work is not substantially complete:
 - 1. The Construction Manager will promptly notify the Contractor in writing, on behalf of the Architect, giving the reasons therefore.
 - 2. The Contractor shall remedy the deficiencies in the Work, and then send a second written notice of Substantial Completion to the Construction Manager.
- G. Paragraphs 1.2-B through 1.2-D will be repeated.
- H. Should it become necessary to perform more than one (1) reinspection due to the inaccurate claims of the status of completion made by the Contractor, the Construction Manager may deduct the costs of such reinspections from the final payment, including but not limited to costs incurred by the Construction Manager and the Architect, and costs incurred by the Owner for payment of compensation to the Construction Manager and the Architect, for services performed for the reinspection(s). Also refer to General Requirements Section 01 45 00, *Quality Control*.
- I. When the Architect and the Construction Manager concur that the Work is substantially complete, the Construction Manager will:
 - 1. Prepare a Certificate of Substantial Completion accompanied by the Contractor's Punch List of items to be completed or corrected, as verified and amended by the Architect, the Construction Manager, and the County.
 - a. Contract responsibilities are not altered by inclusion or omission of required Work for the Punch List.
 - b. The Construction Manager will coordinate with both the County and the Contractor to establish each parties' responsibilities with respect to security, maintenance, heat, utilities, damage to the Work, and insurance, all of which shall be clearly delineated on the Certificate of Substantial Completion.
 - 2. Sign the Certificate of Substantial Completion and submit it to the County, the Architect, and the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

1.3 FINAL COMPLETION

- A. Reference the *Owner-Contractor Agreement*, Article 9, regarding Final Completion.
- B. To attain Final Completion, the Contractor shall complete the activities pertaining to Substantial Completion Certificate and complete work on all Punch List items. Only then shall a written request to the Construction Manager for final inspection be submitted.
- C. When the Work is complete, the Contractor shall submit to the Construction Manager written certification that:
 - 1. the Contract Documents have been complied with in their entirety.
 - 2. the Work has been inspected for compliance with Contract Documents.
 - 3. the Work has been completed in accordance with Contract Documents.
 - 4. the Work is completed and ready for final inspection.
- D. The Construction Manager, Architect, Contractor and County will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- E. Should the Architect and/or Construction Manager determine that the Work is incomplete or defective:
 - 1. The Construction Manager will promptly notify the Contractor in writing, listing the incomplete or defective Work.
 - 2. The Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Construction Manager that the Work is complete.
- F. Paragraphs 1.3-B through 1.3-D will be repeated.
- G. Should it become necessary to perform more than one (1) reinspection due to failure of the Work to comply with the claims of status of completion made by the Contractor, the Construction Manager may deduct the costs of such reinspections from the final payment, including but not limited to costs incurred by the Construction Manager and the Architect, and costs incurred by the Owner for payment of compensation to the Construction Manager and the Architect, for services performed for the reinspection(s). Also refer to General Requirements Section 01 45 00, *Quality Control*.
- H. When the Architect and the Construction Manager find that the Work is acceptable under the Contract Documents, the Contractor will be requested to make a final closeout submittal.

1.4 CONTRACTOR'S CLOSEOUT SUBMITTALS

- A. The Contractor shall provide to the Construction Manager the following documents in the quantity of one original and one copy unless otherwise noted. Note that with the exception of Subparagraphs A.7, A.8, A.10, and A.11 below, submittal for approval shall have already been made prior to Substantial Completion. Submittal under this Paragraph would be for a final submittal should revisions or additional copies be required of previously submitted documentation.
 - 1. Evidence of Compliance with all requirements of governing authorities:
 - a. Certificate(s) of Occupancy
 - b. Certificates of Inspection, for Mechanical, Electrical, Plumbing, Fire Protection, and others as may be required.
 - 2. Project Record Documents: Refer to Section 01 78 39 of the General Requirements.
 - 3. Operation & Maintenance Manuals: Refer to Section 01 78 23 of the General Requirements.

4. Subcontractor List: A complete listing of all subcontractors and their suppliers, indicating business addresses, telephone numbers, contact names, and items supplied by each.
5. Manufacturer List: A listing of manufacturers of major materials, equipment and systems installed in the Work, and local contact addresses and phone numbers.
6. Warranties: Refer to Section 01 78 36 of the General Requirements, and individual sections of the Technical Specifications.
7. Payment of Debts and Claims and Consent of Surety: The Contractor shall submit adequate evidence that the Contractor has paid all obligations to date arising out of the Contract using AIA Document G706. Contractor shall also submit AIA Document G707, indicating written consent of its Surety to final payment.
8. Release of Claims and Liens: The Contractor and each subcontractor shall also submit AIA Document G706A, indicating that the releases for waivers submitted are complete to the best of its knowledge and information.
9. Final Approvals and Certificates:
 - a. Plans and Certificates approved by the Fulton County Development Services Department which were maintained at the jobsite shall be amended to show construction changes and resubmitted as required by law.
 - b. Contractors requiring filing shall complete all Fulton County inspections and permits records before Application for Final Payment. Submit all approvals and certificates required by the Specifications, Drawings and applicable codes and regulations of all relevant departments or agencies of Fulton County, State of Georgia, and local authority having jurisdiction.
10. Shop Drawings, Manufacturer's Literature and Test Data (one copy only): The Contractor shall submit through the Construction Manager to the County, before final acceptance, all reviewed shop drawings (with all corrections noted), plus sets of all approved catalog cuts, equipment manuals, etc. All materials shall be indexed by Specification section. This submittal shall include a list of each room and its paint manufacturers and/or wall covering number for the County's use.
11. No partial submittals of the above items are to be made to the Construction Manager. All items of each category are to be collected by the Contractor and delivered at one time to the Construction Manager, together with a letter of transmittal listing all items. Where items are to be delivered to the County's representative, the Contractor shall include a copy of the transmittal letter listing all enclosures, signed by the County's representative acknowledging receipt.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 78 23

OPERATING AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Refer to individual sections of the Technical Specifications for specific requirements for instructions, maintenance manuals, and operating data, to be submitted by the Contractor in order to provide the County with all necessary documentation to adequately maintain and service materials, systems and equipment for the Project.
- B. The Contractor shall compile all such specified instructions, maintenance manuals and operating data as specified under the appropriate Technical Specification sections, and submit as described below in comprehensive sets of Operation and Maintenance Manuals.
- C. All complete Operation and Maintenance Manuals shall be submitted prior to the Contractor's request to receive a Certificate of Substantial Completion.

1.2 SUBMITTAL REQUIREMENTS

- A. Develop a sequential program for the development of the Operation and Maintenance Manuals. This program shall provide a step-by-step review of the development of the manuals. The following is an abbreviation of the required sequence of development of the manuals.
 - 1. Submittal of the Table of Contents
 - 2. Submittal of draft sections for County's, Architect's and Construction Manager's review
 - 3. Submittal of list of proposed attachments and appendices
 - 4. Submittal of initial draft of complete manual
 - 5. Submittal of final copies of all manuals with approved contents
- B. After all approvals have been obtained, submit to the Construction Manager four (4) sets of bound, clear and complete instructions for maintenance of materials, finishes, machinery and other items to ensure proper care and reasonable life expectancy thereof.
- C. Print or type, in orderly sequence, the required information for each item:
 - 1. Include data for all finishes, whether painted, coated, fabric, polished and satin finish metals, glass, natural finishes on wood, natural stone, manufactured stone and various masonry finishes to the extent that such finishes occur on the project.
- D. Bind each set of data in a manageable number of 8 ½" by 11" sturdy three-ring binders, indexed and clearly labeled by Specification Section and item description. Each set shall be indexed and tabbed for the completed manual regardless of its completeness at the time of its submittal.
- E. Additional data will be added behind its tabbed location as received by the Construction Manager. Include an index for the completed set in each binder. Mark identification on both front and spine of each binder.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 78 36

WARRANTIES

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Unless additional maintenance or performance warranties are required, all the Work shall be warranted by the Contractor for one year after the date of Substantial Completion of the Contract.
- B. Project warranties submitted by the Contractor do not reduce the County's warranty rights provided under State laws and regulations.
- C. Where products, materials, equipment, or systems are not properly performing or operating, the warranty shall not be considered in effect until corrective work is provided and the items are properly performing or operating.
- D. Warranties shall not include replaceable items such as light bulbs or cleaning materials, or damage by wear, vandalism or unusual climatic phenomenon, except water and air leaks caused by such phenomena.
- E. Warranties shall be signed by representatives that are expressly authorized to bind the Contractor to the warranties' terms and conditions. This requirement shall also apply to signatures on warranties of subcontractors, installers, manufacturers, and other entities engaged by the Contractor which are required by the Contract Documents.

1.2 DEFINITIONS

- A. Warranties on the Work are in several categories, including those of the Owner-Contractor Agreement, and including (but not necessarily limited to) the following specific categories related to individual units of Work specified in Division 2 through 17 of the Technical Specifications:
 - 1. Special Project Warranty (Guarantee): A warranty specifically written and signed by the Contractor for a defined portion of the Work; and, where required, countersigned by a subcontractor, installer, manufacturer and/or other entity engaged by the Contractor.
 - 2. Specified Product Warranty: A warranty which is required by the Contract Documents, to be provided for a manufactured product incorporated into the Work; regardless of whether the manufacturer has published a similar warranty without regard for specific incorporation of product into the Work, or has written and executed a special project warranty as a direct result of Contract Document requirements.
The Contractor shall issue four (4) copies of a special product warranty if required by the Technical Specifications. Examples of items which will require a special product warranty include roofing, waterproofing, certain insulation, caulking, wood and automatic doors, carpet and certain equipment.
 - 3. Coincidental Product Warranty: A warranty which is not specifically required by Contract Documents (other than as specified in this Section), but which is available on a product incorporated into the Work, by virtue of the fact that manufacturer of product has

published a warranty in connection with purchases and uses of product without regard for specific applications except as otherwise limited by terms of warranty.

- B. Refer to the individual sections of the Technical Specifications for the determination of portions of the Work which are required to be specifically or individually warranted, and for the specific requirements and terms of those warranties (or guarantees).

1.3 SCOPE OF WARRANTIES

- A. Scope: The Contractor shall submit to the Construction Manager for transmittal to the Architect, upon completion of all the Work under the Contract, its written warranty made out to the County and in a form satisfactory to the Architect and the County, warranting all of the Work under the Contract to be free from faulty materials and improper workmanship, and warranting the Work against injury in the proper and usual use thereof. Under the warranty, the Contractor shall replace Work as may be found by the County to be improper or imperfect and to make good all damage caused to other work or materials by the imperfection or removal and replacement of the imperfect Work.
- B. Time Limit / Individual Warranties: A specific warranty of the Contractor may cover a longer period than that stated above where so stipulated in the Contract Documents. Warranties under service policies and warranties for individual pieces of equipment shall be assigned and delivered to County prior to the date of Final Acceptance, but said individual warranties shall in no way modify or shorten the one year overall warranty to be provided by the Contractor.
- C. Extended Warranties: Certain extended warranties by the Contractor or subcontractors, or maintenance contracts which are longer than one year's duration, may be required by the Contract Documents. At the completion of the Work, all such warranties or maintenance contracts covering materials, workmanship, maintenance, or other items as specified, shall be forwarded in duplicate to the Architect through the Construction Manager, together with a letter addressed to the County giving a summary of each said warranty as follows:
 - 1. Character of Work covered by warranty
 - 2. Name of subcontractor furnishing warranty
 - 3. Period of warranty
 - 4. Conditions of warranty
- D. General Limitations: It is recognized that specific warranties are intended primarily to protect County against failure of the Work to perform as required, and against deficient, defective and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in the Work which result from:
 - 1. unusual and abnormal phenomena of the elements,
 - 2. the County's misuse, maltreatment or improper maintenance of the Work,
 - 3. vandalism after the time of Substantial Completion, or
 - 4. insurrection or acts of aggression, including war.
- E. Cost: Contractor warranties shall provide for the correction of work performed without additional charge. Any additional expense or damage resulting from imperfect work or the removal or replacement of imperfect work shall also be covered by said Contractor warranties.

1.4 CONTRACTOR OBLIGATIONS

- A. Related Damages and Losses: The Contractor shall be responsible for the correction of warranted Work which has failed. The Contractor shall remove and replace other Work which has been damaged as a result of such failure, or which must be removed and replaced to provide access for correction of warranted Work.
 - 1. Consequential Damages: Except as otherwise indicated or required by governing regulations, special project warranties and product warranties are not extended to cover damage to building contents (other than Work of the Contractor) which occurs as a result of failure of warranted Work.
- B. Reinstatement of Warranty Period: Except as otherwise indicated, when Work covered by a special project warranty or product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement for a period of time equal to original warranty period of time, starting on date of acceptance of replaced or restored Work.
- C. Replacement Cost, Obligations: Except as otherwise indicated, costs of replacing or restoring failing warranted units or products is the Contractor's obligation, without regard for whether the County has already benefited from use through a portion of anticipated useful service lives.
- D. Contractor's Procurement Obligations: Do not purchase, subcontract for, or allow others to purchase or subcontract for materials or units of work for the Project where a special project warranty, specified product warranty, certification or similar commitment is required, until it has been determined that entities required to countersign such commitments are willing to do so.
- E. Rejection of Warranties: The County reserves the right, at the time of Substantial Completion or thereafter, to reject coincidental product warranties submitted by the Contractor, which in the opinion of the County tend to detract from or confuse interpretation of the requirements of the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TRANSFER OF WARRANTIES TO OWNER

- A. Format: The warranties shall cover all the Work done under this Contract. All Contractor warranties shall bear the endorsement of the Construction Manager in writing, as per the attached format on the following page:

FORMAT FOR THE TRANSFER OF WARRANTIES TO OWNER

TO: Fulton County Board of Commissioners

c/o: Fulton County Construction Manager

Re: (Work Covered in Warranty)

Project: _____

Name of Contractor: _____

Address of Contractor: _____

Dear County's Representative,

The undersigned warrants to the County that he will be responsible for all faulty or defective materials, equipment and workmanship, in the Work or portion thereof as referenced above, and that he will remedy any defects due thereto and pay for all damage to other work resulting thereof which shall appear within a period of _____ () year(s) from the date of Substantial Completion, as defined in the Contract Documents.

(Add additional conditions of warranty as noted in various technical sections of the Specifications.)

During the warranty period, upon written notice from County, the undersigned shall proceed with due diligence at the undersigned's sole expense to remove and replace properly any defective materials and equipment or perform any labor necessary to correct any such defect in the above. In case that the undersigned fails to remedy such defects, then the County may furnish such materials and equipment or labor as are necessary to correct the work, and the undersigned agrees to reimburse the County for any expense therefore promptly and fully.

Signed: _____ ** Date: _____

Type/Print Name: _____

Witness: _____ **

Construction Manager endorsement of the above-noted warranty:

Signed: _____ Date: _____

*** Signatures must be notarized.*

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 GENERAL

- A. Definition: Record Documents are defined to include those documents or copies relating directly to performance of the Work. Record Documents show changes in Work in relation to way in which Work was shown and specified by the original Contract Documents, and show additional information of value to County's records, but not indicated by the original Contract Documents. Record Documents include marked-up copies of Construction Drawings, Specifications, Field Orders and Change Orders, reviewed copies of Shop Drawings, Product Data and Samples, a final product list, and test records, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information on Work which is otherwise recorded only schematically or not at all. Certain portions of the Contract Documents may indicate specific Record Document requirements which extend the requirements of this Section.
- B. Throughout progress of the Work, maintain and continually update an accurate record of changes in the Contract Documents.
- C. Provide access to all Record Documents for the County's, Architect's, and Construction Manager's reference and review throughout the progress of the Work.
- D. As a condition of Substantial Completion of the Work, the Contractor shall deliver Record Documents to the Construction Manager as provided below.

1.2 MAINTENANCE OF DOCUMENTS

- A. One copy of current Record Documents shall be maintained at the Contractor's jobsite office at all times.
- B. Delegate responsibility for maintenance of Record Documents to one person.
- C. Provide files and racks for suitable storage of documents, and file all documents and samples in a neat and orderly manner.
- D. Protect Record Documents from loss in a secure location. Maintain documents in a clean, dry, legible condition, and in good order. Record Documents are not to be used for construction purposes.

1.3 RECORDING OF CHANGES AND OTHER PERTINENT INFORMATION

- A. Record all changes and other pertinent information concurrently with construction progress.

- B. Accuracy of Records: Coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other documents where such entry is required to show change. The accuracy of records shall be such that future searches for maintenance or analysis purposes may reasonably rely on information obtained from the Record Documents.
- C. Do not permanently conceal any of the Work until changes or other pertinent information has been recorded on the appropriate Record Documents with dimensions from a permanent reference point.
- D. Drawings:
 - 1. Mark the drawing that is most capable of showing actual physical condition, fully and accurately.
 - 2. Where Shop Drawings are marked up, mark cross reference on Contract Drawings at corresponding location.
 - 3. Mark with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of Work at same general location.
 - 4. Mark the location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 5. Indicate all changes of dimension and detail, whether a field change or a directed change. Note Change Order number, Request for Information number, and/or similar identification associated with the initiation of each specific change.
 - 6. Provide Contractor's construction details which may not have been shown on the original Contract Documents.
- E. Specifications:
 - 1. Legibly mark each Section of the Technical Specifications with the manufacturer, trade name, catalog number, serial number and supplier of each product and item of equipment actually installed in the construction.
 - 2. Indicate all field changes and directed changes. Note Change Order number, Request for Information number, and/or similar identification associated with the initiation of each specific change.
- F. Shop Drawings, Product Data and Samples: Maintain as Record Documents. Legibly annotate any changes made after review(s).
- G. Label each Record Document "Project Record" in neat, large letters. This label shall appear in the same location on every record drawing.

1.4 SUBMITTAL OF RECORD DOCUMENTS

- A. With its request for Substantial Completion of the Work, the Contractor shall furnish one marked-up print set of all Record Drawings and Specifications for review by the Construction Manager.
- B. Submittals will be reviewed for adequacy only and returned with comments, if any, to the Contractor.
- C. The Contractor shall incorporate all review comments into the Record Documents.

- D. After incorporation of review comments in the Record Documents, the Contractor shall submit the following as a final submittal:
1. Drawings: one (1) compact disk or USB flash drive containing reproducible set (full-size, and ½ size copies) and three print sets of final marked-up drawings.
 2. Specifications: two (2) sets of final marked-up specifications.
 3. Test records, executed Change Orders, field orders, requests for information, supplemental instructions, and other pertinent documentation: two (2) copies each.
- E. The final submittal shall include a transmittal letter containing the date, Project name and number, Contractor's name and address, title and number of each Record Document, certification that each document as submitted is complete and accurate, and the signature of the Contractor or of its authorized representative.
- F. All revisions to and final submittal of Record Documents shall be completed to the acceptance of the Construction Manager and the County prior to Final Completion of the Work and final payment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 78 43

SPARE PARTS AND MAINTENANCE MATERIALS

PART 1 - GENERAL

1.1 GENERAL

- A. The Contractor shall furnish all labor, materials, tools, equipment and services for the provision of spare parts and maintenance materials as required in conjunction with all of the Work performed, as indicated or as required, in accordance with the provisions of the Contract Documents.

PART 2 - PRODUCTS

2.1 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Refer to the individual sections of the Technical Specifications for items of Work required.
 - 1. Spare parts shall be as specified in the Technical Specifications, or if not specifically specified, as adequate to fulfill one year's usage of such parts.
 - 2. Maintenance materials ("attic stock") shall be as specified in the Technical Specifications.

2.2 PACKAGING AND LABELING

- A. Package all parts and materials in sturdy boxes suitable in size to accommodate the quantity of items being packaged.
- B. All boxes shall have a single, standardized label which shall provide locations to write or type all necessary information. This label shall include the Project name, and shall be large enough so as to be easily read from a distance of several feet. The following information shall be included on each label:
 - 1. Manufacturer's name, part or trade name and stock number.
 - 2. The piece of equipment or finish for which the part or material is to be used.
 - 3. Name, address and phone number of the closest supplier.

PART 3 - EXECUTION

3.1 DELIVERY

- A. Spare parts and maintenance materials shall be submitted directly to the County, with a letter of transmittal which shall itemize all items being submitted, and which shall be signed by an representative of the County as acknowledgement of receipt.
- B. Delivery of all parts and materials shall take place at a single time, unless previous approval is

obtained from the Construction Manager. The time and location(s) of delivery shall be as determined by the County.

- C. A copy of all signed letters of transmittal shall be provided to the Construction Manager.
- D. The Contractor shall be responsible for the safe storage of all parts and materials until the designated time of inventory and acceptance by the County.

END OF SECTION

SECTION 02 41 19

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 the existing built-up roof membrane and roof insulation down to the existing roof deck, existing flashing at parapet wall, mechanical equipment curb flashing and termination bars, and existing scupper boxes. Removal and reinstallation of existing metal coping and metal wall panels at parapet walls.. Disconnect and temporary removal and reinstallation of the existing parapet mounted lightning protection terminals and roof mounted lightning protection cables. Painting of existing exposed steel support members for roof top equipment.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and store.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

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

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.

2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

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

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's building manager's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Use of elevator and stairs.
5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

C. Pre-demolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces that might be misconstrued as damage caused by demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.

D. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and reinstalled.

1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. 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 and using approved contractors 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.

1.10 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

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 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 Project Record Documents of existing construction or other existing condition

and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
 - 1. Comply with requirements specified in Section 013233 "Photographic Documentation."
 - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

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.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off utilities with utility companies.
 - 3. 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.

3.3 PROTECTION

- A. Temporary Protection: 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 equipment that has not been removed.
- B. Remove temporary barricades and protections where hazards no longer exist.

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.
 - 2. Do not use cutting torches on roof. Flame cutting shall not be allowed on roof.
 - 3. At curb mounted mechanical equipment verify condition, connections and operations prior to disconnecting the equipment.
 - 4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting roof framing.
 - 6. Dispose of demolished items and materials promptly.
- B. 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.
- 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 what can be covered in one day by new roofing and so that building interior remains watertight and weathertight. See Section 07 54 00 – FULLY ADHERED THERMOPLASTIC OLEFIN (TPO) ROOFING SYSTEM for new roofing requirements.
 - 1. Remove existing roof membrane, flashings, copings, and roof accessories.
 - 2. Remove existing roofing system down to substrate.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
 - 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.

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

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Provide wood, nails, bolts, screws, framing anchors and other rough hardware, and other items needed, and perform rough carpentry for the construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Code and Standards:
 - 1. In addition to complying with the pertinent codes and regulations of governmental agencies having jurisdiction, unless otherwise specifically directed or permitted by the Architect comply with:
 - a. "Product Use Manual" of the Western Wood Products Association for selection and use of products included in that manual.
 - b. Plywood Specification and Grade Guide" of the American Plywood Association.
 - c. Standard Specifications for Grades of California Redwood Lumber" of the Redwood Inspection Bureau for Redwood, when used.

1.03 PRODUCT HANDLING

- A. Protection:
 - 1. Deliver the materials to the job site and store, in a safe area, out of the way of traffic and shore up off the ground surface.
 - 2. Identify framing lumber as to grades, and store each grade separately from other grades.
 - 3. Protect materials with adequate waterproof outer wrapping.
 - 4. Use extreme care in off loading of lumber to prevent damage, splitting and breaking of materials.

PART 2 PRODUCTS

2.01 GRADE STAMPS

- A. Identify framing lumber by the grade stamp of the West Coast Lumber Inspection Bureau, or such grade stamp as is approved in advance by the Architect.
- B. Identify plywood as to species, grade and glue type by the stamp of the American Plywood Association.
- C. Identify other materials of this Section by the appropriate stamp of the agency approved in advance by the Architect.

2.02 MATERIALS

- A. Provide materials in the quantities needed for the work shown on the Drawings, and meeting or exceeding the following standards of quality.

1. Plywood:

- a. Exterior Grade Pressure Treated 3/4 inch Sheathing: Structural II, C-C, exterior; or standard sheathing with exterior glue.

2. Wood Preservative: Ammoniacal copper arsenite, or 5% solution of pentachlorophenol.

3. Pressure Treated Wood Blocking:

4. Rough Hardware:

a. Steel items:

- 1) Comply with ASTM A7 or ASTM A36.

- 2) Use galvanized at exterior locations.

b. Machine Bolts: Comply with ASTM A307.

c. Lag bolts: Comply with Federal Specifications FF-B-561.

d. Nails:

- 1) Use common except as otherwise noted.

- 2) Comply with Federal Specification FF-N-1.

- 3) Use galvanized at all locations.

2.03 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

JUVENILE JUSTICE CENTER

00-2

ROOF REPLACEMENT PROJECT

Submittal

1/2/19

Final

06 10

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 DELIVERIES

- A. Stockpile materials sufficiently in advance of need to assure their availability in a timely manner for this Work.
- B. Make as many trips to the job site as are needed to deliver materials of this Section in a timely manner to ensure orderly progress of the Work.

3.03 COMPLIANCE

- A. Do not permit materials not complying with the provisions of this Section to be brought onto or to be stored at the job site.
- B. Promptly remove non-complying materials from the job site and replace with materials meeting the requirements of this Section.

3.04 WORKMANSHIP

- A. Produce joints which are tight, true and well nailed, with members assembled in accordance with the Drawings and with pertinent codes and regulations.
- B. Selection of lumber pieces:
 - 1. Carefully select the members.
 - 2. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing, and will allow making of proper connections.
 - 3. Cut out and discard defects which render a piece unable to serve its intended function.
 - 4. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook mildew, fungus, or mold, as well as for improper cutting and fitting.
- C. Do not shim any framing component.

3.05 BLOCKING

- A. Install blocking as required to support items of finish openings, both vertical and horizontal, at roof.

3.07 INSTALLATION OF PLYWOOD SHEATHING

- A. Placement:
 - 1. Place plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise shown on the Drawings.
 - 2. Center joints accurately over supports, unless otherwise shown on the Drawings.

- B. Protect plywood from moisture by use of waterproof coverings until the plywood in turn has been covered with the next succeeding component or finish.

3.07 FASTENING

A. Nailing:

1. Use only common wire nails or spikes of the dimension shown on the Drawings.
2. For conditions not covered in the Drawings, provide penetration into the piece receiving the point of not less than 1/2 the length of the nail or spike, provided, however, that 16d nails may be used to connect two pieces of 2 inch (nominal) thickness.
3. Nail without splitting wood.
4. Prebore as required.
5. Remove split members and replace with members complying with the specific requirements.

B. Bolting:

1. Drill holes 1/16 inch larger in diameter than the bolts being used.
2. Drill straight and true from one side only.
3. Do not bear bolt threads on wood, but use washers under head and nut where both bear on wood, and use washers under all nuts.

C. Screws:

1. For lag screws and wood screws, prebore holes same diameter as root of threads, enlarging holes to shank diameter for length of shank.

END OF SECTION

SECTION 07 54 00

FULLY ADHERED THERMOPLASTIC OLEFIN (TPO) ROOFING SYSTEM

PART 1 GENERAL

1.01 GENERAL NOTES

- A. Preceding job start up, contractor shall decide to his satisfaction that all specifications contained herein are workable.
- B. Contractor will perform all work by competent, trained, and properly equipped personnel in strict accordance with good roofing practices and applicable industry standards.
- C. Contractor will observe all published safety prevention policies and practices relating to application of roofing system and related work. Contractor will follow application, safety, etc. information as published in the most current edition of the manufacturer's fully adhered TPO Roofing System Technical Specification.

1.02 WORK INCLUDED

- A. Work under this section covers the installation of a new adhered TPO roofing system on the Juvenile Justice Center. In addition, contractor shall include all related items of work as noted herein or indicated on the drawings or otherwise required to complete the specified elements of work and provide the necessary warranties for this work.
- B. Contractor will install the roof system to the concrete deck and metal deck and dispose of existing roofing materials which are to be removed properly. Any asbestos removal shall comply with state and local codes and requirements and shall be disposed of in a legal manner.

1.03 SECTION INCLUDES

- A. Substrate preparation.
- B. Wood nailer installation.
- C. Membrane installation.
- D. Membrane flashing installation.

1.04 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry
- B. Section 07 60 00 - Sheet Metal, Flashing and Trim.
- C. Section 07 92 00 - Joint Sealers

1.05 DEFINITIONS

- A. American Society for Testing and Materials (ASTM): 1916 Race St., Philadelphia, PA 19103.
- B. ANSI/SPRI: American National Standards Institute/Single-Ply Roofing Institute

1.06 SYSTEM DESCRIPTION

- A. Reinforced THERMOPLASTIC OLEFIN high temperature sheet roofing that is adhered to acceptable substrate with manufacturer's fully adhered TPO system bonding adhesive. Description:

1. Roof Membrane: .060 Self-Adhering TPO
2. Cover board Type: Manufacturer's high density, closed-cell polyisocyanurate core foam with coated glass facer.
3. Insulation Type: Tapered closed-cell polyisocyanurate foam core laminated to a perforated black glass reinforced mat facer on both major surfaces.
4. Insulation Type: Flat closed-cell polyisocyanurate foam core laminated to a perforated black glass reinforced mat facer on both major surfaces.
5. Deck Type: Concrete and Steel.

1.07 SUBMITTALS

- A. Product Data:
 1. Submit copies of Manufacturer's Technical Information Sheets (TIS) for primary products used including roof membrane, splice tape, fasteners, and batten strip.
- B. Samples:
 1. Submit samples of roof membrane, fasteners, and walkway pads
- C. Application Information:
 1. Submit copy of job related manufacturer's details including flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, drains, and any other relevant details
- D. Letter attesting that contractor is a currently licensed Red-Shield roofing contractor.
- E. Warranty: Submit warranty sample.
- F. Pre Installation Notice:
 1. Submit copy of the manufacturer's Pre Installation Notice (PIN) that has been accepted and approved by the manufacturer with submittals prior to starting the project.
- G. Drawings:
 1. Submit manufacturer's shop drawing for tapered insulation.
 - a. Shop drawings shall show complete layout of the tapered system and shall comply with the drainage patterns required. Only the manufacturer's tapered insulation shop drawings will be acceptable.
 1. The responsibility of providing shop drawings for this project lies solely with the manufacturer of the tapered insulation system. Shop drawings by others will not be acceptable.
 2. Shop drawings shall include: Outline of roof, location of drains, scuppers or gutters, profile of tapered insulation components, indications of minimum and maximum insulation thicknesses, and the total system average LTTR "R" value for the completed insulation system.
 3. The roofing contractor shall verify all roof dimensions and drain locations and confirm same with the manufacturer.
 4. Approved shop drawings shall be returned to the manufacturer before insulation is delivered to the jobsite.

1.08 QUALIFICATIONS

- A. Manufacturer:

1. Company providing a no dollar limit, single source roof system warranty that is backed by corporate assets in excess of one billion dollars.
2. System supplier must have ISO 9002 certification
3. Manufacturer must be able to provide the project with the membrane, edge metal and polyisocyanurate insulation and coverboard that is produced in their facilities.

B. Applicator:

1. Shall be manufacturer's certified Licensed Contractor licensed in the state of Georgia.
2. Shall have at least five years experience in installing heat welded systems.
3. Shall have a full service estimating, installation and repair service location within 50 miles of the project to provide ongoing warranty and response services as needed.

1.09 REGULATORY REQUIREMENTS

- A. Conform to applicable local building code requirements using IBC 2012 and ASCE7-10 to determine the uplift pressure.
 1. Wind Design Speed: 120 MPH
 2. Exposure Rating: C
 3. Category: III
 4. Enclosed Building
- B. Underwriters Laboratories, Inc. (UL): Class **A** Fire Hazard Classification.
- C. All edge securement systems shall be designed in accordance with ANSI/SPRI ES-1.

1.10 QUALITY INSPECTION/OBSERVATION

- A. Inspection by Manufacturer: Provide a final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer.
 1. Technical Representative shall not perform any sales functions.
 2. Contractor shall complete any necessary repairs required for issuance of warranty.

1.11 PRE-INSTALLATION CONFERENCE

- A. Before start of roofing work, attend a conference to discuss the proper installation of materials, delivery and storage / staging of materials, and site access / egress.. Attendees shall include all parties directly affecting work of this Section, the general contractor, and the owner's representative.

1.12 DELIVERY, STORAGE AND HANDLING

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

1.13 ENVIRONMENTAL REQUIREMENTS

- A. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice.

- B. Do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application. Consult Manufacturer's Technical Specifications on cold weather application.
 - C. All roofing products shall be LOW VOC and LOW ODOR products.
 - D. Membrane shall be a high temperature membrane without restrictions as to U.V. or temperature exposure on the roof.
- 1.14. 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.
- 1.15 WARRANTY
- A. Manufacturer's no dollar limit, non-prorated warranty from the manufacturer of the roofing membrane as follows with no exceptions.
 - 1. Warranty coverage: 25-years.
 - 2. Warranty shall be transferable and transfer cannot be at manufacturer's discretion nor require an inspection but shall be transferable upon notification in writing to manufacturer and payment of the standard transfer fee.
 - 3. Warranty coverage to include: roofing membranes, insulation, fasteners, clips, adhesives, accessories and edge metal.
 - 4. The warranty shall cover metal finishes, materials, labor and correct and incorrect workmanship on system installation, seaming and/or flashing. Manufacturer cannot exclude unapproved details or workmanship.
 - 5. All roofing systems tie-ins, flashing and terminations must be covered under the Warranty.
 - 6. Warranty will begin upon completion of the project and completion of the warranty application procedures.
 - 7. Warranty cannot defer warranty coverage to installing contractor for any period of warranty coverage.
 - B. Roof system must be inspected at completion of installation. Manufacturer cannot deny coverage for any items not installed in compliance with manufacturer's application requirements and standards after warranty is issued or as a part of terms and conditions of the warranty. The manufacturer's technical field representative/inspector will conduct final inspections. The manufacturer field representative must be a non-sales employee of the roofing system manufacturer who is responsible for field quality control and contractor training.
 - C. Roof system manufacturer must be a separate legal entity from the installer of the roofing system.
 - D. Warranty can NOT limit the exposure of the membrane to any temperature.

PART 2 PRODUCTS

2.01 NAILERS FOR FLANGES AND ROOF ACCESSORIES

- A. Description: Structural Grade No. 2 or better Southern Pine, Douglas Fir, or Exterior Grade plywood. All wood shall be pressure treated for rot resistance.
 - 1. Nailer width: Minimum 3 ½ in. (nominal) wide or as wide as the nailing flange of each roof accessory.

2. Nailer thickness: Thickness shall be as designated on the drawings.
- B. Reference Standards:
 1. Southern Pines: PS 20; SPIB Grading Rules.
 2. Western Woods: PS 20; WWPB Grading Rules.
 3. Plywood: PS 1; APA Grade Stamps.
 4. Pressure preservative treatment: AWPB LP2.

2.02 MANUFACTURERS - MEMBRANE MATERIALS

- A. Acceptable Manufacturer's: upon certification that their current product meets all requirements of this specification 14 days in advance of bid date:
 1. **BASIS OF DESIGN:** Firestone adhered single-ply membrane system: Reinforced Ultra Ply Self Adhering TPO sheet roofing that is adhered to acceptable substrate with UltraPly TPO bonding adhesive.
 2. Carlisle Syntec: Sure-Weld Self Adhering TPO Roofing System
 3. Johns Manville
 4. GAF
 5. No others will be considered.

2.03 SELF-ADHERING TPO SHEET ROOFING AND FLASHING MEMBRANE

- A. Description: Reinforced, self-adhering TPO synthetic single-ply high temperature membrane composed of Thermoplastic Polyolefin polymer and Ethylene Propylene Rubber with a pre-applied polymer adhesive.
 1. Membrane Type: .060 Reinforced TPO Self-Adhering
 2. Color: White
 3. Membrane: Manufacturer's sheet capable of withstanding reflective light and high heat without restriction.

Testing	Minimum Values	Typical Values (SI Units)
Thickness, min, mm (in.)		
Sheet-overall	1.0 (0.039)	0.060± 10%
Coating over scrim	0.381 (0.015)	0.018± 10%
Tensile strength, min, MPa (psi)	NA	
Breaking strength, min, kN (lbf)	1.0 (225)	300
Elongation, ultimate, min, %	NA	
Elongation at break, min, %	15 ^A	25 ^A
Tensile set, max, %	NA	
Tear strength, min, kN/m (lbf/in.)	NA	
Tearing strength, min, N (lbf)	245 (55)	245 (55)
Brittleness point, max, °C (°F)	-30 (-22)	-60 (-51)
Ozone resistance, no cracks	Pass	Pass
Properties after heat aging: (retained values)		
Tensile strength, % min	NA	
Breaking strength, % min	90%	90%

Elongation, ultimate, % min	NA	
Elongation at break, % min	90% ^A	90%
Tear strength, % min	NA	
Tearing strength, % min	90%	90%
Weight Change (Mass), max %	±4 ^B	±4 ^B
Linear dimensional change, max, %	±2	-1.0
Water absorption, max, mass %	±4 ^B	+1.0 ^B
Factory seam strength, min, kN/m (lbf/in.)	75% of Sheet strength	75% of Sheet strength
Weather resistance:		
Visual inspection	Pass	Pass
Tensile strength, % min	NA	
Breaking strength, % min	90%	90%
Elongation, Ultimate, % min	NA	
Elongation at break, min, %	90% ^A	90% ^A
PRFSE, min, %	N/A	

B. Reference Standards:

- D 412 Test Methods for Vulcanized Rubber and Thermo-plastic Rubbers and Thermoplastic Elastomers--Tension
- D 471 Test Method for Rubber Property--Effect of Liquids
- D 573 Test Method for rubber--Deterioration in an Air Oven
- D 624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
- D 751 Test Methods for Coated Fabrics
- D 1149 Test Method for Rubber Deterioration--Surface Ozone Cracking in a Chamber
- D 1204 Test Method for linear Dimensional Changes of Non-rigid thermoplastic Sheet or Film at Elevated Temperature
- D 1822 Test Method for Tensile-Impact Energy To Break Plastics and Electrical Insulating Materials
- D 2137 Test Methods for Rubber Property--Brittleness Point of Flexible polymers and Coated Fabrics
- D 5538 Practice for Thermoplastic Elastomers Terminology and Abbreviations
- G 155 Practice for Operating Light Exposure Apparatus (Xenon-arc Type) With and Without Water for Exposure of non-metallic Materials
- G 154 Practice for Operating Light and Water-Exposure Apparatus (Fluorescent UV Condensation Type) for Exposure of Nonmetallic Materials

2.04 ROOF INSULATION COMPONENTS

A. BASE LAYER

POLYISOCYANURATE ROOF INSULATION

A. Description: Roof insulation consisting of closed cell polyisocyanurate foam core and a perforated black glass reinforced mat laminated to the face.

1. Thickness: Base Layer to be 2 1/2"
2. Nominal Size: 48 in. x 96 in. when mechanically attached and 48 in x 48 in when adhered with low-rise foam.
3. **Total System Average R-Value shall be LTTR=20**

- B. Reference Standards:
 - 1. FS HH-I-1972/Gen.
 - 2. FS HH-I-1973/3.
 - 3. ASTM C 209 - Water Absorption.
 - 4. ASTM E 96 - Water Vapor Transmission of Materials.
 - 5. ASTM D 1621 - Compressive Strength.
 - 6. ASTM D 1622 - Density.
 - 7. ASTM D 2126 - Dimensional Stability.
 - 8. ASTM E 84 - Flame Spread
- C. Acceptable Products/Producers:
 - 1. ISO 95+ Polyisocyanurate Insulation by Firestone. *Basis of Design*
 - 2. SecurSheild Polyisocyanurate Insulation by Carlisle
 - 3. R-Panel Roof Insulation by Johns Manville

B. INTERMEDIATE LAYER

TAPERED POLYISOCYANURATE ROOF INSULATION

- A. Description: Flat and Tapered roof insulation consisting of closed cell polyisocyanurate foam core and a perforated black glass reinforced mat laminated to the face.
 - 1. Minimum Thickness: 1"
 - 2. Nominal Size: 48 in. x 48 in.
 - 3. System Slope: 3/16" main roof: 1/4" at crickets
- B. Reference Standards:
 - 1. FS HH-I-1972/Gen.
 - 2. FS HH-I-1973/3.
 - 3. ASTM C 209 - Water Absorption.
 - 4. ASTM E 96 - Water Vapor Transmission of Materials.
 - 5. ASTM D 1621 - Compressive Strength.
 - 6. ASTM D 1622 - Density.
 - 7. ASTM D 2126 - Dimensional Stability.
 - 8. ASTM E 84 - Flame Spread
- C. Acceptable Products/Producers:
 - 1. Tapered ISO 95+ Polyisocyanurate Insulation by Firestone *Basis of Design.*
 - 2. SecurSheild Polyisocyanurate Insulation by Carlisle
 - 3. R-Panel Roof Insulation by Johns Manville

C. TOP LAYER

COVER BOARD

- A. Description: High density, closed cell polyisocyanurate foam core with a coated glass facer.
 - 1. Nominal thickness: 1/2"
 - 2. Nominal Size: 48 in. x 96 in.
- B. Reference Standards:
 - 1. ASTM C518 LTTR=2.5 additional to above system.
 - 2. ASTM D1621 Compression Strength = 120 psi MINIMUM
 - 3. UL Classified
 - 4. FM Approved
- C. Acceptable Products/Producers:

1. Firestone ISOGARD HD *Basis of Design*
2. Carlisle SecurShield HD Composite
3. Approved Equal

D. INSULATION ATTACHMENT

- A. Insulation attachment to steel deck.
 1. Description: Standard duty threaded fastener with fluorocarbon polymer coating and drill point tip. Length shall be sufficient to penetrate deck a minimum of 1" in wood and ¾" in steel where present.
 2. Reference Standard: SAE 1022, Heat Treated
 3. Product/Producer:
 - a. Heavy Duty (HD) fasteners by Manufacturer.
- B. Insulation attachment to concrete deck.
 1. Description: Two part polyurethane adhesive (Part A is isocyanate side; Part B is polyol side) designed to attach insulation to insulation.
 2. Product/Producer:
 - a. Polyurethane Adhesive by Manufacturer.
 3. Deck Preparation: Clean existing concrete deck of all dirt, adhesive, mastic, and other residue as required for obtaining proper adherence of insulation to the deck.
- C. All additional layers of Insulation and coverboards.
 1. Description: Two part polyurethane adhesive (Part A is isocyanate side; Part B is polyol side) designed to attach insulation to insulation.
 - i. Contractor may NOT install these layers with mechanical attachment. Must adhere.
 2. Product/Producer:
 - i. Polyurethane Adhesive by Manufacturer.

2.05 SELF-ADHERING TPO SHEET ROOFING SYSTEM COMPONENTS

- A. Roof Flashing:
 1. Description: .060 TPO membrane
- B. TPO Flashing:
 1. Description: Non-reinforced, TPO, single-ply flashing composed of Thermoplastic Polyolefin polymer, and Ethylene Propylene Rubber.
 - a. Nominal Thickness: .060 inch
- C. Bonding Adhesive: Not applicable for this application.
 1. Description: SBR-based, formulated for compatibility with the TPO membrane & a wide variety of substrate materials, including masonry, wood, and insulation facings.
 2. Product/Producer:
 - a. TPO Bonding Adhesive by Manufacturer.
- D. Pourable Sealer:
 1. Description: 2-Part urethane, 2-color for reliable mixing.
- E. Seam Plates:
 1. Description: Steel with barbs and a Galvalume coating.
 2. Reference Standard: Corrosion-resistant to meet FM-4470 criteria.
- F. Termination Bar:
 1. Description: 1.3" X 0.10" thick aluminum bar with integral caulk ledge.

G. Membrane Fasteners:

1. Description: Heavy duty threaded fastener with fluorocarbon polymer coating and drill point tip capable of penetrating 20-gauge steel. Length shall be sufficient to penetrate deck a minimum of $\frac{3}{4}$ " for steel and 1" for wood.
2. Reference Standard: SAE 1022, Heat Treated
3. Product/Producer:
 - a. Heavy Duty (HP) fasteners by Manufacturer

H. TPO Cut Edge Sealant:

1. Polymeric sealant for use where exposed reinforcement is encountered.
2. Product/Producer;
 - a. TPO Cut Edge Sealant.

I. TPO General Purpose Sealant:

1. Polymeric one part general purpose sealant
2. Product/Producer,
 - a. TPO General Purpose Sealant by Manufacturer

J. TPO Coated Metal:

1. Galvanized Steel with Manufacturers bonded TPO Coating.
2. Product/Producer,
 - a. TPO Coated Metal by Manufacturer

K. TPO Molded Flashing Accessories:

1. TPO membrane Pre-Molded for a variety of flashing details (i.e. Pipe Boots, Inside-Outside corners, etc.)
2. Product/Producer,
 - a. TPO System Pre-molded Flashing Accessories by Manufacturer

2.06 VAPOR BARRIER

None

2.07 METAL EDGE AND/OR COPING

A. Edge Metal and/or Coping:

1. Description: Provide prefabricated 24 gauge Steel with Kynar finish in manufacturers standard colors to be selected by owner. Edge metal must have ANSI/SPRI ES-1 test approval and certification of manufacturer production facility approval.
2. Acceptable Manufacturer's / Products
 - a. Firestone: AnchorGard or EdgeGard
 - b. Approved Equal

2.08 MISCELLANEOUS

A. Roof Walkway Pads:

1. Description: Reinforced TPO Walkway Pads, .130" X 30" X 50' with patterned traffic bearing surface.

B. Grease Guards:

1. Description: .060 TPO sacrificial membrane welded to the roofing membrane for a minimum of a 3 foot radius around any kitchen roof top exhaust fan that has a grease trap.

C. TPO molded inside corners.

D. TPO molded outside corners.

- E. TPO molded pipe boots.

PART 3 INSTALLATION

3.01 EXAMINATION

- A. Examine roof deck to determine that it is sufficiently rigid to support roofers and their mechanical equipment and that deflection will not strain or rupture roof components or deform deck.
- B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
- C. Examine roof substrate to verify that it is properly sloped to drains.
- D. Start work with sealants and adhesives at 60° - 80° F.
- E. Fumes from adhesive solvents may be drawn into the building during installation through rooftop intakes. Appropriate measures must be taken to assure that fumes from adhesive solvents are not drawn into the building through air intakes.
- F. Remove existing roof system components to the deck.
- G. The surface must be clean, dry, smooth, free of sharp edges, fins, loose or foreign materials, oil, grease and other materials that may damage the membrane. All roughened surfaces that could cause damage shall be properly repaired before proceeding.
- H. All surface voids of the immediate substrate greater than 1/4" wide must be properly filled with an acceptable insulation or suitable fill material.

3.02 PROTECTION OF OTHER WORK

- A. Protect metal, glass, plastic, and painted surfaces from adhesives and sealants.
- B. Protect neighboring work, property, cars, and persons from spills and overspray from adhesives, sealants and coatings and from damage related to roofing work.
- C. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

3.03 MATERIAL STORAGE AND HANDLING

- A. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition.
- B. Consult container labels and Material Safety Data Sheets (MSDS) for specific safety instructions.
- C. Deliver materials to job site in their original containers as labeled by the manufacturer.

3.04 WOOD NAILER LOCATION AND INSTALLATION

- A. Total wood nailer height shall match height as designated on the drawings and in accordance with manufacturers recommendations and shall be installed with a 1/8" gap between each length and at each change of direction.
- B. Wood nailers shall be firmly fastened to the deck. Mechanically fasten wood nailers to resist a force of 200 lbs. per lineal foot.

3.05 VAPOR BARRIER APPLICATION

None

3.06 ROOF INSULATION APPLICATION: GENERAL

- A. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before the onset of inclement weather.
- B. Lay roof insulation in courses parallel to roof edges.
- C. Neatly fit insulation to all penetrations, projections, and nailers. Insulation shall be fit tightly, with gaps not greater than $\frac{1}{4}$ ". All gaps greater than $\frac{1}{4}$ " shall be filled with acceptable insulation. Under no circumstances shall the roofing membrane be left unsupported over a space greater than $\frac{1}{4}$ ". Tapered insulation shall be installed around roof drains so as to provide proper slope for drainage. Miter roof insulation edges at ridge, valley and other similar non-planar conditions.
- D. When installing multiple layers of insulation, all joints between layers shall be staggered at least 6 in.

3.07 INSULATION ATTACHMENT

- A. Base Layer: Polyisocyanurate insulation
 - 1. Base Layer Attachment: Mechanically attached or adhered.
- B. Intermediate Layer and Tapered Insulation: Polyisocyanurate tapered insulation
 - 1. Top Layer Attachment: Adhered. No exception. Cannot attach with fasteners.
- C. Top Layer: Manufacturer's High Density Cover Board
 - 1. Top Layer Attachment: Adhered.

3.08 INSULATION APPLICATION

- A. INSULATION
 - 1. Using the Manufacturer's Heavy-Duty Fasteners and Manufacturer's insulation plate engage fastener into Steel and Concrete Decks or using Manufacturer's recommended polyurethane adhesive to adhere the insulation to the concrete and steel decks or previous layers of insulation at the depth and rate specified in the Manufacturer's Technical Information Manual.

3.09 MEMBRANE INSTALLATION

- A. Place membrane panel, over the substrate in it's final position.
- B. After making sure the sheet is placed in its final position allowing for a 3" lap, fold it back evenly onto itself so as to expose the underside.
 - 1. Where self-adhering TPO Membrane has been cut to expose reinforcing membrane, Manufacturer's TPO System Cut Edge Sealant or TPO System General Purpose Sealant must be used to encapsulate exposed edge.
- C. Sweep the mating surface of the membrane with a stiff broom to remove any dirt that may have accumulated.
- D. Starting at the fold, roll the previously coated portion of the sheet into the coated substrate slowly and evenly so as to minimize wrinkles.
- E. To ensure proper contact, compress the bonded half of the sheet to the substrate with a stiff push broom.
- F. Fold the unadhered half of the membrane sheet back onto itself, and repeat the procedure to complete the bonding of the sheet.

3.10 MEMBRANE LAP SPLICING

- A. Lap splice areas that have been contaminated must be wiped down with a dry or damp (water only) clean cloth prior to heat welding and allow to completely dry.
- B. All field and flashing splices on the horizontal surface shall be completed using an automatic heat welder that has been designed for hot air welding of thermoplastic membranes.
- C. Hand held welders are only to be used on vertical welds or where an automatic welder is not practical or cannot be used.
- D. Seams made with the automatic welder shall be a minimum of 1-1/2" wide. Seams made with hand welders shall be a minimum of 2" wide. Use 2" wide silicone or silicone coated steel hand rollers to assure proper mating of surfaces as hand heat welding proceeds.
- E. **Seams for self-adhering membranes shall be accomplished as per manufacturer's recommendations to abut the adjoining sheets and strip in with a welded TPO cover strip.**
- F. Probe all completed welds using a slotted screwdriver or cotter pin puller type tool to verify seam integrity. Do not probe welds until they have had time to cool to ambient conditions. Any welds found to be insufficiently welded need to be repaired on a daily basis.

3.11 MEMBRANE SECUREMENT

- A. Secure membrane at all locations where the membrane terminates or goes through an angle change greater than 1" in 12" except for round pipe
- B. Penetrations less than 18" in diameter and square penetrations less than 4" square.

3.12 BASE SHEET APPLICATION

None

3.13 FLASHING - PENETRATIONS

- A. General:
 - 1. Remove all existing flashings (i.e. lead, asphalt, mastic, etc.).
 - 2. Flash all penetrations passing through the membrane.
 - 3. The flashing seal must be made directly to the penetration.
- B. Pipes, Round Supports, etc.:
 - 1. Flash with Manufacturer's Pre-Molded TPO Pipe Flashings where practical.
 - 2. Flash using TPO system membrane when Pre-Molded Flashing is not practical.
- C. Structural Steel Tubing:
 - 1. Use a field fabricated pipe flashing detail provided that the minimum corner radius is greater than 1/4" and the longest side of the tube does not exceed 12". When the tube exceeds 12" use a standard curb detail.
- D. Roof Drains:
 - 1. If project is a Retrofit or Tear-Off remove all existing flashings, drain leads, roofing materials and cement from the existing drain in preparation for membrane and Water Block Seal.

2. Provide a clean even finish on the mating surfaces between the clamping ring and the drain bowl.
 3. Taper insulation around the drain to provide a smooth transition from the roof surface to the drain. Use pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope. Slope shall not exceed Manufacturer's recommendations.
 4. Position the self-adhering TPO membrane, then cut a hole for the roof drain to allow 1/2" -3/4" of membrane extending inside the clamping ring past the drain bolts.
 5. Make round holes in the self-adhering TPO membrane to align with clamping bolts. Do not cut the membrane back to the bolt holes.
 6. Place Water Block Seal on top of drain bowl where the clamping ring seats below the membrane
 7. Install the roof drain clamping ring and clamping bolts. Tighten the clamping bolts to achieve constant compression.
- E. Pipe Clusters and Unusual Shaped Penetrations:
1. Fabricate penetration pockets to allow a minimum clearance of 1" between the penetration and all sides.
 2. Secure penetration pockets per Firestone Details
 3. Fill penetration pockets with Pourable Sealer, so as to shed water. Pourable Sealer shall be a minimum of 2" deep.
- F. Hot Pipes:
1. Protect the TPO system components from direct contact with steam or heat sources when the in-service temperature is in excess of 140° F. In all such cases flash to an intermediate insulated "cool" sleeve per Manufacturer's details.
- G. Flexible Penetrations:
1. Provide a weathertight gooseneck set in Water Block Seal and secured to the deck.
 2. Flash in accordance with Manufacturer's Details
- H. Scuppers:
1. Remove any existing scuppers and provide a new welded watertight scupper.
 2. Set welded watertight scupper in Water Block Seal and secure to the structure.
 3. Flash in accordance with Manufacturer's Details.
- I. Expansion Joints:
1. Install as shown on roof drawings in accordance with Manufacturer's details.
- 3.14 FLASHING - WALLS, PARAPETS, MECHANICAL EQUIPMENT CURBS, etc.
- A. General:
- Using the longest pieces practical, flash all walls, parapets, curbs, etc., a minimum of 8" high per Manufacturer's Details.
- B. Evaluate Substrate:
- Evaluate the substrate and overlay per Firestone specifications as necessary.
- C. If project is a Retrofit or Tear-Off remove all flashings.
- D. Remove excessive asphalt to provide a smooth, sound surface for new flashings.
- E. Apply TPO System Bonding Adhesive at about the same time to both the membrane flashing and the surface to which it is being bonded so as to allow approximately the same drying time. Apply TPO Bonding Adhesive by rolling the adhesive on to the mating surfaces evenly, avoiding globs or puddles.
- F. Allow TPO Bonding Adhesive to flash off until tacky. Touch the TPO Bonding Adhesive surface with a clean, dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, pushing straight down to check for stringing, also push forward on the adhesive at an angle to ensure that the adhesive is ready

throughout its thickness. If either motion exposes wet or stringy adhesive when the finger is lifted, then it is not ready for mating. Flash off time will vary depending on ambient air conditions.

- G. Roll the flashing into the adhesive evenly and carefully so as to minimize wrinkles.
- H. To ensure proper contact, compress the flashing to the substrate with a stiff push broom.
- I. Complete the splice between membrane flashing and the main roof sheet by hot air welding. Provide lap splices in accordance with Manufacturer's details.
- J. Provide termination directly to the vertical substrate as shown in Manufacturer's Details.
- K. Install TPO-Joint covers at field and flashing splice intersections as required by Manufacturer..
- L. Install intermediate flashing attachment as required by Manufacturer's Specifications and Details

3.15 TEMPORARY CLOSURE (NOT WARRANTED BY MANUFACTURER)

- A. Temporary closures that ensure that moisture does not damage any completed section of the new roofing system are the responsibility of the roofing contractor. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.

3.16 ROOF WALKWAYS

- A. Walkways may consist of Manufacturer's TPO System Walkway material. Heat weld the perimeters of the walkway material to the TPO System membrane per Manufacturer's specifications. Walkways should be installed around all roof top equipment, at the entrance of the roof access, and as indicated on the drawings.

3.17 SHEET METAL WORK

- A. Install Manufacturer supplied sheet metal as shown on roof drawings.
- B. Follow current industry guidelines for installation or Manufacturer's requirements, whichever is more stringent.

3.18 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed as required by the manufacturer
- B. Correct identified defects or irregularities.

3.19 CLEAN-UP

- A. Clean all contaminants from building and surrounding areas.
- B. Remove trash, debris, equipment from project site and surrounding areas.
- C. Repair or replace damaged building components or surrounding areas to the satisfaction of the building owner.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Flashings.
 - 2. Manufactured reglets with counterflashing.

1.3 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.4 SUBMITTALS

- A. Product Data: For each of the following
 - 1. Underlayment materials.
 - 2. Epoxy seam sealer.
- B. Shop Drawings: For sheet metal flashing and trim.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Distinguish between shop- and field-assembled Work.
 - 3. Include identification of material, thickness, weight, and finish for each item and location in Project.
 - 4. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
 - 5. Include details of termination points and assemblies.
 - 6. Include details of roof-penetration flashing.
 - 7. Include details of edge conditions, including eaves, ridges, valleys, rakes, crickets, flashings, and counterflashings.
 - 8. Include details of special conditions.

9. Include details of connections to adjoining work.
10. Detail formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches.

- C. Samples: Four (4) 12-inch by 12-inch samples of each sheet metal material. Show pattern, finish, color, and thickness.

1.5 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.
 1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
 2. Protect stored sheet metal flashing and trim from contact with water.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.6 WARRANTY

- A. Guarantee materials and workmanship for two years.
- B. Special Warranty on Finishes: 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. Finish Warranty Period: 20 year guarantee for PVDF coating from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, 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. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. FM Approvals Listing: Manufacture and install roof edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification Class 1-90. Identify materials with name of fabricator and design approved by FM Approvals.

- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Aluminum Sheet: ASTM B209, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth surface.
 - 1. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 2. Color: As selected by Architect from manufacturer's full range.
 - 3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal 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.
 - 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. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
 - 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Elastomeric Sealant: ASTM C920, elastomeric polyurethane, polysulfide, or silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- D. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

- E. Reglets: Units of type, material, and profile required, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions and with interlocking counterflashing on exterior face, of same metal as reglet.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Fry Reglet Corporation.
 - b. Hohmann & Barnard, Inc.
 - c. National Sheet Metal Systems, Inc.
 2. Source Limitations: Obtain reglets from single source from single manufacturer.
 3. Material: Aluminum, 0.024 inch thick.
 4. Surface-Mounted Type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
 5. Finish: Mill With manufacturer's standard color coating.

2.4 FABRICATION, GENERAL

- A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.
1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
 2. 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.
 3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
 4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances:
1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
 2. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.

2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.
- 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 cited sheet metal standard for application, but not less than thickness of metal being secured.
- G. Seams:
 1. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.
- H. Do not use graphite pencils to mark metal surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with installer present, for compliance with requirements for installation tolerances, substrate, 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.
 3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
 1. Install fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of sealant.
 3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
 4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.

5. Install continuous cleats with fasteners spaced not more than 12 inches o.c.
 6. Space individual cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
 7. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
 8. Do not field cut sheet metal flashing and trim by torch.
 9. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure- treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
1. Coat concealed side of uncoated-aluminum sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
1. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.
 2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
 3. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated.
 - a. Embed hooked flanges of joint members not less than 1 inch into sealant.
 - b. Form joints to completely conceal sealant.
 - c. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way.
 - d. Adjust setting proportionately for installation at higher ambient temperatures.
 - 1) Do not install sealant-type joints at temperatures below 40 deg F.
 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

3.3 INSTALLATION OF ROOF FLASHINGS

- A. Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard.
 - 1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
 - 2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing:
 - 1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
 - 2. Anchor to resist uplift and outward forces in accordance with recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch centers.
 - 3. Anchor to resist uplift and outward forces in accordance with recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for FM Approvals' listing for required windstorm classification.
- C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches over base flashing. Install stainless steel draw band and tighten.
- D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing.
 - 1. Insert counterflashing in reglets or receivers and fit tightly to base flashing.
 - 2. Extend counterflashing 4 inches over base flashing.
 - 3. Lap counterflashing joints minimum of 4 inches.
 - 4. Secure in waterproof manner by means of snap-in installation and sealant or lead wedges and sealant unless otherwise indicated.
- E. 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 INSTALLATION OF MISCELLANEOUS FLASHING

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

3.5 INSTALLATION TOLERANCES

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

3.6 CLEANING

- 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.

3.7 PROTECTION

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.
- C. Maintain sheet metal flashing and trim in clean condition during construction.
- D. 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, as determined by Architect.

END OF SECTION

SECTION 07 72 00
ROOFTOP SUPPORT SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. The work covered by this specification consists of furnishing all labor, equipment, materials and accessories, and performing all operations required for the correct installation of recycled rubber pipe or conduit supports for mechanical piping or electrical conduit systems.

1.02 REFERENCES

- A. ASTM A653 G90 SS Gr. 33 - Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot Dipped Process
- B. ASTM B633 - Specification for Electrodeposited Coatings of Zinc on Iron and Steel
- C. ASTM C531 – Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical Resistant Mortars, Grouts, Monolithic Surfaces, and Polymer Concretes
- D. ASTM C642 – Test Method for Specific Gravity, Absorption, and Voids in Hardened Concrete
- E. ASTM C672 – Test Methods for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
- F. ASTM D412 – Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension
- G. ASTM D395 – Standard Test Methods for Rubber Property – Compression Set
- H. ASTM D573 – Test Method for Rubber – Deterioration in an Air Oven
- I. ASTM D746 – Test Method for Brittleness Temperature of Plastics and Elastomers by Impact
- J. ASTM D2240 – Test Method for Rubber Property – Durometer Hardness
- K. NFPA 70 – National Electrical Code

1.03 QUALITY ASSURANCE

- A. Rubber / steel pipe supports shall be manufactured under a strict quality control program assuring quality product delivered to the jobsite. Pipe supports that are damaged shall not be installed.
- B. Workmanship: All pipe and conduit supports to be installed by a qualified piping and electrical contractor and installed in accordance with manufacturer's recommendations.
 - 1. All work shall comply with all applicable federal, state, and local codes and laws having jurisdiction.
 - 2. All work shall conform to accepted industry and trade standards for pipe support or conduit installations.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with these specifications, pipe support systems shall be Dura-Blok design as supplied by Cooper B-Line, Inc., Grainger, Eaton, Graybar or approved equal.

2.02 MATERIALS

- A. Curb base must be made of 100% recycled rubber and polyurethane prepolymer with a uniform load capacity of 500 pounds per linear foot of support*. In addition, each base to have a reflective red stripe.(*See 3.01(C))
- B. Dimensions: 6-inches wide by 5.0- inches tall by 9.6- inches long and 6-inches wide by 5.0-inches tall by 20.2 inches long.
- C. Steel frame: Steel, strut galvanized per ASTM A653 or strut galvanized per ASTM A653 for bridge series.
- D. Attaching hardware: Zinc-plated threaded rod, nuts and attaching hardware per ASTM B633.
- E. Any products claiming to be a similar, like, or equal must demonstrate (meet or exceed) the same physical and performance characteristics as specified below:
 - 1. Density: 0.52 oz/cu in ASTM D575
 - 2. Durometer Hardness: 67.2A \pm 1 ASTM D575

3. Tensile Strength: 231 psi minimum ASTM D575
4. Compression Deformation: 5% at 70psi and 72°F ASTM D575
5. Brittleness at Low Temp: -50°F ASTM D746
6. Weathering: 70 hours at 120°F ASTM D573
 - a. Hardness retained: 100% ($\pm 5\%$)
 - b. Compressive strength: 100% ($\pm 5\%$)
 - c. Tensile strength: 100% ($\pm 5\%$)
 - d. Elongation retained: 100% ($\pm 5\%$)

length. Assembly has 1" gaps between blocks for free flow of water. Standard strut accessories can be used for attachment.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions and recommendations.
- B. If gravel top roof, gravel must be removed around and under pipe support.
- C. Always consult roofing manufacturer for roof membrane compression capacities. If necessary, a compatible sheet of roofing material (rubber pad) may be installed under rooftop support to disperse concentrated loads and add further membrane protection.
- D. Gas pipe spacing subject to local gas authorities.
- E. Use properly sized clamps to suit pipe and conduit sizes.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

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. Exterior joints in vertical and horizontal surfaces.
 - a. Joints between scupper boxes, masonry and metal coping.
 - b. Other joints as indicated.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.
- B. Provide joint sealants for exterior applications that have been produced and installed to establish and maintain watertight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.
- C. Provide products that will not produce off-gassing of VOC's after product is installed and properly cured.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product.
 - 1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.
 - 2. Provide Material Safety Data Sheets (MSDS) for the following:
 - a. Elastomeric joint sealants.
 - b. Primer.
 - c. Cleaners for nonporous surfaces.
- 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. 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.
- D. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.
- E. Qualification data complying with requirements specified in "Quality Assurance" article. Include list of completed projects with project names addresses, names of architects and owners, plus other information specified.
- F. Compatibility and adhesion test reports from elastomeric sealant manufacturer indicating that materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.
- G. Product test reports for each type of joint sealants indicated, evidencing compliance with requirements specified.
- H. Preconstruction field test reports, indicating which products and joint preparation methods demonstrate acceptable adhesion to joint substrates.
- I. Field-Adhesion-Test Reports: For each sealant application tested.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
- B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealants and joint backer materials from a single manufacturer for each different product required.
- C. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by a qualified independent testing laboratory on current product formulations within a 24-month period preceding date of Contractor's submittal of test results.
 - 1. Test elastomeric sealants for compliance with requirements specified by reference to ASTM C920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.
 - 2. Include test results performed on joint sealants after they have cured for 1 year.

1.6 PRECONSTRUCTION TESTING

- A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
 2. Conduct field tests for each kind of sealant and joint substrate.
 3. Notify Architect seven days in advance of dates and times when test joints will be erected.
 4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
 - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
 6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.7 FIELD 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.
 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.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, 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. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.
- C. Provide VOC-compliant sealants. Products must not produce off-gassing after proper curing is achieved.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920.
- B. One part, multi-purpose polyurethane sealant: Uses / Locations: Roof flashing and membranes.
 - 1. Type: Type S (ASTM C 920).
 - 2. Grade NS (ASTM C 920).
 - 3. Class: 35 (ASTM C 920).
 - 4. Use: NT, M, A, O and I.
 - 5. Shore A Hardness: 20 (ASTM C 661).
 - 6. Movement Capability: 25 (ASTM C 719).
 - 7. Extrusion Rate: 5 ml/min.
 - 8. Use Related to Exposure: NT (non-traffic).
 - 9. Basis of Design:
 - a. AP Sealant by Firestone

2.3 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Provide sealant backings of material and type that are non- staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing. Provide backing and filler material by sealant manufacturer to greatest extent possible, or products recommended by sealant manufacturer.
- B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non- extruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
 - 1. Open-cell polyurethane foam.
 - 2. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, non-outgassing in unruptured state.
- 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.

2.4 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: Non-staining, 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 performance of the Work.
- 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 concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean metal, glass and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- 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 C1193 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 Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
 - 1. Provide concave joint configuration per Figure 5A in ASTM C1193, unless otherwise indicated.
 - 2. 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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

SECTION 07 95 13.16

EXTERIOR EXPANSION JOINT COVER ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Exterior building expansion joint cover assemblies.
- B. Related Requirements:
 - 1. Field painting: Refer to Section 09 90 00.

1.2 COORDINATION

- A. Coordinate sizes and locations of expansion joint cover assemblies with joint widths and assumed movement.

1.3 SUBMITTALS

- A. Comply with Division 01 requirements.
- B. Product Data: Manufacturer's specifications and technical data edited specifically for proposed system, including specific requirements indicated.
 - 1. Detailed specification of construction and fabrication.
- C. Shop Drawings: Indicate joint device profile, dimensions, location in the work, affected adjacent construction, anchorage devices, and location of splices.
- D. Samples: Submit 2 6-inch samples, illustrating operational properties of assemblies.
- E. Manufacturer's Installation Instructions: Indicate installation requirements and rough-in dimensions.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Comply with Division 01 requirements.
- B. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer's identification.
- C. Store per manufacturer's instructions.
 - 1. Store in dry area out of direct sunlight.

1.5 WARRANTY

- A. Provide manufacturer's written warranty.
- B. Warrant materials and fabrication against defects after completion and final acceptance of Work.

1. Repair defects, or replace with new materials, faulty materials or fabrication developed during the warranty period at no expense to Owner.

PART 2 PRODUCTS

1.6 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from the following manufacturers:
 1. Nystrom
 2. John Mansville
 3. GAF
 4. Watson Bowman Acme
 5. Approved Equivalent

1.7 ASSEMBLY DESCRIPTION

- A. Furnish units in longest practicable lengths to minimize field splicing.
- B. Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion joint cover assemblies.

1.8 PERFORMANCE REQUIREMENTS

- A. Expansion Joint Design Criteria **<Insert drawing designation>**:
 1. Type of Movement: Thermal.
 - a. Nominal Joint Width: 2 inches.

1.9 EXTERIOR ROOF EXPANSION JOINT COVERS

- A. Membrane-covered, Bellow-type Roof Expansion Joint Cover with Concealed Attachment Flanges:
 1. Basis of Design: Subject to compliance with requirements, provide Nystrom, Inc.; Model EWCF
 2. Design Criteria:
 - a. System Width: 2 inches
 - b. Nominal Joint Width: 2 inches.
 - c. Material: White EPDM
 - d. Attachment Method: Concealed Attachment Flanges: 1 3/8 inch (35 mm) wide by .015 inch (0.4 mm) thick tin strip wrapped with neoprene-coated nylon fabric Mechanical fasteners.

1.10 ROOF-TO-WALL EXPANSION CONTROL

- A. Membrane-covered, Bellow-type Roof Expansion Joint Cover with Concealed Attachment Flanges:

1. Basis of Design: Subject to compliance with requirements, provide Nystrom, Inc.; Model EWCFw
2. Design Criteria:
 - a. System Width: 2 inches
 - b. Nominal Joint Width: 2 inches
 - c. Material: White EPDM

1.11 MATERIALS

- A. Aluminum: ASTM B 221 (ASTM B 221M), Alloy 6063-T5 for extrusions; ASTM B 209 (ASTM B 209M), Alloy 6061-T6 for sheet and plate.
- B. Apply manufacturer's standard protective coating on aluminum surfaces to be placed in contact with cementitious materials.
- C. Stainless Steel: ASTM A 240/A 240M or ASTM A 666, Type 304 for plates, sheet, and strips.
- D. Brass: ASTM B 36/B 36M, UNS Alloy C26000 for half hard sheet and coil.
- E. Bronze: ASTM B 455, Alloy C38500 for extrusions; Alloy C23000 red brass for plates.
- F. Elastomeric Seals: Manufacturer's standard preformed elastomeric membranes or extrusions to be installed in metal frames.
- G. Fire Barriers: Any material or material combination, when fire tested after cycling, designated to resist the passage of flame and hot gases through a movement joint and to comply with performance criteria for required fire-resistance rating.
- H. Moisture Barrier: Manufacturer's standard, flexible elastomeric material.

PART 3 EXECUTION

1.12 EXAMINATION

- A. Verify that rough openings for joint covers are correctly sized and located.
- B. Verify block outs are in place, where required.

1.13 PREPARATION

- A. Provide anchoring devices for installation and embedment.
- B. Provide templates or rough-in measurements.

1.14 INSTALLATION

- A. Install components and accessories to comply with manufacturer's instructions.
 1. Exterior conditions: Heat weld splices and intersections to form a continuous joint system.
- B. Align work plumb and level, flush with adjacent surfaces.

- C. Rigidly anchor to substrate to prevent movement or misalignment.
- D. Where required install flexible fire barrier to comply with manufacturer's instructions.

END OF SECTION

SECTION 09 90 00
PAINTING & COATINGS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The Contractor shall furnish all materials, labor, equipment and incidentals required and perform all painting necessary to complete this Contract in its entirety.
- B. It is the intent of these Specifications to paint all exposed exterior plywood wall sheathing and wood fascia board. Minor items omitted in the schedule of work shall be included in the work of this Section when they come within the general intent of the Specifications as stated herein.
- C. The following surfaces or items are not required to be painted:
 - 1. Stainless steel, brass, bronze and aluminum.
 - 2. Non-ferrous metals, unless specifically noted otherwise.

1.02 RELATED WORK

- A. Section 06 10 00: Rough Carpentry

1.03 QUALITY ASSURANCE

- A. Include on label of containers:
 - 1. Manufacturer's name.
 - 2. Type of paint.
 - 3. Manufacturer's stock number.
 - 4. Color.
 - 5. Instructions for reducing, where applicable.
 - 6. Label analysis.
 - 7. Federal Specification Number.
- B. Paint Coordination

1. Provide finish coats which are compatible with the prime coats actually used.
2. Review other Sections of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrata.
3. Upon request, furnish information on the characteristics of the specific finish materials to assure that compatible prime coats are used.
4. Provide barrier coats over non-compatible primers, or remove the primer and reprime as required.
5. Notify the Owner in writing of anticipated problems in using the specified coating systems over prime coatings supplied under other sections.

C. Field Quality Control

1. Request review of first finished required by the Owner for color texture, and workmanship.
2. Use first acceptable surface as project standard for each color scheme.

1.04 SUBMITTALS

- A. Submit to the Owner as provided in the General Conditions, manufacturer's specifications and printed technical data on the proposed paint systems and detailed surface preparation, application procedures and dry film thickness.
- C. The Contractor shall have available, at all times at the work site, a Nordson Dry Film gauge or other Owner approved dry film thickness gauge to be used to inspect the coating thickness by the Contractor during the progress of the work. The gauge shall also be made available to the Architect upon request for dry film thickness inspection.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials

1. Deliver sealed containers with labels legible and intact and with batch codes indicating when the coating was manufactured.
2. Deliver to project site or segregate at source of supply in advance of need so as to allow 15 days for testing.

B. Storage of Materials

1. Store only acceptable project materials on project site.
2. Store in a suitable location.
3. Restrict storage to paint materials and related equipment.
4. Comply with health and fire regulations.
5. No paint shall be stored on site or applied which exceeds the product shelf life at time of application.

1.06 JOB CONDITIONS

A. Environmental Requirements

1. Do not apply finish coating in areas where dust is being generated.

B. Protection

1. Cover or otherwise protect finished work of other trades or surfaces not being painted concurrently or not to be painted.

C. Weather Conditions

1. Do not apply paint in snow, rain, fog or mist, or when the relative humidity exceeds 85% or to damp or wet surfaces, unless otherwise permitted by the manufacturers' printed instruction as approved by the Architect.
2. Applications may be continued during inclement weather only within the temperature limits specified by the paint manufacturer as being suitable for use during applications and drying periods.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All painting and primer coating materials shall be fully the equal to those manufactured by PPG Industries, Inc. (Porter Paints), Sherwin Williams, Benjamin Moore, Duran or Koppers Company, Inc. unless noted otherwise. The painting and primer coating schedule has been prepared on the basis of PPG Industries, Inc. (Porter Paints) products. No brand other than those named will be considered for approval unless the brand and type of paint proposed for each item in the following schedule together with sufficient data substantiated by certified tests conducted at no expense to the Owner to demonstrate its equality to the paint(s) named is sub-mitted in writing to the Owner for approval within 30 days after the signing of the Notice to Proceed. The type and number of tests performed shall be subject to the Owner's approval. Minimum standards for testing shall be in accordance with the applicable test methods of the American Society for Testing and Material (ASTM) and Federal Standard No. 141 or

other approved methods when not covered by the preceding.

- B. All painting materials shall be delivered to the mixing room in unbroken packages, bearing the manufacturer's brand and name. They shall be used without adulteration and mixed, thinned and applied in strict accordance with manufacturer's directions for the applicable materials and surface and with the Owner's approval before using.
- C. Shop priming shall be done with primers that are guaranteed by the manufacturer to be compatible with the finish paints to be used.
- D. No paint containing lead will be allowed. Oil shall be pure boiled linseed oil.
- E. Work areas will be designated by the Owner for storage and mixing of all painting materials. Materials shall be in full compliance with the requirements of pertinent codes and fire regulations. Proper containers outside of the building shall be provided and used for painting wastes, and no plumbing fixture shall be used for this purpose.
- F. All recommendations of the paint manufacturer in regard to the health and safety of workers shall be followed.

2.02 FABRICATED EQUIPMENT

- A. Unless otherwise indicated below all fabricated equipment shall be shop primed and shop or field finished.
- B. All items to be shop primed shall be thoroughly cleaned of all loose material prior to priming. If, in the opinion of the Owner, any prime coating that has been improperly applied or if material contrary to these Specifications has been used, that coating shall be removed by sandblasting to white metal and reprimed in accordance with these Specifications.
- C. All shop prime coats shall be of the correct materials and applied in accordance with these Specifications. The Contractor shall remove any prime coats not in accordance with these Specifications by sandblasting and apply the specified prime coat at no additional cost to the Owner.
- D. Shop primed surfaces shall be cleaned thoroughly and retouched with the specified primer before the application of successive paint coats in the field.
- E. Shop finish coats may be the standard finish as ordinarily applied by the manufacturer when approved by the Architect. All pumps and motors shall be repainted after installation, unless specified otherwise.
- F. The Contractor shall be responsible for and take whatever steps necessary to properly protect the shop prime and finish coats against damage from weather or any other causes.
- G. If, in the opinion of the Owner, a shop finish coat does not give the protection quality of

other work of similar nature the Contractor shall apply the coat or coats of paint as directed by the Architect to accomplish the desired protection quality. Architect may request proof of purchase of specified materials by the Contractor and/or fabricator if the need arises.

PART 3 EXECUTION

3.01 PREPARATION OF SURFACES

A. Exterior Exposed Tube Posts and Beams:

1. Primer

- i. Clean the surface, per SSPC SP-2, Hand Tool Cleaning. .Clean surface to be coated dry and free of dirt, loose paint, oil, grease, wax, rust, loose mill scale, release agents, curing compounds and other foreign materials and contamination. remove any dirt, chalk, and any other contamination that may be present on the surface.
- ii. Sand all slick or glossy surfaces.

2. Paint

- i. Clean surface free of dirt, grease, oil, release agents, curing compound and other foreign materials. Putty all holes and caulk all cracks and open seams. Sand all glossy, rough and patched surfaces. Remove all rust, surface contaminants and all forms of contamination.

3. Prior to coating, Solvent wipe substrate to remove dust and residual contamination.

3.02 PAINTING SYSTEMS

- A. All colors will be selected by the Owner from PPG Industries, Inc.(Porter Paints) Design Spectrum Color System.
- B. The following types of paints by PPG Industries, Inc. (Porter Paints) have been used as a basis for the paint schedule:
- C. The following surfaces shall have the types of paint specified below and applied at the wet film thickness and dry film thickness in mils (W.F.T. and D.F.T.) per coat, as noted.

1. Exterior Exposed Steel Columns and Beams unless otherwise noted:

First Coat: PPG Industries, Inc.: Apply one coat PPG Paints, 6-208 Series: SPEEDHIDE Interior/Exterior Rust Inhibitive Steel Primer. Apply at a dry film thickness of not less than 2.3 Mils.

Second Coat: PPG Industries, Inc.: Apply one coat PPG Paints 7-374 S Series Interior/Exterior Semi-Gloss Acrylic Metal Finish. Apply at a dry film thickness of 1.5 minimum to 2.0 maximum Mils.

Third Coat: PPG Industries, Inc.: Apply one coat PPG Paints 7-374 S Series Interior/Exterior Semi-Gloss Acrylic Metal Finish. Apply at a dry film thickness of 1.5 minimum to 2.0 maximum Mils.

3.03 WORKMANSHIP

A. General

1. At the request of the Owner, samples of the finished work prepared in strict accordance with these Specifications shall be furnished and all painting shall be equal in quality to the approved samples. Finished areas shall be adequate for the purpose of determining the quality of workmanship. Experimentation with color tints shall be furnished to the satisfaction of the Owner where standard chart colors are not satisfactory.
2. Protection of TPO roof membrane, metal coping, standing seam metal panels, gutters, masonry, and other building components shall be provided throughout the painting operations. Dripped or spattered paint shall be promptly removed. Lay drop cloths in all areas where painting is being done to adequately protect roofing and other work from all damage during the operation and until the finished job is accepted.
3. Paints shall be mixed in proper containers of adequate capacity. All paints shall be thoroughly stirred before use and shall be kept stirred while using. No unauthorized thinners or other materials shall be added to any paint.
4. Only skilled painters shall be used on the work and specialists shall be employed where required.

B. Field Priming

1. Equipment which is customarily shipped with a baked-on enamel finish or with a standard factory finish shall not be field painted unless the finish has been damaged in transit or during installation. Surfaces that have been shop painted and have been damaged or where the shop coats of paint have deteriorated shall be properly cleaned and retouched before any successive painting is done on them in the field. All such field painting shall match as nearly as possible the original finish.
2. Perform test patch over previously painted corrugated metal roof to ensure adhesion to the existing coating is achieved and wrinkling of the existing coating does not occur.

C. Field Painting

1. All painting at the site shall be designated as Field Painting and shall be under the direct and complete control of the Owner, and only skilled painters and specialists where required, shall be used on the work.
2. All paint shall be at 70° F before applying, and painting shall be done when the air and surface temperatures are between 60-100° F for epoxies, 50-100° F for acrylic emulsions and concrete stains and 32-100° F for all other coating systems applied. Unless coating manufacturer's technical information states otherwise no paint shall be applied unless the surface and air temperature is 5° F above the dew point.
3. Successive coats of paint shall be tinted so as to make each coat easily distinguishable from each other with the final undercoat tinted to the approximate shade of the finished coat.
4. Finish surfaces shall not show brush marks or other irregularities. Undercoats shall be thoroughly and uniformly sanded with No. 00 sandpaper or equal to remove defects and provide a smooth even surface. Top and bottom edges of doors shall be painted and all exterior trim shall be back-primed before installation.
5. Painting shall be continuous and shall be accomplished in an orderly manner so as to facilitate inspection. Materials subject to weathering shall be prime coated as quickly as possible. Surfaces of exposed members that will be inaccessible after erection shall be cleaned and painted before erection.
6. All materials shall be brush painted unless spray painting is specifically approved by the Owner.
7. All surfaces to be painted as well as the atmosphere in which painting is to be done shall be kept dry until each coat of paint has hardened. Any defective paint shall be scraped off and repainted in accordance with the Architect's directions.
8. Before final acceptance of the work, all damaged surfaces of paint shall be cleaned and repainted as directed by the Owner at no additional cost to the Owner.
9. It shall be the responsibility of the Contractor to arrange a meeting prior to the start of painting between the Contractor, the coating manufacturer and the Owner. All aspects of surface preparation and application of the specific coating systems shall be fully reviewed at the meeting.
10. It shall be the responsibility of the coating manufacturer's representative to provide on site technical assistance to the Owner and Contractor and to report his findings from the on site inspection as to surface preparation, application procedures, and dry film thickness to the Owner on a timely basis unless deemed

unnecessary by the Owner.

11. Touch up shop applied prime coats which have been damaged and touch up bare areas prior to start of finish coats application.
12. Do not apply additional coats until the completed coat has been inspected and approved.
13. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.

D. Drying

1. Allow sufficient drying time between coats, modifying the period as recommended by the material manufacturer to suit adverse weather conditions.
2. Consider oil base and oleo resinous solvent type paint as dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and when the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

E. Brush Application

1. Brush out and work the brush coat onto the surface in an even film.
2. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness and other surface imperfections will not be acceptable.

F. Spray Application

1. Paint: Spray application shall be in accordance with manufacturer's recommendations.

- G. For completed work, match the approved samples as to texture, color and coverage. Remove, refinish or repaint work not in compliance with the specified requirements.

3.04 CLEANUP

- A. The premises shall at all times be kept free from accumulation of waste material and rubbish caused by employees or work. At the completion of the painting remove all tools, scaffolding, surplus materials, and all rubbish from and about the buildings and leave work "broom clean" unless more exactly specified.
- B. Upon completion, remove all paint where it has been spilled, splashed, or splattered on floor, fixtures, equipment and all other surfaces, leaving the work ready for inspection.

END OF SECTION

**PROJECT SPECIFICATIONS
CONSTRUCTION DOCUMENTS**

**MEDICAL EXAMINER OFFICE
ROOF REPLACEMENT PROJECT**

January 2, 2019

Final Submittal



PREPARED BY

WILLIAMS-RUSSELL AND JOHNSON, INC

MEDICAL EXAMINER OFFICE ROOF REPLACEMENT

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SECTION 01 10 00**SUMMARY OF WORK****PART 1 - GENERAL****1.1 GENERAL NOTES**

- A. This Section includes detailed information regarding the scope of work for this Contract. Scopes of work for any separate contracts for the Project, if any, and other information relating to or affecting this Contract shall also be provided in this Section.
- B. The Contractor is responsible for performing the Work described in this Section for the Contract for which it has submitted a bid. The Contractor shall have taken all of the provisions herein into consideration when preparing its bid, and all costs associated with performing all Work required by the Contract Documents shall be included in the Contractor's Contract Sum. The Contractor is responsible for knowing what Work has been assigned to any preceding or succeeding separate contracts. No additional reimbursement or extensions of time will be allowed the Contractor due to its ignorance of the Work assigned to this Contract or to any separate contract which may affect its Work.
- C. The Contract Documents shall be construed so as to require the Contractor to perform all Work reasonably inferable therefrom as being necessary in order to produce the indicated functional, operational or finished result.
- D. The Contract Documents issued are deemed by the County to contain sufficient information for bidding and contracting for the Work specified. However, the Contractor is advised to check documents for thoroughness of information and notify the Construction Manager immediately in writing of any valid discrepancies.
- E. Time is of the essence for every portion of this Contract wherein a definite and certain length of time is fixed for performance of any act whatsoever. The Contractor shall be aware of the extreme importance of performing the Work and achieving all required milestones and completion dates within the allotted Contract Time.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Use of premises.
 - 3. Work restrictions.
 - 4. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Fulton County Medical Examiner Office Roof Replacement.
 - 1. Project Location: 430 Pryor Street, Atlanta, GA 30312

B. The Work consists of the following:

1. Roof Replacement: Demo all existing roofing and insulation at roof, roofing membrane at face of parapet walls and metal coping at parapet as indicated on the drawings. Install new TPO membrane roofing with tapered insulation to roof scuppers and all associated flashings at curbs, equipment, roof penetrations and parapets. Remove existing flashing at existing curbs, pitch pockets and pipe vents for new TPO flashing at existing curbs, pitch pockets and pipe vents. Install walk pads along designated pathways to equipment and roof access points. Install new metal coping at parapet walls. Install new scupper boxes at all existing scupper locations. Remove existing conductor heads at scupper boxes and reinstall existing conductor heads at existing scupper box locations. Remove and reinstall existing lighting protection terminals at the roof and parapets. Remove and re-install existing conductor heads at existing through wall scupper locations. Disconnect and temporarily raise existing curb mounted roof top mechanical equipment to accommodate new flashing installation. Lower, reset and reconnect existing curb mounted roof top mechanical equipment. Disconnect and temporarily remove wall mounted light fixture or electrical connection outlet at parapet walls and reinstall wall mounted light fixture and electrical outlet at parapet wall.

- C. The Contractor's services shall include all construction and equipment installation required to complete the Work as indicated in the Contract Documents. The Contractor shall provide or cause to be provided and shall pay for all testing services, labor, materials, equipment, tools, construction equipment and machinery, temporary utilities, transportation and all other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work. The above shall be provided such that the facility is turned over to the County in a complete, finished, and fully functional and operating manner.

1.4 SCOPE OF WORK

- A. Work includes, but is not limited to, demolition of existing roof system, insulation, associated flashing and coping, installation of new roofing and associated flashing, metal coping, sealants, cover board and insulation.
- B. The Contractor shall be responsible for securing and paying for all permits, fees, taps, meters, inspections and bonds required to complete the Work. The Contractor shall also be responsible for paying for and coordinating all the required Work with all utility companies required for services to the Project. Additionally, any disruption in service must be coordinated to the satisfaction of the Owner so as not to disrupt any ongoing activities and requirements of the Owner. Any work involving security and CCTV monitoring shall be closely coordinated with the Sheriff's Office.

1.5 REGULATORY REQUIREMENTS AND STANDARDS

- A. Permitting: The Contractor assumes responsibility for securing all land disturbance permits, demolition permits and building permits; providing meters and paying all utility tie-in fees; restoring of roads and right-of-ways; maintaining siltation control; and securing all final releases from regulating bodies. Minimum permits required for this Project:

1. Demolition Permit: from City of Atlanta Bureau of Buildings.
2. Building Permit: from City of Atlanta Bureau of Buildings.

The Contractor is responsible for payment of fees associated with the permits and inspections per the following schedule. ANY FEE FOR REQUIRED PERMITS OR INSPECTIONS NOT SPECIFICALLY NOTED BELOW AS WAIVED IS THE RESPONSIBILITY OF THE DESIGN/BUILDER.

- a. Land Disturbance Permitting-Fee Waived
 - b. Fulton County Building Permit-Fee Waived
- B. Codes: It is the Contractor's responsibility to comply with all applicable laws, statutes, ordinances, building codes, rules and regulations applicable to the Work.

1.6 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated by representative of Fulton County General Services Department.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 1. Confine storage of materials to area designated by Owner.
 2. Driveways and Entrances: Keep loading areas and entrances serving premises clear and available to Fulton County, Fulton County employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 3. Hauling Restrictions: Comply with all legal load restrictions in the hauling of materials. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment.
- C. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed during non-business hours of 7 a.m. to 6 p.m., Monday through Friday, except otherwise indicated.
 1. Weekend Hours: 7 a.m. Saturday to 6 p.m. Sunday.
 2. Special Events: As indicated by Fulton County and the City of Atlanta. Specific special event days are as noted:
 - a. New Years Day
 - b. Martin Luther King Holiday

- c. Memorial Day
- d. Independence Day
- e. Labor Day
- f. Presidents Day
- g. Veteran's Day
- h. Thanksgiving Day
- i. Christmas Day

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Fulton County Medical Examiner's Office or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

- 1. Notify Owner not less than five days in advance of proposed utility interruptions.
- 2. Do not proceed with utility interruptions without Owner's written permission.

1.8 FIELD VERIFICATION

A. Field verify all new and existing dimensions affecting the work of this contract before ordering products or commencing work.

1.9 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.

- 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
- 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

- 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
- 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context,

are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 21 00

ALLOWANCES

PART 1 - GENERAL

1.1 DEFINITIONS / GENERAL

- A. Allowances: Allowances are defined as sums of monies within the Contract Sum which may, at Owner's option and under terms established in the Contract, be utilized at the Owner's discretion to supplement corresponding basic requirements of Contract Documents.
- B. Owner allowances are exclusively for the cost of materials, delivery to the site and associated installation. The total allowance amount is exclusively for Owner use, and shall include no markup for the Contractor or for its subcontractors.

1.2 SCHEDULE OF ALLOWANCES

A. OWNER-PROVIDED ALLOWANCES

1. Division 01 Owners Allowance

- a. Allowance amount: The Owner-Provided Allowances will consist of the Owner Controlled contingency. The dollar value of the Owner Controlled contingency shall be determined by the Owner.
- b. Scope of Work: As determined by the Owner, through the Construction Manager.
- c. Procurement Procedure: By the Contractor, and coordinated by the Construction Manager.
- d. Schedule Conditions: As required.
- e. Coordination Responsibility: As determined by the Construction Manager.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 GENERAL SUMMARY

- A. The Contractor shall submit to the Construction Manager a Schedule of Values for the entire Contract, either within ten (10) days of Contract award or fifteen (15) days prior to the first Application for Payment deadline, whichever comes first.

B. Breakdown and Content

The Schedule of Values will be submitted in a format as prescribed by and to the level of detail specified by the Construction Manager.

1. The sum of the parts of the Schedule of Values shall aggregate to the total Contract Sum.
2. The minimum level of breakdown will normally be:
 - a. General Conditions line item(s) as required
 - b. Construction costs, by CSI Division or major trade, and broken down into labor and material line items for specific areas of the facility
 - c. Stored material projections
3. Schedule of Values items shall have a direct and understandable relation to the Project CPM Schedule.

1.2 SCHEDULE OF VALUES UTILIZATION

A. Applications for Payment

The Schedule of Values, unless objected to by the Construction Manager or the Architect, shall be the basis for the Contractor's Applications for Payment.

B. Changes to the Schedule of Values

The Construction Manager shall have the right to require the Contractor to alter the value or add/delete categories listed on the Schedule of Values at any time for the following reasons:

1. The Schedule of Values appears to be incorrect or unbalanced.
2. A revision to the segregation of values is required due to the Contractor revising the sequence of construction or assembly of building components, which in turn invalidates the Schedule of Values.
3. Change Orders are issued to the Contractor and require incorporation into the Schedule of Values.

C. Stored Materials

The Contractor is required to correlate the documentation for payment of stored materials requested in the Application for Payment against the agreed upon breakdown of the Schedule of Values. The Construction Manager reserves the right to not process the Application for Payment if this correlation has not been submitted in conjunction with the Application.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 13

PROJECT COORDINATION

PART 1 - GENERAL

1.1 GENERAL SUMMARY

- A. The Contractor shall become thoroughly familiar with the requirements of the Contract Documents, as well as jobsite conditions and the work of separate contractors (if any), and shall make any adjustments necessary to maintain the Project schedule.
- B. Close coordination will be required by the Contractor with the County, Construction Manager, other authorities having jurisdiction, separate contractors (if any), and others having an interest in the Project to assure that all work on the site, access to and from the site, and the general conduct of the operations is maintained in a safe and efficient manner, and that disruption and inconvenience to existing streets and property are minimized.
- C. The Contractor and its subcontractors of all tiers shall be subject to such rules and regulations for the conduct of the Work as the County, Construction Manager, or other authority having jurisdiction may establish.

1.2 COORDINATION OF THE WORK

- A. The Contractor shall be completely responsible for the coordination of its Work, including the Work performed by its subcontractors of all tiers.
- B. Observation of the Work by the Construction Manager or others shall not be interpreted as relieving the Contractor of its responsibility for the coordination of all Work, superintendence of the Work, or scheduling and direction of the Work.
- C. The Contractor shall coordinate its Work with the work of any separate contractors through the Construction Manager for proper function and sequence, coordinating material deliveries and staging of same, all to avoid construction delays.
- D. The Contractor shall review material and equipment staging requirements with the Construction Manager prior to placing such materials or equipment on the site.
- E. The Contractor shall conduct the Work so as to provide the least possible interference to the activities of adjacent properties and traffic patterns. Confine operations only to areas where construction or support functions are required. Portions of the site beyond areas in which construction or support functions are required are not to be disturbed.

1.3 ACCESS AND TRAFFIC CONTROL

- A. The Contractor shall maintain free access to all buildings and areas of the site for emergency vehicles, service vehicles, and fire fighting equipment and at no time shall block off or close roadways or designated fire lanes without providing auxiliary roadways and means of entrance acceptable to the County, the Construction Manager, and any other authority having jurisdiction. Fire hydrants shall remain accessible at all times. The Contractor shall provide at least forty-eight (48) hours notice of any changes to such routes.
- B. The Contractor shall be responsible for security of the site and building(s) until acceptance of the Project by the County. The Contractor shall cooperate with the County, the Construction Manager, and any separate contractors with respect to entry into the Project when requested during non-standard working hours.
- C. The Contractor shall coordinate its operations to minimize the impact on vehicular and pedestrian traffic around the site. Operations and traffic control measures shall comply with the requirements of the authority having jurisdiction.

1.4 WORKING HOURS

- A. The Contractor hours of work operation are 7:00 am until 6:00 pm Monday through Friday. Weekend hours begin 7:00 am Saturday and end 6:00 pm Sunday and are to be planned in coordination with and approved by the Construction Manager.
- B. The Contractor shall work whenever conditions permit (regardless of anticipated or orderly procedure, the operations of the County or other contractors, or conditions encountered) to proceed without delay and to maintain schedule dates. All operations shall be conducted so as to comply with all applicable laws, ordinances, and regulations regarding allowable hours of work.
- C. The Contractor shall notify the Construction Manager at least forty-eight (48) hours in advance of planned weekend work. Failure to provide such notice may be cause for the Construction Manager to require the removal or uncovering of Work performed without the knowledge of the Construction Manager.

1.5 EXISTING UTILITIES AND OTHER SERVICES

- A. Utilities and/or other services which are shown, or not shown but encountered, shall be protected by the Contractor from any damage from any work operations of the Contract, unless or until they are abandoned. If the utilities or services are not abandoned at the time of damage, the Contractor shall immediately repair any damage from its work operations and restore the utilities or services to an equal or better conditions than that which existed prior to the damage.

- B. The Contractor and its subcontractors of all tiers shall be responsible for all damage to the Project including any existing buildings and grounds due to its operations under this Contract. Repair or replacement of damaged items shall be to the satisfaction of the County and the Construction Manager.

1.6 PROTECTION OF FINISHED WORK

- A. The Contractor shall be responsible for protecting its finished Work and materials from damage from any source, and shall maintain such protection until acceptance of the Work by the County. Any damage to finished Work caused by the work operations of this Contract shall be repaired, or such damaged Work replaced, by the Contractor at no additional cost to the County. No exceptions to this policy will be allowed.
- B. The Contractor shall coordinate the proper means by which materials and/or equipment are moved through the construction, ensuring that no structural overloading is allowed and that existing construction is protected from physical damage.
- C. Protect new roof system membrane from puncture or other damage during and after the new roof membrane and system has been installed.
- D. Keep roof membrane free of oils, grease, and other materials to prevent discoloring or damage from chemical contaminants. Where work is performed over finished roof surfaces, the Contractor shall provide an acceptable cover to protect the membrane against damage, puncture, paint, or stains.
- E. Load no part of the structure during construction with a load greater than calculated to bear safely when completed. Make temporary supports as strong as permanent supports.
- F. Take strict precautions against unnecessary traffic on finished roofing surfaces.
- G. Protect all glass surfaces at skylights during construction. Prior to Substantial Completion, replace any broken, scratched, or otherwise damaged skylight glass with glass of the same type, size, and quality as the original.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.1 GENERAL

- A. The Construction Manager will determine the agenda for and chair the meetings described below, and also shall prescribe the format for the documentation of the meetings to be produced by the Contractor.
- B. Representatives of the Contractor and its subcontractors and suppliers in attendance at any project meeting shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall schedule and administer project meetings throughout progress of Work where specified or required, and shall have the following specific responsibilities:
 - 1. Distribute Construction Manager's agenda for meetings
 - 2. Distribute written notice of each meeting a minimum of four days in advance of meeting date
 - 3. Make physical arrangements for meetings
 - 4. Record minutes, in the format to be provided by the Construction Manager, to include significant proceedings and decisions
 - 5. Reproduce and submit word processed minutes, within four working days after each meeting, to the Construction Manager for approval before further distribution. After approval, distribute copies as follows:
 - a. to all participants in the meeting
 - b. to all parties affected by decisions made at meeting
 - c. to all other parties as may be designated by the County or Construction Manager
- D. The County's user department(s) will be active participants in the design and construction process for this project, and their representative(s) shall be invited to all project meetings for which their presence and/or participation is appropriate.

1.2 PRE-CONSTRUCTION MEETING

- A. Scheduling: Meetings shall be held at least two weeks prior to any Work commencing on the site.
- B. Location: Designated by Construction Manager.
- C. Attendance:

1. Owner/user group representative(s), as appropriate.
2. Construction Manager' representative
3. Architect's representative (at its option)
4. Contractor's Project Manager, Superintendent, and other representative(s) as appropriate
5. Major subcontractors and suppliers
6. Others as appropriate

D. Suggested Minimum Agenda:

1. Discussion of major subcontractors and suppliers
2. Projected construction schedules
3. Critical work sequencing
4. Major equipment deliveries and priorities
5. Project coordination and designation of responsible personnel
6. Procedures and processing of:
 - a. Design issues and decisions
 - b. Field decisions
 - c. Proposal requests
 - d. Submittals
 - e. Change orders
 - f. Applications for payment
7. Adequacy of distribution of Construction Documents
8. Procedures for maintaining record documents
9. Use of premises:
 - a. Office, work and storage areas
 - b. County's, Architect's, and Construction Manager's requirements
10. Construction facilities, controls and construction aids
11. Temporary utilities
12. Safety and first-aid procedures
13. Security procedures and site access controls
14. Housekeeping procedures
15. Traffic and parking procedures

16. Other administrative procedures.

1.3 CONSTRUCTION PROGRESS MEETINGS

- A. Scheduling: Meetings shall be conducted at least bi-weekly throughout the construction phase.
- B. Location of the Meetings: Project field office of Contractor or other location designated by Construction Manager.
- C. Attendance:
 1. Owner/user group representative(s), as appropriate
 2. Construction Manager' representative
 3. Architect's representative (at its option)
 4. Contractor's Project Manager, Superintendent, and other representative(s) as appropriate
 5. Subcontractors and suppliers as appropriate to the agenda
 6. Others as appropriate
- D. Suggested Minimum Agenda:
 1. Actual vs. scheduled progress since previous meeting
 2. Planned construction activities for the next four weeks
 3. Problems with and revisions to construction schedule
 4. Review of off-site fabrication and delivery schedules
 5. Corrective measures and procedures to regain projected schedule
 6. Submittal schedules and expediting
 7. Construction Document clarifications
 8. Field observations, problems, conflicts
 9. Quality control
 10. Actual and potential changes and their impacts
 11. Safety issues

1.4 PRE-INSTALLATION MEETINGS

- A. Scheduling: Schedule pre-installation meetings for installation of various aspects of the Work prior to the start of installation, or as otherwise specified in the Project Manual. Do not schedule pre-installation meetings until required submittals have been approved.

B. Location: At job site.

C. Meeting Requirements:

1. Prior to installation of work, conduct pre-installation meeting at project site with Contractor's superintendent and foreman, primary materials installer, installer of each component of associated work, representative(s) of materials manufacturer(s), inspection and testing agency representative (if any), installers of other work requiring coordination, Construction Manager, Architect, and Owner's representative for the purpose of reviewing job mock-up (if any), job conditions, project requirements and procedures to be followed in performing work.
2. At pre-installation meeting, examine areas and conditions under which work is to be performed. Report in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected. Commencement of work shall constitute acceptance of substrate conditions.
3. At pre-installation meeting, the manufacturer's authorized representative shall inspect storage of job site materials, establish scheduling of initial and final installation of products, and establish the method of preparing written progress reports to Contractor (with copy to Construction Manager) of job conditions and installation.
4. At pre-installation meeting, review manufacturer's product data publications and other published instructions for material installation compliance including shop drawings. Shop drawings and submittals shall be reviewed and approved prior to pre-installation meetings. Contractor shall provide a set of approved shop drawings and submittals for meeting use.
5. Where manufacturer's representative offers recommendations on material use, such recommendations shall be submitted in writing and substantiated by dated, printed, published product data or material use statement which is complete, definite, and clear, and signed by authorized company official.
6. Meeting Report: Submit copy of pre-installation job meeting report. Include copy of manufacturer's inspection report, manufacturer's recommendations, and any statement of non-compliance as applicable.
7. Pre-Installation meetings shall include, but not be exclusive of the following portions of the Work:
 - a. Roof System
 - b. Flashing

1.5 INSPECTION TOURS

- A. Formal inspection tours shall be made of the job progress for the Owner and any other officials as the occasion warrants and as scheduled by the Construction Manager.
- B. If requested by the Construction Manager, the Contractor shall be prepared to show and explain work completed and in progress throughout the Project to the inspection parties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 32 13

SCHEDULING OF THE WORK

PART 1 - GENERAL

1.1 INTRODUCTION

- A. This Section describes the construction scheduling and progress reporting requirements of the Contract. The primary objectives of the requirements of this Section are:
 - 1. to insure adequate planning and execution of the Work by the Contractor;
 - 2. to assist the County and Construction Manager in evaluating the progress of the Work;
 - 3. to provide for optimum coordination by Contractor of its trades, subcontractors and suppliers, and of its Work with the work or services provided by the County or any separate contractors; and
 - 4. to permit the timely prediction or detection of events or occurrences which may affect the timely prosecution of the Work.

1.2 GENERAL SCHEDULING REQUIREMENTS

- A. The Work of this Contract shall be planned, scheduled, executed, and reported using the critical path method (CPM). The Contractor shall use one of the following software programs to develop its Detailed Construction Schedule:
 - 1. Primavera Project Planner, latest version
 - 2. Microsoft Project, latest version (MPX file)
- B. The Detailed Construction Schedule, as defined herein, shall represent the Contractor's commitment and intended plan for completion of the Work in compliance with the Contract completion date and interim milestone dates specified. The Detailed Construction Schedule shall take into account all foreseeable activities to be accomplished by any separate contractors or the County, and interface dates with utility companies, the County's operations, and others. The Detailed Construction Schedule shall anticipate all necessary manpower and resources to complete the Work within the dates set forth.
- C. Once approved by the Construction Manager, the Detailed Construction Schedule will become the Schedule of Record, and will be the basis for coordinating the Work, scheduling the Work, monitoring the Work, reviewing progress payment requests, evaluating time extension requests, and all other objectives listed above. No other schedule will be recognized for this Contract.
- D. The Contractor is responsible for determining the sequence of activities, the time estimates of the detailed construction activities and the means, methods, techniques and procedures to be employed. The Detailed Construction Schedule shall represent the Contractor's best judgment of how it will prosecute the Work in compliance with the Contract requirements. The Contractor shall ensure that Detailed Construction Schedule is current and accurate and is properly and timely monitored, updated and revised as Project conditions and the Contract Documents may require.

- E. When there are separate contractors working concurrently on the Project whose work must interface or be coordinated with the Work of the Contractor, the Contractor shall coordinate its activities with the activities of the separate contractors, and the Detailed Construction Schedule shall take into account and reflect such work by others.
- F. The Contractor shall be solely responsible for expediting the delivery of all materials and equipment to be furnished by it so that the progress of construction shall be maintained according to the currently approved construction schedule for the Work. The Contractor shall notify the Construction Manager in writing, and in a timely and reasonable manner, whenever the Contractor determines or anticipates that the delivery date of any material or equipment to be furnished by the Contractor will be later than the delivery date indicated by the currently approved construction schedule, or required consistent with the completion requirements of this Contract, subject to schedule updates as herein provided.

1.3 DETAILED CONSTRUCTION SCHEDULE

- A. Within two (2) weeks after the Notice to Proceed, the Contractor shall submit a Detailed Construction Schedule according to the requirements established herein.
- B. The Detailed Construction Schedule shall consist of a time-scaled, detailed network graphic representation of all activities which are part of the Contractor's construction plan and an accompanying listing of activity's dependencies and interrelationships. The Detailed Construction Schedule submission shall include, but not be limited to, the following information:
 - 1. Project name
 - 2. Distinct, logical and identifiable subdivisions of Work
 - 3. Activities for all aspects of the Work, with durations not exceeding fourteen (14) calendar days for all activities for which the Contractor will perform actual construction work. Material procurement, submittals, concrete curing and other similar activities may exceed fourteen (14) calendar days if approved by the Construction Manager. Related activities, each of a duration of five (5) calendar days or less, may be shown as one activity together, if not on the critical path of timely job completion.
 - 4. Outage schedules for existing utility services that will be interrupted during the performance of the Work
 - 5. Acquisition and installation of equipment and materials supplied and/or installed by the County or separate contractors
 - 6. All start dates, milestones, float and completion dates
 - 7. An accounting of the number of workdays anticipated to be lost due to weather. This accounting shall be in accordance with allowable days per month provided in Article 8 of the *Owner-Contractor Agreement* (Section 00 500).
 - 8. A tabular report listing all predecessor and successor activities for each activity
 - 9. A legible time scaled network diagram showing the critical path.
 - 10. A listing of the project calendar, indicating the anticipated days of work performance
 - 11. A compact disk or USB flash drive with software application, in a form and format acceptable to the Construction Manager, of the Detailed Construction Schedule including all required submission information resident in the computer system and containing all of the files associated with the schedule.
- C. Activities and milestones to appear on the Detailed Construction Schedule shall include, but

not be limited to, sitework, structure erection, roof close-in, exterior wall systems, paving, major material fabrication and delivery, shop drawings submittals, bi-weekly progress meetings, furniture delivery and installation, equipment delivery and installation, coordination requirements, mock-up installations and inspections, dates of Substantial and Final Completion, Certificate of Occupancy inspection, systems testing and instruction, and special County reviews and decision points that impact the Work.

- D. Schedule Reports: Schedule submissions will contain the following minimum information for each activity:
1. Activity number, description and estimated duration
 2. Anticipated start and finish dates
 3. Responsibility for activity
 4. The cost loading values for each activity.
- E. For all major equipment and materials to be fabricated or supplied for the Project, the Detailed Construction Schedule shall show a sequence of activities including:
1. Preparation of shop drawings and sample submissions
 2. A reasonable time for review of shop drawings and samples or such time as specified in the Contract Documents
 3. Shop fabrication, delivery and storage
 4. Erection or installation
 5. Testing of equipment and materials.
- F. The Contractor shall submit, as a part of the data submitted to the Construction Manager, a narrative report indicating the anticipated allocation by the Contractor of the following resources and work shifts for each activity which he proposes to be utilized on the Project:
1. labor resources;
 2. equipment resources; and
 3. whether it proposes the Work to be performed on single, double or triple shifts, and whether it is to be done on a 5, 6 or 7 day work week basis.
- G. The Construction Manager shall have the right to require the Contractor to modify any portion of the Contractor's Detailed Construction Schedule, or Recovery Schedule, as herein required, (including cost loading) with the Contractor bearing the expense thereof, which the Construction Manager reasonably determines to be:
1. impractical or unreasonable;
 2. based upon erroneous calculations or estimates;
 3. not in compliance with other provisions of the Contract Documents;
 4. required in order to ensure proper coordination by the Contractor of the Work of its subcontractors and with the work or services being provided by any separate contractors;
 5. necessary to avoid undue interference with the County's operations or those of any utility companies or adjoining property owners;
 6. necessary to ensure completion of the Work by the milestone and completion dates set forth in the Contract Documents;
 7. required in order for the Contractor to comply with the requirements of this Section or any other requirements of the Contract Documents; or
 8. not in accordance with the Contractor's actual operations.

1.4 COST LOADING

- A. As part of the submission of the Detailed Construction Schedule, the Contractor shall submit a breakdown of the expected value of each of the schedule activities for which payment is required.
- B. The cost breakdown of the Detailed Construction Schedule shall have a direct correlation to the Schedule of Values to be used as the basis for Applications for Payment.

1.5 UPDATING OF CONSTRUCTION SCHEDULE/PROGRESS REPORTS

- A. Not less than seven (7) calendar days before the submission of the monthly progress payment request, or on a date specified by the Construction Manager, the Contractor shall arrange for its Project Manager, Superintendent and necessary subcontractors and suppliers to attend a monthly schedule meeting with the Construction Manager to review the Contractor's report of actual progress. Said report shall set forth up-to-date and accurate progress data, and shall be prepared by the Contractor in consultation with all principal subcontractors and suppliers.
- B. The progress report of the Contractor shall show the activities, or portions of activities, completed during the reporting period, the actual start and finish dates for these activities, remaining duration and/or estimated completion dates for activities currently in progress, and quantities of material installed during the reporting period.
- C. The Construction Manager will produce a computerized update worksheet for the Contractor to complete as a part of this process.
- D. At the monthly schedule meeting a total review of the Project will take place including but not limited to, the following:
 - 1. Current update of the Detailed Construction Schedule
 - 2. Anticipated detailed construction activities for the subsequent report period
 - 3. Critical items pending
 - 4. Contractor requested changes to the Detailed Construction Schedule.
- E. The Contractor shall submit a narrative with the progress report which shall include, but not be limited to, a description of problem areas, current and anticipated delaying factors and their impact, explanations of corrective actions taken or planned, any proposed newly planned activities or changes in sequence, and proposed logic for a Recovery Schedule, if required, as further described herein. The report shall also include:
 - 1. A narrative describing actual Work accomplished during the reporting period
 - 2. A list of major construction equipment used on the Project during the reporting period
 - 3. The total number of men by craft actually engaged in the Work during the reporting period, with such total stated separately as to office, supervisory, and field personnel
 - 4. A manpower and equipment forecast for the succeeding thirty (30) days, stating the total number of men by craft, and separately stating such total as to office, supervisory and field personnel
 - 5. A list of Contractor supplied materials and equipment, indicating current availability and anticipated job site delivery dates
 - 6. Anticipated changes or additions to Contractor's supervisory personnel.

- F. As part of the updating process, the Construction Manager will calculate, based upon progress data provided by the Contractor and agreed to by the Construction Manager, the value of Work completed based on the sum of the cost loading amounts for all activities, including activities specifically defined for stored materials, less the amount previously paid. Summation of all values of each activity less the appropriate percent of retainage shall be the maximum amount payable to the Contractor, provided that the Contractor has complied with all requirements of the Contract Documents.
- G. No invoice for payment shall be submitted and no payment whatsoever will be made to the Contractor until the required narrative reports, as defined herein, have been submitted and the Detailed Construction Schedule has been updated.

1.6 RECOVERY SCHEDULE

- A. Should the updated Detailed Construction Schedule, at any time during the Contractor's performance, show, in the sole opinion of the Construction Manager, that the Contractor is behind schedule for any milestone or completion date for any location or category of work, the Contractor, at the request of the Construction Manager, shall prepare a Recovery Schedule within five (5) days, at no additional cost to the County (unless the County is solely responsible for the event or occurrence which has caused the schedule slippage), explaining and displaying how the Contractor intends to reschedule its Work in order to regain compliance with the Detailed Construction Schedule within thirty (30) calendar days.
- B. If the Contractor believes that all of the time can be recovered within thirty (30) calendar days, the Contractor will be permitted to prepare a Recovery Schedule as set forth below. However, if the Contractor believes it will take more than thirty (30) days to recover all of the lost time, it shall prepare and submit a request for revision to the Detailed Construction Schedule and comply with all of the requirements of a Schedule Revision as set forth in Paragraph 8 below.
- C. The Contractor shall prepare and submit to the Construction Manager a one month maximum duration Recovery Schedule, incorporating the best available information from subconsultants, subcontractors and others which will permit a return to the Detailed Construction Schedule at the earliest possible time. The Contractor shall prepare a Recovery Schedule to the same level of detail as the Detailed Construction Schedule. The Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.
- D. Within two (2) days after submission of the Recovery Schedule to the Construction Manager, the Contractor and any of the necessary subcontractors, suppliers, vendors, manufacturers, etc. shall participate in a conference with the Construction Manager to review and evaluate the Recovery Schedule. Within two (2) days of the conference, the Contractor shall submit the revisions necessitated by the review for the Construction Manager's review and approval. The Contractor shall use the approved Recovery Schedule as its plan for returning to the Detailed Construction Schedule.
- E. The Contractor shall confer continuously with the Construction Manager to assess the effectiveness of the Recovery Schedule. As a result of these conferences, the Construction Manager will direct the Contractor as follows:
 - 1. If the Construction Manager determines the Contractor continues behind schedule, the

Construction Manager will direct the Contractor to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the County and Construction Manager as provided elsewhere in the Contract Documents; or

2. If the Construction Manager determines the Contractor has successfully complied with provisions of the Recovery Schedule, the Construction Manager will direct the Contractor to return to the use of the approved Detailed Construction Schedule.
- F. In carrying out any approved Recovery Schedule, or whenever it becomes apparent that any critical activity completion date may not be met, the Contractor shall take any or all of the following minimum actions, as may be required, at no additional cost to the County:
1. Increase manpower to put the Work back on schedule.
 2. Increase the number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination which will place the Work back on schedule.
 3. Reschedule activities to achieve maximum practical concurrence and place the Work back on schedule.
- G. If the Contractor fails to take appropriate action as required by this Paragraph 7 to recover delays in the schedule, the Construction Manager may take action to attempt to put the Work back on schedule and deduct the cost of such action from monies due or to become due the Contractor in accordance with the Contract Documents.

1.7 SCHEDULE REVISIONS

- A. Should the Contractor desire to or be otherwise required under the Contract Documents to make modifications or changes in its method of operation, its sequence of Work or the duration of the activities in its Construction Schedule, it shall do so in accordance with the requirements of this Paragraph and the Contract Documents. The approved Detailed Construction Schedule may only be revised by written approval of the Construction Manager as provided herein.
- B. The Contractor shall submit requests for revisions to the Detailed Construction Schedule to the Construction Manager, using a Schedule Revision Form provided by the Construction Manager, together with written rationale for revisions and description of logic for rescheduling work, substantiating that the milestone and completion dates will be met as listed in the Contract Documents. Proposed revisions acceptable to the Construction Manager and County will be approved in writing and incorporated into the Detailed Construction Schedule.
- C. Requests for revision will be accompanied by evidence acceptable to the Construction Manager that the Contractor's suppliers, subcontractors and sub-subcontractors are in agreement with the proposed revisions.
- D. If there are separate contractors on the Project, the approval of the separate contractors shall be obtained to make the proposed schedule revisions. If accepted by the Construction Manager and County, the revisions shall be binding upon the Contractor and all separate contractors on the Project.

- E. The impact of all change orders to this Contract shall be included in the Detailed Construction Schedule.

1.8 FLOAT TIME

- A. Float or slack time associated with one chain of activities is defined as the amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as calculated as part of the currently approved construction schedule. Float or slack time shown on the currently approved construction schedule is not for exclusive use or benefit of either the County or the Contractor and is available for use by either of them according to whichever first needs the benefit of the float to facilitate the effective use of available resources and to minimize the impact of Project problems, delays, impact, acceleration or changes in the Work which may arise during performance. The Contractor specifically agrees that float time may be used by the County or Construction Manager in conjunction with their review activities or to resolve Project problems. The Contractor agrees that there will be no basis for any modification of the milestone or completion dates or an extension of the Contract Time, or a claim for additional compensation as a result of any Project problem, delay, impact, acceleration, or change order which only results in the loss of available float on the currently approved construction schedule.
- B. Float time shown on any construction schedule shall not be used arbitrarily by the Contractor in a manner which, in the opinion of the Construction Manager, unnecessarily delays separate contractors from proceeding with their work in a way which is detrimental to the interests of the County.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

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SECTION 01 32 20**CONSTRUCTION PROGRESS REPORTING****PART 1 - GENERAL****1.1 DAILY REPORTS**

- A. The Contractor's Superintendent shall prepare and submit Daily Reports throughout the construction phase of the Work. Daily Reports shall be kept in an orderly manner at the site, available for inspection or review when requested by the Construction Manager or the Architect. Copies of Daily Reports shall be accumulated and submitted to the Construction Manager on a weekly basis, on a regular day and time to be determined by the Construction Manager. Failure to submit Daily Reports or to comply with the format requirements below is cause for the Construction Manager to retain additional monies due the Contractor from the monthly Application(s) for Payment until such time as the reports have been brought up to date by the Contractor.
- B. Each Daily Report shall include the following information at a minimum:
 - 1. Manpower by subcontractor, trade, and skill level
 - 2. Weather and temperatures (AM and PM)
 - 3. List of visitors to the jobsite
 - 4. Specific work performed with locations
 - 5. Situations or circumstances which could delay the Work or give cause for a time extension or additional cost
 - 6. Instructions requested (and of whom)
 - 7. Materials received
 - 8. Major equipment arrival/departure
 - 9. Total days accrued under the terms of the Contract Documents
 - 10. Accidents and incidents
 - 11. Safety issues
 - 12. Meetings
 - 13. Other significant events at the jobsite
- C. The Contractor shall take the necessary action required to specifically alert the Construction Manager to items which could result in impacts to the progress of the Work. Such items shall be clearly highlighted in the report.
- D. All Daily Reports shall be clearly handwritten or typed. Poor copies, reports in sloppy or illegible handwriting, or on wrinkled paper will not be accepted.

1.2 FIELD CONDITION REPORTS

- A. Field condition reports: Immediately on discovery of a difference between field conditions and the contract documents, prepare a detailed report. Submit with a request for information (RFI). Include a detailed description of the differing conditions, together with recommendations for changing the contract documents.

1.3 SPECIAL REPORTS

- A. General: Submit special reports to Construction Manager and Architect within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting unusual events: When an event of an unusual and significant nature occurs at project site, whether or not related directly to the work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Construction Manager and Architect in advance when these events are known or predictable.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 33

PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 CONSTRUCTION PHOTOGRAPHS, GENERAL

- A. Take color photographs on a weekly basis to show progress of the work. Submit photographs with contractor's monthly application for payment.
- B. Take photographs beginning at first month of construction activity and terminating at date of final acceptance.
- C. Take photographs on same day each week, weather permitting, and at same time of day.
- D. Take photographs of same standard locations each week, unless otherwise directed by Owner. Assign a letter to each of the standard photograph locations, for comparison with previous and future submittals.

1.2 SUBMITTAL OF PHOTOGRAPHS

- A. Submit photographs in duplicate with contractor's application for payment. Format may be Print or Digital.
- B. Print
 - 1. Size: 8" x 10"
 - 2. Paper: Glossy
 - 3. Label back of each photograph with project name, date, description and photograph number of location or element of the work and contractor's name.
- C. Digital
 - 1. Resolution: 5 megapixel
 - 2. Format: jpeg
 - 3. Time and date stamp each photograph
 - 4. File name to include Project Name, letter of photograph location.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 GENERAL INFORMATION

- A. This Section covers mandatory provisions for requests for product substitution during the bid period, and submission of product information and for submission of product information and for substitution procedures, after Contract award.
- B. Definitions:
 - 1. "Products" are defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for this Project or taken from the Contractor's stock of previously purchased products.
 - 2. "Materials" are defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form units of the Work.
 - 3. "Equipment" is defined as a product with operational parts, regardless of whether motorized manually operated, and particularly including products with service connections (wiring, piping, etc.).
 - 4. Definitions in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including specialties, systems, finishes, accessories, furnishings, special construction and similar terms which are self-explanatory and have recognized meanings in the construction industry.

1.2 PRODUCT SUBSTITUTION APPROVAL (BID PERIOD)

- A. As part of the bidding process, contractors, subcontractors or manufacturers may request approval for product substitutions for items that are specified allowing "or equal".
- B. Only products submitted following the proper procedure, detailed in this section, and submitted by the deadline for the last Request for Information, will be reviewed and considered.

1.3 INITIAL PRODUCT SUBMISSION (AFTER CONTRACT AWARD)

- A. As part of the Submittal Register specified in Section 01 33 23 of the General Requirements, provide a list showing names of products together with the names of manufacturer of each and, where applicable, the name of the installing subcontractor.
- B. Only specified products will be reviewed, except as herein below provided for substitutions.

1.4 PRODUCTS

- A. General Product Compliances

1. The compliance requirements for individual products as indicated by the Contract Documents are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details and other similar forms and methods of indicating requirements, compliance with all of same being a requirement.
2. The Contractor's options for selection of products are limited by the Contract Document requirements and by governing regulations, and are NOT controlled by industry traditions or procedures experienced by the Contractor on previous construction projects. Required procedures for the selection of product options include, but are not limited to, the following:
 - a. If material specified in the Contract Documents is not available on the current market, alternate materials may be proposed by the Contractor through the Construction Manager for Architect and County approval.
 - b. In the Contract Documents where a specific brand, make, or manufacturer is denoted, the intent is that it be considered the standard for establishing the style, type, character and quality level of the article desired, but not as a restriction in the selection process to the specific brand, make or manufacturer named.
 - c. Alternate brands, make of material, device or equipment which, in the opinion of the Architect, are recognized as the equal of that specified on the basis of quality, workmanship and economy of operation considerations and are suitable for the purpose intended may qualify for acceptance.
 - d. Standards, Codes and Regulations: Where only compliance with an imposed standard, code or regulation is required, selection from among products which comply with requirements including those standards, codes and regulations shall be at the Contractor's option.
 - e. Performance Requirements: Provide products which comply with the specific performances specified, and which are recommended by the manufacturer (in published product literature or by individual certification) for the application indicated. Overall performance of a product is implied where the product is specified with only certain performance requirements.
 - f. Prescriptive Requirements: Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing and similar operations during the manufacturing process.
3. Visual Matching: Where matching with an established sample is required, final judgment of whether a product proposed by the Contractor matches the sample satisfactorily lies with the Architect. Where no product within the specified cost range is available for a satisfactory match that complies with requirements, comply with the provisions in the Contract Documents related to "Substitutions" and "Change Orders" for the selection of a matching product outside the established cost category or of a product not complying with requirements.
4. Visual Selection: Except as otherwise indicated, where specified product requirements include "...as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product (complying with the requirements) is at the option of the Contractor with the subsequent selection of color, pattern and texture to be by the Architect.

B. Quality Assurance

1. Source Limitation: To the greatest extent possible for each unit of work, provide products, materials or equipment of a singular generic kind and from a single source.
2. Compatibility of Options: Where more than one choice is available as options for Contractor's selection of a product or material, select an option which is compatible with other products and materials already selected. Total compatibility among options is not assured by limitations within the Contract Documents, but must be provided by the Contractor. Compatibility is a basic general requirement of product and material selections.
3. Provide products and materials which are undamaged and unused at the time of installation, and which are complete with accessories, trim, finishes, safety guards and labels, maintenance instructions and other devices and details required for a complete installation and for the intended use and effect.
4. Standard Products: Where available, provide standard products of types which have been produced and used previously and successfully in similar applications on other projects.
5. Continued Availability: Where additional amounts of a product, by the nature of its application, are likely to be needed by the County at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to the County at such later date.
6. Warranties and Guarantees: Warranties are in several categories including those indicated in the General Requirements and in the Technical Specifications.

C. Certification

1. Certification of compliance with specification performance standards and manufacturers' specifications and directions shall be furnished for any portion of the Work for which specific performance requirements and/or manufacturers' specifications are listed. The Contractor shall be responsible for securing two (2) copies of each certification as required and transmitting same to the Construction Manager.
2. Each item requiring certification shall be so noted and an affidavit must be filed singly to cover each specified material, installation, application and the like.

D. Certification of Compatibility: If requested, the material and equipment manufacturers shall certify in writing that:

1. Other manufacturers' materials and/or equipment coming in contact with their product are compatible with their product in every way and that the intended performance of the system in which their product is incorporated will not be affected as a result of such contact. Also, that a physical breakdown of their product by chemical reaction or otherwise will not occur as a result of such contact.

2. The combination of products by one manufacturer to make up the manufacturer's specified system will contribute to the performance of the system as intended, and will remain operational, reliable and durable. The manufacturer will be the source of routine maintenance and replacement parts.
- E. Nameplates: Except as otherwise indicated for required approval labels, and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on the exterior of the Work.
1. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.
 2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings and similar essential operating data. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.
- F. Reuse of Existing Material
1. Except where specified or approved in writing, materials and equipment removed from an existing structure shall not be used in the Work.
 2. Where use of existing materials and/or equipment is specified or approved in writing, use special care in removing, handling, storing and reinstallation to assure proper function of same in the completed Work.

1.5 CONSIDERATION OF SUBSTITUTIONS

- A. The requirements for substitutions do not apply to specified Contractor options on products and construction methods. Revisions to Contract Documents, where requested by the County or the Architect, are "changes" and not "substitutions." The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions", nor do they constitute a basis for change orders, except as provided for in the Contract Documents. Otherwise, the Contractor's requests for changes in products, materials and methods of construction required by the Contract Documents are considered requests for "substitutions", and are subject to the requirements herein.
- B. Substitutions for a specified product, after contract award, will be considered only if the specified product is not obtainable, or if delivery date of all such specified products is such that the scheduled date of Substantial Completion of the Work will be delayed if the specified product remains a requirement. The latter cause shall only be considered if the Construction Manager is notified of this condition within thirty (30) days of the Notice to Proceed for the Contract, or if after order has been placed, circumstances beyond the Contractor's control, such as labor disputes affecting manufacture or delivery of product cause such a delay. Under no circumstances will a substitution be allowed for reasons of potential delay due to Contractor's failure to execute timely purchase orders with the vendor or subcontractor, or due to Contractor's failure to submit product data or shop drawings in adequate time to allow

for review and possible re-submittal prior to the required delivery date.

- C. Qualifications (during Bid Period): Substitutions will only be considered if the specifications denote “or equal” acceptance, and based upon the Contractor's, Subcontractor's or Manufacturer's representation that by submitting any Request for Substitution, they:
 - 1. Have researched the proposed substitution and has determined that it is equivalent to or superior in all respects to that specified.
 - 2. Confirm that the same warranties or bonds apply for the substitution as for the specified product, material, system and/or construction method.
 - 3. Identify all coordination issues resulting from the installation of any accepted substitution into the Work.
- D. Qualifications (after Contract Award): Substitutions will only be considered for the reasons noted above, based upon the Contractor's representation that by submitting any Request for Substitution, the Contractor:
 - 1. Has researched the proposed substitution and has determined that it is equivalent to or superior in all respects to that specified.
 - 2. Confirms that the same warranties or bonds apply for the substitution as for the specified product, material, system and/or construction method.
 - 3. Has determined by its best judgment and experience that the proposed substitution is either necessary or in the County's best interest.
 - 4. Will coordinate the installation of any accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.
 - 5. Waives claims for additional costs caused by the substitution which may subsequently become apparent.
 - 6. Has submitted complete cost data which includes all related costs under its Contract.
- E. Disqualifications: No consideration will be given to proposed substitutions when:
 - 1. They are indicated or implied on shop drawing submittals without having been formally requested in accord with provisions specified herein.
 - 2. For their implementation they require a major revision in the Work in order that their use may be accommodated.
 - 3. They materially alter the design concept including color or function originally intended by the specified product.

1.6 SUBMITTAL PROCEDURES ON SUBSTITUTIONS

- A. Substitution Request Form: The attached form must be filled out in its entirety and submitted in addition to the submittal information and data noted below. Submit a separate Substitution Request Form for each proposed substitution.

- B. Submittals: Submit three (3) copies of each Substitution Request Form and of each of the following related support items:
1. Identify product for which substitution is proposed by description, brand name and catalog number, giving specification section number where specified.
 2. Identify in similar manner the proposed substitution and include the manufacturer's name, address and telephone number.
 3. Itemize differences between product specified and proposed substitution, including but not limited to physical, color, function and guarantee considerations.
 4. Itemize changes in adjacent work occasioned by proposed substitutions.
 5. Accompany request with test data from independent laboratory substantiating quality and performance of proposed substitution.
 6. Attach manufacturer's complete instructions on storage, handling and installation.
 7. Provide list of three projects giving names, addresses and phone numbers of owners, general contractors, and architects where proposed product has been used.
 8. State proposed change to the Contract Sum and proposed change to the Contract Time if substitution is accepted and confirmed by Change Order. If the proposed substitution involves a change to the Contract Sum, any change in cost of adjacent or related Work shall be included also.
 9. State the number of days (not less than 15) during which the substitution as submitted is subjected to acceptance.
 10. Include any cost savings to the County which might result from this substitution.

1.7 ACCEPTANCE OR REJECTION

- A. The Architect and/or the Construction Manager have the authority to reject any substitution submittals due to incompleteness or for other good reason.
- B. The Architect will be the sole judge of the acceptability of the proposed substitution.
- C. Only the Architect, with the County's approval, will have the authority to change the specified standards of quality. However, neither this authority to act under this provision, or any decision made in good faith either to exercise or not to exercise this authority, shall give rise to any duty or responsibility of the Architect to the Contractor, subcontractor of any tier, any or their agents or employees or other persons performing the Work or offering to perform the Work.
- D. The Construction Manager will attain a prompt review from the Architect of the Request for Substitution which complies with the above provisions.
- E. If no exceptions are taken, approval will be granted in writing. If the substitution represents a change to the Contract Documents, the substitution will be confirmed by Change Order.

- F. If accepted, the Contractor explicitly assumes all liability for the fit and function of all surrounding assemblies, and all interfacing devices.
- G. If rejected, the Contractor will be promptly notified, and the Contractor shall proceed with the Work in accordance with the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

SUBSTITUTION REQUEST FORM *(For use by Architect)*

For Use During Bid Period

☐ Accepted
☐ Accepted as Noted
☐ Not Accepted
☐ Received Too Late

From: _____

To: Williams-Russell and Johnson, Inc.

Project: _____ ITB No. _____

We hereby submit for your consideration the following proposed substitution in lieu of the specified item for the above-named project:

Proposed Substitution:

Specified Item:

Reference Drawing No(s). Reference Specification Section/Paragraph

1. Attach complete information and technical data on any changes to the program, drawings, specifications, or other Contract Documents which the proposed substitution will necessitate for its proper incorporation.
2. Accompany this request with all samples and substantiating data necessary to prove equal quality and performance levels of the proposed substitution to those of the specified item. Clearly mark manufacturer's literature to highlight the indicated equality in performance.
3. Respond to each of the following questions (use additional sheets if necessary):
 - A. What is the quality level of the proposed substitution versus that of the specified item?
 - B. What are significant variations between the proposed substitution and the specified item?
 - C. What affect(s) would the proposed substitution have on the operation and maintenance of the completed facility?

SUBSTITUTION REQUEST FORM (continued)
For Use During Bid Period

D. Are manufacturer's warranties for the proposed substitution and the specified item the same?

Yes _____ No _____

If no, explain:

E. What effect would the proposed substitution have on other trades?

F. How would the proposed substitution affect the project schedule?

G. What reason(s) justifies this request for a substitution?

The undersigned states and certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item and assumes the liability for the provision of equal performance of same as a minimum. THIS FORM MUST BE SIGNED.

SIGNATURE: _____ DATE: _____

NAME (type or print): _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: _____

NOTE: Signature shall be by a person having authority to legally bind his/her firm to the above terms. Failure to provide a legally binding signature will result in the retraction of any approval of this proposed substitution.

SUBSTITUTION REQUEST FORM *(For use by Architect)**For Use Only After Contract Award*

☐ Accepted
☐ Accepted as Noted
☐ Not Accepted
☐ Received Too Late

From: _____

To: Williams-Russell and Johnson, Inc.

Project: _____ Contract No. _____

We hereby submit for your consideration the following proposed substitution in lieu of the specified item for the above-named project:

Proposed Substitution:

Specified Item:

Reference Drawing No(s).

Reference Specification Section/Paragraph

- | Reference Drawing No(s). | Reference Specification Section/Paragraph |
|--------------------------|---|
| 1. | Attach <u>complete</u> information and technical data on any changes to the program, drawings, specifications, or other Contract Documents which the proposed substitution will necessitate for its proper incorporation. |
| 2. | Accompany this request with all samples and substantiating data necessary to prove equal quality and performance levels of the proposed substitution to those of the specified item. Clearly mark manufacturer's literature to highlight the indicated equality in performance. |
| 3. | Respond to each of the following questions (use additional sheets if necessary): |
| A. | What is the quality level of the proposed substitution versus that of the specified item? |
| | _____ |
| | _____ |
| B. | What are significant variations between the proposed substitution and the specified item? |
| | _____ |
| | _____ |
| C. | What affect(s) would the proposed substitution have on the operation and maintenance of the completed facility? |
| | _____ |
| | _____ |

SUBSTITUTION REQUEST FORM (continued)

For Use Only After Contract Award

D. Are manufacturer's warranties for the proposed substitution and the specified item the same?

Yes _____ No _____

If no, explain:

E. What effect would the proposed substitution have on other trades?

F. How would the proposed substitution affect the project schedule?

G. What are accurate comparative cost figures between the proposed substitution and the specified item?

H. What reason(s) justifies this request for a substitution?

The undersigned states and certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item and assumes the liability for the provision of equal performance of same as a minimum. THIS FORM MUST BE SIGNED.

SIGNATURE: _____ DATE: _____

NAME (type or print): _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: _____

NOTE: Signature shall be by a person having authority to legally bind his/her firm to the above terms. Failure to provide a legally binding signature will result in the retraction of any approval of this proposed substitution.

END OF SECTION

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SECTION 01 33 23**SHOP DRAWINGS, PRODUCT DATA AND SAMPLES****PART 1 - GENERAL****1.1 GENERAL**

- A. This Section covers provisions for the submittal of shop drawings, product data, and samples prior to construction, and supplements the Owner-Contractor Agreement.
- B. The Contractor is required to make all submittals in accordance with the Contract Documents. Refer to the individual Technical Specifications for identification of equipment and materials for which submittals are required.
- C. Provisions in this Section are mandatory procedures for preparing and submitting shop drawings, product data, and samples.
- D. Required shop drawings, product data, and samples shall be coordinated, prepared, and submitted so as not to impact the project schedule. Submittals for interfacing units of work, and different categories of submittals for the same work, shall be coordinated and sequenced so that one will not be delayed by another. Adequate time shall be allowed for review by the Architect, and for possible resubmittal. Delays or impacts due to the Contractor's failure to make or process submittals in a timely fashion are solely the responsibility of the Contractor. The Contractor has an obligation to notify the Construction Manager in a timely manner if the submittal review process, with respect to reviews by the Architect might cause a schedule impact on the required delivery of any materials or fabricated assemblies required to execute the Work.
- E. Project delays or delays in the purchasing of materials or equipment occasioned by the requirement for resubmission of shop drawings, product data, and samples not in accordance with the Contract Documents are the Contractor's sole responsibility and will not be considered valid justification for time extensions.
- F. No portion of the Work requiring the submittal of shop drawings, product data, or samples shall be commenced until each such submittal has been reviewed by the Architect, and the action required on the returned submittal does not require a correction and resubmittal (i.e., "No Exceptions Taken" or "Make Corrections Noted," or similar notation); and further, each installer shall have possession of such final reviewed submittal prior to commencing its portion of the Work.
- G. The Contractor shall be responsible for distribution of all copies of initial and approved submittals required for coordination with others concerned with the Work.
- H. Submittals requiring review by the Architect shall be delivered to the Construction Manager's office, unless directed otherwise by the Construction Manager. Submittals are to be scheduled and submitted to allow adequate time for review.

1.2 DEFINITIONS

- A. "Shop Drawings" are drawings, diagrams, illustrations, schedules, performance charts, manufacturer's data sheets, brochures and other data which are prepared and submitted by

the Contractor and its subcontractors to illustrate in detail some portion of the Work. The Architect's drawings are not acceptable as shop drawings.

- B. "Product Data" are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor and its subcontractors to illustrate a material, product, or system for some portion of the Work.
- C. "Samples" are physical examples prepared for submission by the Contractor and its subcontractors to illustrate materials, equipment, or workmanship, and to establish standards by which the work will be judged as complying with the Contract Documents. Mock-ups are a special form of samples, too large or otherwise inconvenient for transmittal in the manner specified. Mock-up requirements are specified elsewhere in the Contract Documents.

1.3 SUBMITTAL REGISTER

- A. Within ten (10) days of the Contractor's receipt of the Notice of Award, the Contractor shall submit a comprehensive Submittal Register to the Construction Manager, showing all items requiring submission as defined in the General Requirements and the Technical Specifications.
- B. No submittals will be accepted or reviewed until the Submittal Register has been submitted, reviewed, and approved by the Architect and the Construction Manager as to content and format.
- C. The Submittal Register shall be updated by the Contractor and resubmitted on a monthly basis, or as otherwise required by the Construction Manager.
- D. The initial format of the Submittal Register shall be determined by the Contractor. If any aspect is lacking, the Submittal Register shall be reworked and resubmitted in a format as prescribed by and to the level of detail required by the Construction Manager.
- E. The Submittal Register shall be organized by Specification Section, and shall be further broken down as submittals from subcontractors will be structured.
- F. The Submittal Register shall include all required submittals for test procedures, training programs, operation and maintenance manuals, and any other submittals required by the General Requirements.
- G. The Submittal Register shall include the following information at a minimum:
 - 1. Submittal breakdown by Specification Section and Paragraph number.
 - 2. Scheduled date for initial submittal of each item.
 - 3. Number of calendar days required after review to fabricate and deliver the specified item to the jobsite (if applicable).

1.4 PREPARATION OF SUBMITTALS

- A. General Identification: All shop drawings, product data, and samples submitted for review shall have the following identification data, as applicable, contained thereon or permanently affixed thereto.

1. Date of submission and the dates of any previous submissions
2. Project title and location
3. Job number
4. Contract identification
5. Names of the Contractor, subcontractor, installer, supplier, and manufacturer
6. Identification of product (brand name, model number), use, and location
7. For each shop drawing: drawing number, drawing title, revision number, and date of drawing and all subsequent revisions
8. Corresponding Specification Section and Paragraph reference from Contract Documents
9. Field dimensions, clearly identified as such
10. Relation to adjacent or critical features of Work or materials
11. Applicable standards, such as ASTM or Federal Specification numbers
12. Identification of deviations from the Contract Documents
13. Identification of revisions from previous submittals (if a resubmittal)
14. Contractor's stamp, initialed or signed, and dated

B. Shop Drawing Preparation

1. Provide newly-prepared information with graphics at accurate scale (except as otherwise indicated).
2. Number all sheets consecutively.
3. Indicate all working and erection dimensions. Identify all dimensions based on field measurement.
4. Show arrangements and sectional views.
5. Indicate kinds of materials and finishes, anchoring and fastening details, including information for making connections to other Work. Furnish installation instructions to be followed in the field to achieve manufacturer's designed and planned intentions.
6. Indicate corresponding detail numbers from Contract Drawings in addition to numbering systems used on shop drawings.
7. Form:
 - a. Up to 11" x 17" in size may be either prints on opaque paper, or reproducible transparency. The use of 8-1/2" x 14" size shall not be acceptable.
 - b. Prepare submissions larger than above on reproducible, correctable transparent sheets between 18" x 24" (minimum) and 30" x 45" (maximum) in size.
8. Number of copies to be submitted:
 - a. The Contractor shall submit one (1) reproducible copy and five (5) print copies for review.
 - b. Copies shall be grouped together such that one set of all copies can be removed immediately without the necessity to remove and re-sequence the remaining copies.
9. Associated drawings relating to a complete assembly shall be submitted simultaneously to the greatest extent possible, so that each may be checked in relation to each other and the total assembly.

C. Product Data Preparation

1. Product data submittals shall be made by Specification Section. All items within a

Specification Section requiring submissions shall be submitted together. If two or more Sections require inter-coordination (e.g. Air Handling Unit and Vibration Isolation, or Emergency Generator and Transfer Switch), they shall be submitted at the same time. Each individual submittal item shall be marked to show the Specification Paragraph number which pertains to that item.

2. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and coordination requirements.
3. Clearly mark each copy to identify pertinent products, brand names, or models, and to indicate which choices and options are applicable to the Work.
4. Modify each copy to delete information which is not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work and to job conditions.
5. Include performance characteristics and capacities.
6. Include dimensions and clearances required.
7. Include wiring or piping diagrams and controls.
8. Form:
 - a. Submit all items within a Specification Section in a tabbed binder, with an index.
 - b. Submittals for multiple but related Specification Sections may be grouped in the same binder, if adequately indexed and tabbed for easy reference.
 - c. If product submittals bound together exceed the capacity of one binder, two or more binders shall be used, and notations shall be made on the covers of each indicating the number of binders in the set and the number of each binder (i.e., 2 of 3).
9. Number of copies to be submitted: five (5).

D. Sample Preparation

1. Provide samples which are identical with the final condition of proposed materials or products for the Work.
2. Provide "range" samples (not less than three (3) units) where unavoidable variations must be expected, and describe or identify variations between units of each set.
3. Provide a full set of optional samples where selection is required.
4. Provide information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards.
5. Number of samples to be submitted: three (3).
6. Maintain one set of all approved samples at the jobsite, in suitable condition, for quality control comparisons by the Construction Manager. Jobsite quality control samples shall become the property of the County.
7. Returned submittals which are intended or permitted to be incorporated into the Work shall be so indicated in the individual Specification Sections, and shall be in a suitable and undamaged condition at the time of incorporation.

E. Other Submittals

1. Inspection and Test Reports: Classify each as either a "shop drawing" or "product data," depending on whether report is uniquely prepared for the Project or a standard publication of workmanship control testing at point of production, and process accordingly.
2. Letters of Material Certification: Submit for specified materials, items, or equipment, and when requested. Letters of certification shall certify that material or equipment submitted complies with the Contract Documents and shall be submitted

- with substantiating supporting data (i.e., test reports from approved independent testing laboratory or other approved source). Classify as “product data.”
3. Fire Rating and Acoustical Rating Certifications: Submit notarized certifications with shop drawings and material samples which are required to show or have a fire or acoustical rating.

1.5 TRANSMITTAL

- A. Transmit all shop drawings, product data, and samples to the Construction Manager for transmittal to the Architect.
- B. Accompany each submittal to the Construction Manager with a transmittal letter, in duplicate, containing the Project name, Contractor’s name, contract number and description, and brief description of submittal, including the number of drawing sets, data sets, and/or samples included. Include an outline of deviations, if any, from the requirements of the Contract Documents, and itemize proposed changes in the Contract Sum or Contract Time, if any. Where no change in the Contract Sum or Contract Time is indicated by the Contractor, it shall be concluded that no such change is involved for making the change.

1.6 CONTRACTOR’S RESPONSIBILITIES

- A. The Contractor shall prepare and submit all submittals with promptness and in accordance with the project schedule.
- B. The Contractor shall determine and verify prior to submittal of any shop drawing, product data, or sample, the following:
 1. Field measurements
 2. Field construction criteria and job conditions
 3. Catalog numbers and similar data
 4. Conformance with Specifications
- C. Any deviation in a submittal from the requirements of the Contract Documents shall be called to the attention of the reviewing party in writing at the time of the submittal.
- D. The Contractor shall affix its stamp, with initials or signature, and date, prior to submittal to the Construction Manager, indicating its review and concurrence that the submittal conforms to the Contract Documents.
- E. All copies of submittals shall include the stamp indicated above, and previous revisions, if any, shall be clouded and noted. Failure to adhere to these requirements will result in the return of the unreviewed submittal to the Contractor for re-submittal, with the Contractor responsible for any impact to the project schedule resulting there from.
- F. If re-submittals are necessary, they shall be made as specified above for initial submittals. Re-submittals shall highlight all revisions made and the cover shall include the phrase, “Re-submittal No. _____.”
- G. All re-submittals shall carry the same submittal number but shall have a suffix designation which is designed to signify that the package is a re-submittal. This suffix designation shall be changed for each subsequent re-submittal.

1.7 CONSTRUCTION MANAGER'S RESPONSIBILITIES

- A. The Construction Manager will provide a general review of all submittals for completeness and compliance with submittal procedures as outlined herein.
- B. The Construction Manager will return to the Contractor, without review, all submittals not bearing the Contractor's review stamp or not indicating that the submittal has been reviewed by the Contractor. All costs resulting from unnecessary delays of this type will be the responsibility of the Contractor.
- C. The Construction Manager will forward acceptable submittals to the Architect for review.
- D. After the Architect review, the Construction Manager will forward reviewed submittals to the Contractor and retain one copy for the County. The Contractor will provide additional distribution copies to the Construction Manager of any submittals in a "No Exceptions Taken" status as directed by the Construction Manager at any time during execution of the contract.

1.8 ARCHITECT'S RESPONSIBILITIES

- A. Shop drawings, product data, and samples will be examined by the Architect with reasonable promptness and returned to the Construction Manager. Allow a reasonable time for processing by the Architect and the Construction Manager in addition to transit time.
- B. Shop drawings, product data, and samples will be returned to the Contractor noted for action as follows:

Action

Meaning

Reviewed:

Architect finds no contract deviations on/of the submittal. Contractor may incorporate the submittal into the work. Contractor in doing so has full responsibility for complying with the contract. Architect will endeavor to identify any deficiencies with submittal but takes no responsibility for oversight.

Reviewed and noted:

Architect finds minor deficiencies with submittal and so notes on the submittal. Contractor may incorporate corrected work into the project and provide corrected submittal for project record.

Resubmit:

Architect finds submittal in non-conformance or there are sufficient deviations from the contract documents that require revisions and resubmittals prior to incorporation into the work.

Reviewed for Information only:

Architect reviewed the document only to further understand the Contractor's intent.

- C. The Architect will apply its document review stamp, with signature or initials, on all reviewed copies of submittals. Through the Construction Manager, one copy of all reviewed submittals will be returned to the Contractor; for shop drawings where reproducible copies are submitted, one print and one reproducible copy will be returned.

- D. The Technical Specifications for structural, mechanical and electrical work may modify the above requirements and shall govern in the event of conflict.
- E. If the Contractor has a complaint with either the time required or the information provided by the Architect's review, it shall be expressed in writing at the time the submittal is returned. Failure by the Contractor to file such complaints at that time will prevent attempting to allege delays or impacts resulting there from at a later date. Such complaints must be fully detailed, and if additional information is requested by the Construction Manager, it shall be provided as soon as becomes available, but in no case later than ten (10) days from the return of the submittal in question.
- F. The Architect's review of a submittal shall not be construed as an indication that it is correct or suitable, nor that Work represented by a submittal complies with the Contract Documents, except as to matters of finish, color, and other aesthetic matters left to the Architect's decision by the Contract Documents. Further, reviews by the Architect of submittals of details for any material, apparatus, device, etc., will not relieve the Contractor from responsibility for furnishing same of proper dimension, size, quantity, and quality to efficiently perform the Work and carry out the requirements and intent of the Contract Documents.

1.9 RECORD SUBMITTALS

- A. At Substantial Completion of the Work, the Contractor shall deliver to the Construction Manager one copy of all final, approved submittals for the County's record.
- B. Record submittals not in the form of drawing rolls shall be neatly labeled and organized by Specification Section and boxed in a "Banker's Box" or equivalent. Rolls of shop drawings shall be labeled appropriately for easy reference.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 35 00

SPECIAL PROCEDURES

PART 1 - GENERAL

1.1 ONGOING CONSTRUCTION MANAGER OPERATIONS/SITE ACCESS

- A. Construction Parking: Construction parking shall limited to area approved by and coordinated with the Medical Examiner Office facility manager. No parking is allowed on areas adjacent to the construction limits or on any of the permanent spaces available for the Construction Manager's employees or visitors. Contractor shall be responsible for providing off-site parking and worker transportation to the site as required meeting this condition.
- B. Normal Business Hours: The Medical Examiner Office normal business hours are 8 AM to 5 PM on Monday through Friday.
- C. Construction Manager Notifications: Contractor shall coordinate with Construction Manager prior to any construction operations that interfere, alter or otherwise impact ongoing business operations. Such notice shall be provided in writing and, unless otherwise specified, with not less than seven (7) days advance notice. Examples requiring notification include work in existing buildings, high noise levels, shut down of existing buildings, temporary interruption of utilities, and work outside of normal business hours.
- D. Access to Existing Buildings: Access shall be coordinated with the Construction Manager. All work in the existing buildings shall be performed during the hours specified by Construction Manager. Construction Manager notification shall be provided in writing not less than seven (7) days prior to commencing work in existing buildings. Contractor shall comply with any reasonable Construction Manager security procedures for work in existing buildings.
- E. Temporary Offices and Storage for the Contractor shall be located within the zone designated by Construction Manager and Facilities Management.

1.2 LIMITS OF CONSTRUCTION

- A. Maintaining the site in its existing condition is of the highest priority to the Construction Manager. This includes retaining existing sidewalk, curb and landscape. Strict limits of construction for work on the site must be observed. The limits of construction define an area for site access, staging, parking, building access and all other construction related activities. These limits shall be clearly defined on the site through temporary fencing or other means acceptable to the Construction Manager and shall be strictly enforced by the Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 35 29**HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES****PART 1 GENERAL****1.1 DESCRIPTION**

- A. The work of this section consists of establishing an effective accident prevention program and providing a safe environment for all personnel and visitors.

1.2 SUBMITTALS

- A. Accident Prevention Program: Before on-site work begins, submit for approval an accident prevention program. The Project Manager will review the proposed program for compliance with OSHA and project requirements. If the program requires any revisions or corrections, the Contractor shall resubmit the program within 10 days. No progress payments will be made until the program is approved. The program shall include:
1. Name of responsible supervisor to carry out the program.
 2. Weekly and monthly safety meetings.
 3. First aid procedures.
 4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to ensure property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase by reference to specification section or division numbers.
 5. Training, both initial and continuing.
 6. Planning for possible emergency situations, such as floods, fires, cave-ins, slides, explosions, power outages, and wind storms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.
 7. Cleaning.
 8. Fire Protection.
- B. Submit a copy of test reports, as required by OSHA, for personnel working with hazardous materials.
- C. Submit a report of safety meetings and of inspections.
- D. Upon request, submit proof of employees' qualifications to perform assigned duties in a safe manner.

1.3 QUALITY ASSURANCE

- A. Clauses entitled "Accident Prevention" and "Permits and Responsibilities" of the contract. In case of conflicts between Federal, state, and local safety and health requirements, the most stringent shall apply. Equipment or tools not meeting OSHA requirements will not be allowed on the project sites. Failure to comply with the requirements of this section and related sections may result in suspension of work.
- B. Qualifications of Employees:
1. Ensure that employees are physically qualified to perform their assigned duties in a safe manner.

2. Do not allow employees to work whose ability or alertness is impaired because of drugs, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.
3. Operators of vehicles, mobile equipment, hoisting equipment, and hazardous plant equipment shall be able to understand signs, signals, and operating instructions, and be capable of operating such equipment. Provide operating instructions for all equipment. Newly hired operators shall be individually tested by an experienced operator or supervisor to determine if they are capable of safely operating equipment.

1.4 ACCIDENT REPORTING

- A. Reportable Accidents: A reportable accident is defined as death, occupational disease, traumatic injury to employees or the public, property damage by accident in excess of \$100, and fires. Notify Project Manager immediately in the event of a reportable accident. Within 7 days of a reportable accident, fill out and forward to Project Manager an Accident/Property Damage Report.
- B. All Other Accidents: The Contractor shall report all other accidents to the Project Manager as soon as possible and assist the Project Manager and other officials as required in the investigation of the accident.

PART 2 PRODUCTS

2.1 FIRST AID FACILITIES

- A. Provide adequate facilities for the number of employees and the type of construction at the site.

2.2 PERSONNEL PROTECTIVE EQUIPMENT

- A. Meet requirements of NIOSH and MSHA.

PART 3 EXECUTION

3.1 EMERGENCY INSTRUCTIONS

- A. Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

3.2 FIRE AND LIFE SAFETY

- A. Provide and maintain the fire and life safety requirements in NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations).
- B. Contractor shall have a Hazard Communications Plan; store hazardous materials in accordance with manufacturer's and OSHA recommendations; immediately report all spills of hazardous materials to the park; and maintain a spill emergency response kit.

3.3 PROTECTIVE EQUIPMENT

- A. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repair, as appropriate, personal items before issuing them to another individual.
- B. Inspect and maintain other protective equipment and devices before use and on a periodic basis to ensure safe operation.

3.4 SAFETY MEETINGS

- A. As a minimum, conduct weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by a foreman and attended by all construction personnel at the worksite.
- B. Conduct monthly safety meetings for all levels of supervision. Notify the Project Manager of meeting dates and times. These meetings shall be used to review the effectiveness of the Contractor's safety effort, to resolve current health and safety problems, to provide a forum for planning safe construction activities, and for updating the accident prevention program. The Project Manager will attend the meeting and enter the results of the meetings into the daily log.

3.5 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

- A. A hard hat area will be designated by the Project Manager. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Project Manager.
- B. It is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary protective equipment at all times. As a minimum, provide six hard hats for use by visitors. Change liners before reissuing hats.

3.6 TRAINING

- A. First Aid: Provide adequate training to ensure prompt and efficient first aid.
- B. Hazardous Material: Train and instruct each employee exposed to hazardous material in safe and approved methods of handling and storage. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

END OF SECTION

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SECTION 01 42 19

REFERENCE STANDARDS

PART 1 - GENERAL

1.1 APPLICABILITY OF STANDARDS

- A. Where reference is made to standards or specifications published by various organizations ("standards"), the Work shall conform to latest edition of such standards as amended and revised in effect at the date of Contract, unless a specific date is indicated.
- B. Where material is designated for certain applications, material shall conform to standards designated in the applicable building code governing the Work. Similarly, unless otherwise specified, installation methods and standards of workmanship shall also conform to standards required by such code. Where no particular material is specified for a certain use, the Contractor shall select from choices offered in the governing code.
- C. Where a standard does not provide all information necessary for the complete installation of an item, comply with manufacturer's instructions for installation and workmanship.
- D. Where specific articles, sections, divisions or headings for standards are not given, such standards shall apply as appropriate. Standards when included in the Contract Documents by abbreviations or otherwise, shall form a part of Contract Documents. In the event of conflicts between cited standards and/or the Contract Documents, the more stringent shall govern.

1.2 ABBREVIATIONS AND ACRONYMS

- A. Abbreviations and acronyms used throughout the Contract Documents refer to associations, institutes, societies and other public bodies who publish standards which are readily available to the public, and to the titles of the standards which they publish. Where such abbreviations or acronyms are used in the Contract Documents, they shall mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.
- B. Whenever initials representing such a body are shown, followed by a number or a combination of numerals and letters, reference is to a particular standard to which Contractor shall conform. The number or combination of numerals and letters following abbreviation designates the particular standard to be followed.

1.3 CONTRACTOR'S DUTIES AND RESPONSIBILITIES

- A. The Contractor shall be responsible when required by Contract Documents, or upon written request from the Construction Manager, to deliver required proof that materials or workmanship, or both, meet or exceed the requirements of a reference standard.

1.4 CONFLICTING STANDARDS

- A. Where compliance with two or more standards is specified and where the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different but apparently equal and other uncertainties to the Architect, through the Construction Manager, for a decision before proceeding.

1.5 COPIES OF STANDARDS

- A. Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.

END OF SECTION

SECTION 01 45 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Refer to the Technical Specifications for specific quality control activities to be performed, and for the inspection and testing required by public authorities having jurisdiction.
- B. The Contractor shall furnish all labor, materials, tools, equipment and services for quality control of materials, components and systems incorporated or to be incorporated the Work, so as to adequately and acceptably perform the Work as required by the Contract Documents. All testing and inspection, whether required by the Contract Documents; by laws, ordinances, rules, regulations, codes or orders of any public authority having jurisdiction; or whether performed by the Contractor for qualification of materials or its convenience, shall be at the Contractor's expense unless otherwise indicated in the Contract Documents.
- C. The Contractor shall be fully responsible for quality control. The Contractor shall employ an individual on its staff who shall be primarily responsible for ensuring an acceptable level of quality on the Project. This individual shall not be the Contractor's Project Superintendent.
- D. The Contractor shall completely coordinate its Work internally and with the work of any separate contractors. Although such Work may not be specifically indicated in the Contract Documents, the Contractor shall furnish and install all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation.
- E. At any time during the execution of the Contract, the Construction Manager may notify the Contractor that some aspect of quality control is not being correctly performed. If the Contractor fails to respond to a request for quality control surveys or reports, or to a second request for proper preparatory work in an area for the purpose of a test or inspection, including a punch list inspection, the Construction Manager or the County may provide this work and deduct the cost of such work from the value of the Contract.

1.2 SPECIAL INSPECTIONS NOT USED

1.3 OTHER REQUIRED TESTING AND INSPECTION

- A. The Contractor shall be responsible for all other tests and inspections which may be required, any of which may or may not require the use of an independent testing and inspection agency.

1.4 JOB CONDITIONS

- A. Employment of an independent testing and inspection agency shall not relieve the Contractor of its obligation to comply with the Contract Documents.
- B. Where operating tests are specified, the Contractor shall test its Work as it progresses, at its own expense, and shall make satisfactory preliminary tests in all cases prior to applying for official tests. Tests shall be in the manner specified for the appropriate type of Work.
- C. Each test shall be made on the entire system for which such test is required wherever practical. In case it is necessary to test portions of the Work independently, the Contractor shall do so without additional compensation. Should defects appear, they shall be corrected by the Contractor and the test repeated until the installation is acceptable to the Architect and the Construction Manager. No Work of any kind shall be covered or enclosed before it has been tested and approved.

1.5 PROCEDURES AND REPORTS

- A. Prior to the start of construction, submit to the Construction Manager a complete list of proposed tests and inspections according to specification section and Schedule of Special Inspections.
- B. Perform, or cause to be performed, all required inspections, sampling and testing of materials and methods of construction, utilizing methods required by the specifications and applicable standards. The Contractor's quality assurance specialist shall observe all sampling and testing and shall review all test results.
- C. Test procedures:
 - 1. Each test to be performed shall have a test procedure which shall include a detailed description of the specific steps which will be taken by the testing technician.
 - 2. Each test procedure shall be submitted to the Construction Manager for review at least four (4) weeks prior to the time that the Contractor wishes or is required to perform the test.
 - 3. No formal acceptance test will be performed without an approved test procedure being utilized.
- D. Report each test/inspection/sampling in the form specified below. All reports shall be submitted promptly after completion of the test.
- E. Retest all failed materials, components, and systems.
- F. Record all test and inspection results and maintain a complete log of the testing and inspection program. This log shall be submitted for the Architect's or the Construction Manager's review upon request.
- G. Equipment testing:
 - 1. All pieces of rotating mechanical equipment and electrical equipment shall be formally tested prior to acceptance by the Architect, the Construction Manager and the County. This requirement will not be waived by temporary or permanent occupancy of some or all parts of the finished construction.
 - 2. The Construction Manager shall have the final determination as to whether or not a piece of equipment shall require a formal acceptance test.
 - 3. No equipment warranty period shall be started until a formal acceptance test has been

- successfully completed.
4. No final payment for any such equipment shall be made until a formal acceptance test has been successfully completed.
- H. Test / inspection procedures and reports shall include the following information at a minimum:
1. Project name and number
 2. Project location
 3. Applicable specification section and paragraph
 4. Type of test or inspection
 5. Name of testing/inspecting agency (if used)
 6. Name(s) of testing/inspecting personnel
 7. Date of test/inspection
 8. Record of field conditions encountered, including weather
 9. Observations regarding compliance
 10. Test method used
 11. Results of test/inspection
 12. Date of report
 13. Signature of testing/inspecting personnel
- I. Where test/inspection reports indicate non-compliance, provide report on colored bond paper.
- J. All testing/inspection reports produced by an independent testing and inspection agency shall be submitted to the Construction Manager directly from the independent testing and inspection agency, with copies to the Contractor.
- 1.6 SPECIAL INSPECTION TESTING AGENCY DUTIES AND LIMITATIONS OF AUTHORITY
- A. Provide qualified personnel at site after due notice; cooperate with the Contractor, the Architect, and the Construction Manager in performance of services.
 - B. Promptly notify the Construction Manager of irregularities or non-conformance of Work which are observed during performance of services.
 - C. Attend preconstruction conferences and progress meetings if an as requested by the Construction Manager.
 - D. An independent testing and inspection agency is not authorized to:
 1. Release, revoke, alter, or enlarge on requirements of the Contract Documents.
 2. Approve or accept any portion of the Work.
 3. Assume any duties of the Contractor.
 4. Stop the Work.
- 1.7 CONTRACTOR'S DUTIES TO SPECIAL INSPECTION OR INDEPENDENT TESTING AND AGENCY
- A. The Contractor shall be responsible to coordinate all work of the testing and inspection agency including notifications, coordination on and off site and distribution of test reports.
 - B. The Contractor shall cooperate with testing and inspection agency personnel, and provide access to Work.

- C. The Contractor shall provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.
- D. The Contractor shall notify the testing and inspection agency and the Construction Manager of any test or inspection 48 hours in advance to allow for proper coordination,
- E. Unless noted otherwise, field testing procedures shall be performed by the Contractor under the direction and observation of the independent testing and inspection agency.

1.9 PUNCH LIST INSPECTIONS

- A. The preparation of the Work or a portion thereof prior to a punch list inspection shall be solely the Contractor's responsibility. The Contractor shall first verify, and then certify that the Work for which a punch list inspection is being requested is in such a state that it may be easily punched out for acceptance by the Architect, the Construction Manager and/or the County. Failure to properly prepare the Work for a punch list inspection shall constitute a failure to perform a quality control duty, and the Construction Manager may take appropriate action as defined in Paragraph 1.1E above.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

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SECTION 01 50 00

CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 INTRODUCTION

- A. The Contractor shall provide all construction facilities and temporary controls throughout the construction period unless otherwise indicated in the Contract Documents.
- B. The Contractor shall pay all costs for providing, maintaining, and removing all construction facilities and temporary controls unless otherwise indicated in the Contract Documents.

1.2 QUALITY ASSURANCE

- A. All work specified herein shall be performed in a workmanlike manner and shall be in accordance with applicable codes, OSHA regulations, utility company rules and regulations, and other rules and regulations of any other authorities having jurisdiction.

1.3 JOB CONDITIONS

- A. The Contractor shall establish and initiate use of each construction facility or temporary control at the time first reasonably required for proper performance of Work. Terminate use and remove facilities and controls at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.
- B. The Contractor shall install, operate, maintain and protect construction facilities and temporary controls in a manner and at locations which will be safe, non-hazardous, sanitary and protective of persons and property, and free of deleterious effects.
- C. Conservation: In compliance with County policy on energy/materials conservation, install and operate construction facilities and temporary controls and perform construction activities in a manner which reasonably will be conservative and avoid waste of energy and materials, including water and electric power.

1.4 TEMPORARY UTILITIES - GENERAL

- A. The Contractor shall provide and pay all costs for temporary utilities, including consumption costs. Do not use utilities of any existing, permanent operations at site.
- B. Make all temporary connections to utilities and services in locations acceptable to the local authorities having jurisdiction. Furnish all necessary labor and materials, and make all installations in a manner subject to the acceptance of such authorities.
- C. Maintain all temporary utility installations connections and remove them when no longer required. Restore the services and sources of supply to proper operating condition.

- D. The Contractor may extend and use permanent utilities installed for the Project for temporary facilities. Prior to Substantial Completion, remove temporary connections, replace lamps, filters, etc., and restore permanent utilities to specified condition.
- E. Metering: Comply with requirements of local utilities for installation of meters for water and electrical power services.

PART 2 – PRODUCTS

2.1 TEMPORARY POWER DISTRIBUTION

- A. Temporary electrical power service shall be installed and maintained such that power can be secured at any desired point with no more than a 60 foot extension cord.
- B. Service shall be sufficient for the following items:
 - 1. Power centers for miscellaneous tools and equipment used in the construction work, each with a minimum of four 20-amp, 120 volt grounding type outlets. Each outlet shall provided with ground fault detecting circuit breaker protection.
 - 2. Adequate lighting for safe working conditions, provided and maintained on a 24-hour basis, throughout the building including stairways. At least 0.25 watts of incandescent lighting per square foot for general use must be installed and maintained in all areas where work is in progress. Each lamp must be rated at least 100 watts. Voltage of each socket must be at least 110 volts.
 - 3. Power for any equipment used for temporary heating and ventilation, and for start-up testing of any permanent electric-powered equipment prior to its connection to permanent electrical system.
- C. Power for electric welding shall be provided via the temporary electrical system or engine-driven power generator sets. Coordinate all connections for welding equipment with the Construction Manager.
- D. Regulatory Agency Requirements:
 - 1. The Contractor shall obtain any and all permits required by local authorities having jurisdiction, as applicable to any temporary power work performed.
 - 2. The temporary electrical service shall comply with the National Electrical Code as currently adapted by local authorities, and all other applicable local codes and utility regulations.
- E. Materials:
 - 1. The materials may be new or used, but must be adequate in capacity for the purposes intended and must not create unsafe conditions or violate the requirements of applicable

codes.

2. Use wire, cable, or busses of appropriate type, sized in accordance with the National Electrical Code for the applied loads. Use only UL-labeled wire and devices.

- F. Equipment: Provide appropriate enclosures for the environment in which equipment is placed and used, in compliance with NEMA standards.

2.2 TEMPORARY LIGHTING

- A. Provide task lighting of sufficient level for installation of the Work. If the Construction Manager does not deem the amount of task lighting to be adequate in a given area, the Contractor shall immediately increase the amount of task lighting at no additional cost. Verbal direction for the Construction Manager shall be adequate in this situation.
- B. Lighting for field offices, storage trailers, shops and outdoor work areas shall be provided by the Contractor as necessary.
- C. Outdoor area lighting, in excess of any existing streetlight levels, of any site staging areas shall be provided by the Contractor. This lighting shall be in the form of dusk-to-dawn mercury vapor fixtures. Lighting shall be of sufficient levels to permit security checks of the areas and provide for minimal access. If the Construction Manager does not deem the amount of area lighting to be adequate in a given area, the Contractor shall immediately increase the amount of area lighting at no additional cost.

2.3 TEMPORARY WATER

- A. Water for Construction: Construction water may be provided from available existing water mains or by use of temporary tanks. When connecting to existing water service lines, perform all work according to the requirements of, and obtain any and all permits required by, local authorities having jurisdiction. Remove all temporary installations and equipment upon completion of construction.
- B. Drinking Water: Provide drinking water adequate in quantity, quality and locations for all personnel at the project site. Furnish paper drinking cups and waste receptacles at each drinking water dispensing location.

2.4 TEMPORARY FIRE PROTECTION

- A. Specific administrative and procedural minimum actions are specified in this Paragraph, as extensions of provisions in the Owner-Contractor Agreement and other Contract Documents. These requirements have been included for special purposes as indicated. Nothing in this Paragraph is intended to limit types and amounts of fire protection required, and no omission from this Paragraph will be recognized as an indication by the County or Construction Manager that such temporary activity is not required for successful completion of the Work and compliance with requirements of Contract Documents.
- B. Quality Assurance

1. NFPA Code: Comply with NFPA Code 241 "Building Construction and Demolition Operations."
 2. The Contractor shall also comply with all applicable state, city and local fire codes.
- C. The Contractor shall take all necessary precautions to guard against all possible fire hazards and to prevent damage to any construction Work, building materials, equipment, field offices, storage sheds and all other property, both public and private, in accordance with all fire protection and prevention laws and codes. The Contractor will assume full responsibility for damage caused by fire to construction and building, building materials, equipment and all property, both public and private.
- D. The location of the nearest corporation or public fire alarm box and the number of the local fire department shall be conspicuously posted by the Contractor in its field office and in the construction area.
- E. The Contractor's superintendent in charge of the Work shall review the Project at least once a week to make certain that it adheres to the conditions and requirements set forth herein.
- F. No open fires shall be permitted. The Contractor and its subcontractors will not be allowed to start fires with gasoline, kerosene or other flammable materials. The bulk storage of all flammable liquids shall be located at least 75 feet from any inhabited trailer or office and from the yard storage of flammable building materials. All flammable liquids having a flash point of 100 degrees F or below, which must be brought into any building, shall be confined to the Underwriter's Laboratories' labeled safety cans. Drums containing flammable liquids are to be equipped with approved vent pumps and located per direction of the Construction Manager. Drums with spigots are prohibited for the storage of flammable liquids on the project site.
- G. Welding, flame cutting or other operations involving the use of flame, arcs or sparking devices will not be allowed without adequate protection and shielding. All combustible and flammable material shall be removed from the immediate working area. If removal is impossible, all flammable or combustible material shall be protected with a fire blanket or suitable noncombustible shields to prevent spark, flames or hot metal from reaching the flammable or combustible materials. The Contractor shall provide the necessary personnel and fire fighting equipment to effectively control incipient fires resulting from welding, flame cutting or other operations involving the use of flame, arcs or sparking devices.
- H. Only fire resistant tarpaulins with UL label and flame spread of 15 or less shall be used on this project.
- I. Use of only Underwriters Laboratory approved heaters and/or stoves is permitted in field offices or storage sheds and they shall have fire resistive material underneath and at the sides near partitions and walls. Pipe sleeves and covering shall be used where stove pipe runs through wall or roof.

- J. Smoking shall be prohibited around concentrations of combustibles and in particularly hazardous areas. Restricted areas must be plainly marked, with signs posted. No smoking rules must be strictly enforced.
- K. Fire Extinguishers
 - 1. The Contractor shall provide and maintain in working order during construction, an adequate number of fire extinguishers for use by all trades in each area of work. Two (2) fire extinguishers shall also be placed in the vicinity of Contractor's construction office.
 - 2. In areas of flammable liquids, asphalt or electrical hazards, extinguishers of the 15 lb. carbon dioxide type or 20 lb. dry chemical type shall be provided.
 - 3. The Contractor shall maintain and inspect all fire extinguishers periodically. Fire extinguishers must be mounted in plain view and sealed, so that operation of the fire extinguisher will break the seal. In the event a fire extinguisher is discharged or damaged, it shall be removed from service and be replaced with a charged unit.
 - 4. The Contractor shall post warnings and quick instructions at each extinguisher location. The Contractor and all of its subcontractors shall instruct their personnel at the project site, at the time of their first arrival, on proper use of extinguishers and other available facilities at the project site.

2.5 TEMPORARY ENCLOSURES

- A. Provide temporary enclosures reasonably required to ensure adequate workmanship and protection from the weather and unsatisfactory ambient conditions for the Work, including those enclosures inside which temporary heat is used.
- B. Provide fire-retardant treated lumber and plywood where used for temporary enclosures.

2.6 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain sanitary toilet facilities for use of all personnel at the project site. Either piped (wet) toilet facilities or self-contained chemical toilet units may be used.
- B. The number of sanitary facilities required shall be based on the total number of workers employed on the site and shall be in accordance with the provisions of the applicable code. Separate toilet facilities for men and women shall be provided when both sexes are working in any capacity on the project site.
- C. All sanitary facilities shall be maintained by the Contractor in a safe, clean, and sanitary conditions at all times.

2.7 TEMPORARY SIGNAGE

- A. Project Sign: The Contractor shall construct, erect and maintain one (1) 4 foot by 8 foot project sign of $\frac{3}{4}$ inch (minimum) exterior grade plywood, given two coats of paint and mounted securely on two 4 inch by 4 inch posts set 30 inches (minimum) into the ground. The sign shall be clearly lettered by one skilled in the sign trade with the facility name, address, County logo, names of County Commissioners, the County Manager and other County representatives,

Contractor name, major subcontractors' names, and the jobsite telephone number. Locate the project sign as designated by the Construction Manager. Avoid a placement that may inhibit safe entry or exit from the site. Verify sign content with County, through the Construction Manager, prior to procuring and erecting the sign.

- B. No other signs or advertising shall be displayed on the premises without the approval of the Construction Manager, other than the posting of required notices and cautionary signage by the Contractor, and signage on equipment and trailers to designate ownership.

2.8 TEMPORARY FIELD OFFICE AND TOOL STORAGE FACILITIES

- A. The Contractor shall provide a trailer or other suitable temporary building for a field office, which shall contain office space required for the Contractor's operations, a conference room of suitable size for regular progress meetings, toilet facilities, and a separate spare office for a County, Architect, or Construction Manager representative to use when onsite. Ample space shall be provided for storage of all construction documentation. The trailer shall have telephone service for use by the Contractor and its subcontractors, and shall also have a working intrusion alarm system. One sign with the Contractor's name may be placed on the trailer.
- B. The Contractor may provide other temporary trailers or buildings for storage and maintenance as required and as space permits.
- C. All field office and storage structures shall be placed or constructed in accordance with the regulations of the local Fire Marshal having jurisdiction.
- D. Field offices and sheds shall be of suitable design, maintenance, and appearance.
- E. The Contractor shall provide power and heat to its field office, and to storage sheds if storing climate-sensitive materials or equipment.
- F. The Contractor shall adequately maintain the designated space designated for its field office and storage sheds, including the removal of weeds, debris, and trash.
- G. Temporary field offices and sheds shall not be used for living quarters.
- H. If the Construction Manager, for good reason, directs that any or all field offices or storage sheds on the site must be removed, the Contractor shall do so within ten (10) days of written notice of same. Structures not removed in a timely manner will be removed by the Construction Manager at the Contractor's expense.

2.9 FIRST AID STATION

- A. The Contractor shall provide and maintain at least one unmanned first aid station for its personnel and subcontractors.

PART 3 – EXECUTION

3.1 TEMPORARY SYSTEMS INSTALLATION

- A. Install all work with a neat and orderly appearance.
- B. Make the work structurally sound throughout.
- C. Maintain the system to give continuous service and to provide safe working conditions.
- D. Modify temporary power and lighting installation as job progress requires.
- E. Locate work such that interference with storage areas, traffic areas and other work is avoided.
- F. Remove all temporary equipment and materials completely upon completion of construction.
- G. Repair all damage caused by the installation and restore to satisfactory condition.

3.2 CONSTRUCTION TRAFFIC INGRESS TO AND EGRESS FROM SITE

- A. Routes to Construction Site: The Contractor shall inform and insure compliance of its subcontractors and suppliers regarding the recommended traffic route(s) from major highways to the jobsite. For all traffic off of the jobsite, the Contractor shall coordinate with, and obtain any necessary permits from, appropriate authorities having jurisdiction.
- B. Construction Site Access: All construction traffic, including deliveries of materials and equipment, shall enter and exit the site only by the routes prescribed on a site access and parking plan submitted by the Contractor and approved by the Construction Manager prior to start of construction (see Subparagraph 14.I below).
- C. Cleaning: The Contractor shall take all precautions necessary to prevent the tracking of mud and debris onto paved roads adjacent to the jobsite. The Contractor shall immediately clean any affected area if directed by the Construction Manager. The utilization of wheel wash areas located at all site entrance/exit points is mandatory for all vehicles leaving the site if the tracking of mud or debris onto adjacent streets would result otherwise.

3.3 SITE ACCESS ROADS AND PARKING AREAS

- A. Provide and maintain vehicular access to and within the site for use by all persons and equipment involved in construction of the Project.
- B. New temporary access roads shall be constructed across designated easements from public thoroughfares only as allowable by local authority having jurisdiction.
- C. Provide adequate access for emergency vehicles.

- D. Provide and maintain temporary parking areas for use by construction personnel. Do not use any existing parking lots which may exist at existing facilities on the site unless specific authorization is given by the County. If parking needs exceed onsite capacity, provide offsite parking as necessary, as well as transportation to and from the site if distance dictates.
- E. All traffic and parking areas shall be filled, compacted, and graded as necessary to provide suitable support for vehicular traffic under anticipated loadings.
- F. Maintain all onsite traffic and parking areas free of excavated materials, construction equipment, construction materials, debris, snow and ice. Provide for surface drainage for all traffic and parking areas, and implement and maintain dewatering if and as necessary.
- G. Keep fire hydrants, water control valves, and all other utilities requiring possible access free from obstructions.
- H. Provide temporary directional signage as necessary.
- I. Prior to the start of construction, submit to the Construction Manager for approval a complete site access/utilization and parking plan, incorporating the requirements described above.

3.4 STORAGE AREAS

- A. The Contractor shall be responsible for all onsite and offsite storage of materials and equipment required for the Project. Onsite storage is subject to the review and approval of the Construction Manager.
- B. All combustible or flammable materials shall be safely stored in a secured area in strict accordance with regulations, codes, and laws enforced by local, State, or Federal agencies, whatsoever is the most stringent.
- C. If the Construction Manager, for good reason, directs that any or all materials stored on the site must be removed, the Contractor shall do so within ten (10) days of written notice of same. Stored materials not removed in a timely manner will be removed by the Construction Manager at the Contractor's expense.

3.5 SECURITY

- A. Neither the County or any of its agents assumes any responsibility for loss, theft or damage to the Work, tools, equipment and/or construction. In the instance of any such loss, theft or damage, the Contractor shall be responsible to renew, restore or remedy the Work, tools, equipment and construction in accordance with requirements of the Contract Documents without additional cost to the County.
 - 1. The Contractor shall immediately advise the Construction Manager of any theft or damage which may delay the execution of the Work.
 - 2. The Contractor shall furnish the Construction Manager with a copy of any theft report filed with appropriate law enforcement agencies.

- B. Site parked equipment, operable machinery and hazardous parts of the new construction subject to mischief and accidental operation shall be inaccessible, locked or otherwise made inoperable when left unattended.
- C. The Contractor shall utilize specific entrances for material deliveries, equipment deliveries, and worker access to the construction site as indicated on its site access/utilization plan and approved by the Construction Manager.
- D. The County or Construction Manager, as the Project progresses, may establish additional security policies and procedures. The Contractor shall cooperate with the County and/or Construction Manager in implementing such additional procedures.

3.6 TRASH / DEBRIS DISPOSAL

- A. The Contractor shall provide dumpsters sufficient to hold site waste from its operations and that of its subcontractors, and shall remove same from the jobsite on a regular basis.
- B. Debris such as soil waste, concrete, steel, or other bulky items from excavation and/or demolition work not disposed of in dumpsters shall be removed and disposed off-site by appropriate means. Methods of debris removal and disposal shall be reviewed with the Construction Manager.

3.7 SITE CLEANING

- A. The Contractor shall be responsible for the maintenance of a clean, neat and safe project site. The Construction Manager is hereby placing the Contractor on notice that failure to clean up on a weekly basis will immediately result in the Construction Manager bringing in labor to perform this task and deducting the cost of such measures from the Contract Sum. The Construction Manager shall be the sole authority which shall determine the amounts to be deducted from the Contractor's contract for this type of cleaning.
- B. The Contractor shall assign at least five (5) percent of his own and his subcontractors' work forces to clean-up activities for at least four (4) hours per week, or as deemed necessary by the Construction Manager.
- C. No exceptions to these rules will be allowed. Failure to immediately adhere to all of the Construction Manager's directions in this regard will result in the holdup of Contractor's progress payments until compliance with these rules are obtained.

3.8 MISCELLANEOUS CONSTRUCTION FACILITIES

- A. The Contractor shall be responsible for providing and maintaining its own scaffolding and for conforming with all safety regulations related thereto.
- B. The Construction Manager retains the right to inspect all erected scaffolding, and to request written verification from an inspection agency as to the soundness of erected scaffolding to

perform its intended function. However, the Construction Manager assumes no responsibility to do so, or of the results of such inspections.

- C. Except as otherwise provided, the Contractor shall provide and maintain all necessary temporary stairs, ladders, ramps and runways to facilitate conveyance of men, materials, tools, and equipment for proper execution of the Work.
- D. All protection and safety barricades, devices, covers, etc., shall be provided by the Contractor as it relates to the safe conduct of his work in accordance with OSHA requirements.
- E. The Contractor shall maintain safe temporary access to the work as construction progresses.
- F. All barriers and barricades shall comply with OSHA or other applicable safety requirements of the Project. All barriers and barricades shall be installed in a manner that will allow for the continued progress of the Work. Installation and removal of barriers, barricades and railings will be monitored by the Construction Manager.
- G. If the Contractor or any subcontractor, who in the course of its work, creates a hazard, it is responsible for providing, at its own expense, all required protection, including all safety barriers, barricades and perimeter protection as necessary.
- H. If any safety protection is required to be temporarily removed during the progress of the Work, it shall be reinstalled at the completion of the specific activity requiring such removal, and in a manner that provides a level of compliance equal to the initial installation.
- J. The Contractor shall enclose all construction areas in such a manner so as to protect the public from injury and in accordance with authorities having jurisdiction
- K. Provide any other types of construction facilities as may be reasonably required for performance of the Work and accommodation of personnel at the project site, including the County's and Construction Manager's personnel.

END OF SECTION

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SECTION 01 57 19

ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide all facilities, establish procedures, and conduct construction activities in a manner which will ensure compliance with the County's environmental requirements and other regulations controlling construction activities at the Project site.

1.2 DEFINITIONS

- A. Sediment: Soil that has been eroded and transported by runoff water.
- B. Degradable Debris: Debris which can undergo biodegradation or combustion, or which can be dissolved in or suspended by water.
- C. Non-degradable Debris: Inorganic debris which will not disintegrate nor dissolve when exposed to moisture or water.
- D. Chemicals: Petroleum or cementitious products, bituminous materials, salts, acids, solvents, alkalis, herbicides and pesticides.
- E. Waste: Sewage, including domestic sanitary sewage, garbage and trash resulting from food and food packaging.

PART 2 - PRODUCTS

- 2.1 General: Products, devices and materials shall be approved by authorities having jurisdiction.

PART 3 - EXECUTION

3.1 ENVIRONMENTAL PROTECTION PROCEDURES

- A. General
 - 1. In the means and methods of construction, and in the coordination and control of the Work at the site, establish and enforce ecological preservation standards which avoid pollution of the atmosphere, waterways and vegetation.
 - 2. Conform to laws, ordinances, restrictions, and rules of governmental bodies having enforcement power in regard to site preservation and erosion control.
 - 3. Prevent droppings of petroleum products, cementitious waste and chemical substances on the ground or into storm, sanitary drains or waterways.
 - 4. This Section may be supplemented by notes on drawings relative to environmental protection.

5. The Contractor shall designate one person, the Superintendent or other, to enforce strict discipline on activities related to generation of wastes, pollution of air/water, generation of noise and similar harmful or deleterious effects which might violate regulations or reasonably irritate persons at or in vicinity of the Project site.
 6. Take special precautions when working on roofs directly above any occupied floors and adjacent to circulation or vehicular circulation. Minimize noise, dust, or other environmental hazards to spaces.
- B. Noise Control
1. Provide mufflers on combustion engine powered equipment to minimize noise.
 2. Blasting is strictly prohibited without written permission from first the Construction Manager and then all applicable State and Local regulatory agencies.
- C. Air Quality Control: Maintain acceptable air quality at all times. Acceptable air quality shall also be maintained in any existing, operating buildings or structures during construction operations that require physical connection to such buildings or structures so as to not interfere with any existing operations.
- D. Water Control
1. Keep the building or portions thereof free from water ingress due to construction operations at all times until Final Completion of the Work.
 2. Provide all pumping necessary to keep the roof dry and free from water.
 3. Dispose of water in such a manner as will not endanger public health or cause damage or expense to public or private property. Abide by the requirements of all public authorities having jurisdiction.
- E. Dust Control
1. Effectively confine dust, dirt and noise to the actual construction area(s) until Substantial Completion of the Work.
 2. Clean up operations shall be by vacuuming, wet mopping, wet sweeping, or wet power brooming.
 3. Keep dust down at all times, including non-working days, weekends and holidays. Temporary methods consisting of water sprinkling or similar methods will be permitted to control dust. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.
 4. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.
- F. Snow and Ice Removal
1. Arrange for removal of snow and ice in and about the premises, as necessary to conform with local regulations on public sidewalks adjacent to the site, and as necessary on and about the site and the Work to permit safe access to continue or perform work.
 2. When performing work under exposed conditions, remove snow and ice for the protection and execution of the Work.
- G. Vermin Control: Control vermin during the construction period. If vermin are encountered, provide extermination arrangements as necessary.
- H. Disposal of Debris, Chemicals and Waste
1. Dispose of debris, chemicals, and waste off the site in compliance with Federal, State and local laws and regulations.

2. Collect and contain materials before disposal in an orderly fashion and by means which prevent contamination of air, water and soil.
 3. Store chemicals in watertight containers.
 4. Non-degradable and degradable debris shall be disposed of off the site.
 5. Do not burn materials on the site.
- I. Clean-Up and Restoration of the Site
1. Maintain the site in good order through periodic pick up and clean-up of construction waste and wind-borne trash. Dispose of all waste and trash in tightly covered containers and schedule regular removal of trash and waste from the site.
 2. Existing sitework damaged during construction shall be restored to good and acceptable condition.
- J. Damage from Storms: Secure the site to avoid damage to the Work and stored materials, as well as damage to adjacent property.

END OF SECTION

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SECTION 01 66 00**PRODUCT STORAGE AND HANDLING REQUIREMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Deliver, handle and store materials and equipment in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration and loss, including theft. Provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged or sensitive to deterioration, theft and other sources of loss.
- B. Prior to starting work, the Contractor shall meet with the Construction Manager to determine the use of available areas for site offices and storage.
 - 1. The Contractor shall confine his equipment, the storage of material and the operations of his workmen to limits indicated by the Contract Documents, laws, ordinances, permits or directions of the Construction Manager.
 - 2. Neat and orderly stockpiling of all materials shall be maintained.
 - 3. Materials which require significant amounts of storage space, as determined by the Construction Manager, shall be brought to the site in quantities no greater than required for two (2) weeks work.
 - 4. Delivery of materials shall be scheduled so as not to encumber the site with items which will not be required for a significant length of time.
- C. If at any time it becomes necessary to move material or equipment which have been stored during construction, the Contractor, when directed by the Construction Manager, shall move them to another location without charge.
- D. The Contractor shall not load or permit any part of the site or structures to be loaded with a weight that will endanger its safety.
- E. Storage of materials outside the limits of construction, but on the County's property, is strictly prohibited without written permission from the County through the Construction Manager.
- F. All costs relating to temporary storage and protection shall be borne by the Contractor or subcontractor requiring such storage and protection. The Contractor shall retain full responsibility for any form of damage or deterioration to stored materials and any form of damage or deterioration caused by materials to surrounding surfaces.

1.2 MATERIALS HANDLING PLAN

- A. The Contractor shall develop and submit to the Construction Manager for approval, at least ten (10) days prior to the start of construction on the site, a comprehensive materials handling plan. This plan shall take into consideration the following:
 - 1. Control delivery of materials to maintain the construction schedule.
 - 2. Coordination with any separate contractors.
 - 3. The County's operation of adjacent facilities, if any.

4. Provisions for both vertical and horizontal transportation and utilization of material and personnel hoists, if required.
5. Limitations on space available for storage.
6. Requirements for handling and installation of large equipment.

1.3 VERTICAL TRANSPORTATION

- A. The Contractor shall be responsible for providing vertical transportation for materials, equipment, and personnel if and as required for multi-story buildings or significant heights. Cranes, hoists, conveyors, and other equipment used for this purpose shall be placed/installed and maintained according to applicable codes and regulations of authorities having jurisdiction.
- B. Temporary hoists and permanent elevators used as construction lifts shall be provided with an operator at all times such equipment is in use.
- C. The Contractor shall cooperate with the County, the Construction Manager and any separate contractors in the event that hoists or elevators are required for use by such entities during the course of the Project.

1.4 MATERIAL AND EQUIPMENT REMOVAL

- A. Any required cranes, hoists, conveyors and other equipment mobilized and utilized by the Contractor shall be removed from the site within ten (10) days after completion of the Work.
- B. Upon completion of the Work, or sooner if directed by the Construction Manager, the Contractor shall remove his temporary structures and sheds and place the areas in a clean and orderly condition.
- C. No materials or equipment shall be removed from the site without the permission of the Construction Manager.

1.5 PASSAGE OF MATERIALS AND EQUIPMENT

- A. Establish passage clearances required to deliver and install materials and equipment.
- B. In case of insufficient clearance for passage of materials and equipment, deliver and protect such equipment before confining construction is installed.
- C. If existing structures, equipment and systems must be removed or altered to provide access for new materials and equipment, engage those skilled in the respective trade to restore structures, equipment and systems to their original condition at no additional cost. Do not alter structure, equipment or systems without written approval of the Construction Manager.
- D. In lieu of altering structures to provide passage of materials and equipment, provide materials and equipment that can be disassembled, brought into the building, and reassembled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 71 23

CONSTRUCTION LAYOUT

PART 1 - GENERAL

1.1 PROJECT LAYOUT REQUIREMENTS

- A. The Contractor shall be responsible to accurately establish and maintain all principal lines, and levels for the Work.
- B. Establish lines and levels, similar appropriate means, the following:
 - 1. Controlling lines and levels required for roof slope, flashing and crickets.
- C. Protect and preserve the established control points. The Contractor shall not make any change in location without the written approval of the Construction Manager. Any control points lost or displaced through the neglect of the Contractor shall be replaced at no additional cost to the County.
- D. Verify the overall and critical dimensions and elevations for the Work prior to commencement of construction. Submit a written statement to the Construction Manager of the acceptance of the location of all existing conditions and previously completed construction, if any, as it relates to the Work of this Contract.
- E. Verify all drawing dimensions and existing measurements as the Work progresses at the site. No extra charges shall be allowed for differences between actual field measurements and any dimensions shown on the Contract Documents. Do not provide filler pieces or closures without approval from the Construction Manager.
- F. Verify and maintain layouts during construction operations, using the same methods as were used to establish original layouts.

1.2 QUALITY ASSURANCE / QUALITY CONTROL

- A. The Contractor shall employ qualified personnel locate the reference points as needed to properly locate the Work of the Contractor and all subcontractors.
- B. The Contractor shall be responsible for transferring all required measurements from the control points to the required locations throughout the Project. If, at any time, the Construction Manager questions the transference of such dimensions, the Contractor shall, at no additional cost to the County, verify the transference of questionable dimensions to the Construction Manager.

1.3 COORDINATION

- A. Upon Notice to Proceed, and again prior to commencement of construction, examine the site and the conditions under which the Work is to be installed, and notify the Construction Manager in writing of any discrepancies or conditions detrimental to the proper performance of the Work. The Contractor is not to proceed until any such discrepancies or detrimental conditions are corrected.

- B. Obtain accurate field dimensions in ample time to permit fabrication of items requiring same, and allow for delivery and installation in time to maintain the project schedule. The Contractor and all subcontractors shall cooperate and coordinate in completing the work phases to accommodate the schedule for obtaining dimensions and to prevent fabrication delay. In the event it is impractical to have work in place to permit field dimensions to be taken, the Contractor shall guarantee necessary dimensions to fabricators and be responsible to ensure those dimensions will be accurate.
- C. The Contractor shall furnish approved copies of all relevant information (shop drawings, diagrams, templates, technical data, etc.) to the County or to separate contractors, as required for coordination with any work of the Project by others.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 73 29**CUTTING, CORING AND PATCHING****PART 1 - GENERAL****1.1 SUMMARY**

- A. "Cutting, Coring and Patching" is hereby defined to include, but not necessarily be limited to, removal, cutting (including excavation), coring, fitting and patching of nominally completed and previously existing Work, as shown or required in order to accommodate the coordination of Work, installation of new Work, to uncover other Work for access or inspection, remove and replace defective Work or Work not conforming to the Contract Documents, or to obtain samples for testing or for similar purposes.
- B. For existing buildings, the sizes, dimensions, and elevations shown on the drawings represent measurements which should be regarded as typical dimensions; actual dimensions may and will vary due to prevailing building practices at the time of construction, and building settlement over time.
- C. The requirements of this section apply generally to all aspects of the Work, including mechanical, electrical and special systems work, unless otherwise indicated. The Technical Specifications may include additional or more specific requirements or limitations applicable to individual units of work.
- D. The Contractor shall note that it is its responsibility to coordinate the locations and sizes and to cut or core all openings and penetrations for all trades involved in the Work of this Contract. Any openings and penetrations which may be shown on drawings provided by the County are intended only to assist the Contractor in coordinating the major openings and penetrations and are not representative of all openings which will be required to complete the work.

1.2 QUALITY ASSURANCE

- A. The Contractor shall not cut, core and patch structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio. Prior to cutting, coring and patching structural work, obtain Architect's approval to proceed with cutting and patching as proposed in a written submittal by the Contractor.
- B. The Contractor's submittal requesting consent to proceed with cutting, coring and patching structural work must include:
 - 1. Identification of the Project
 - 2. Description of the affected Work
 - 3. Necessity for cutting or coring
 - 4. Affects on other Work, and on the structural integrity of the Work
 - 5. Description of the proposed Work, which designates:
 - a. Scope of cutting, coring and patching
 - b. Subcontractor who will execute the work
 - c. Products proposed to be used

- d. Extent of refinishing required
 - 6. Alternates to cutting, coring and patching
 - 7. Designation of the responsibility for the costs associated with the cutting, coring and patching
- C. Prior to performing any cutting, coring and patching as extra work, the Contractor shall have submitted a written cost proposal and received written direction from the Construction Manager.
- D. The Contractor shall be responsible for providing, locating, and installing all embeds necessary for the completion of the Work, so as to avoid unnecessary cutting and patching.

1.3 OPERATIONAL AND SAFETY LIMITATIONS

- A. The Contractor shall not cut and patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in the manner intended including energy performances, or resulting in decreased operational life, increased maintenance, or decreased safety.
- B. The Contractor shall not cut, core drill or otherwise penetrate any post-tensioned cast-in-place concrete elements.

1.4 VISUAL REQUIREMENTS

- A. The Contractor shall not cut and patch work which is exposed on the exterior, or exposed on the interior in occupied spaces of the building, in a manner resulting in a reduction of visual qualities, or resulting in substantial evidence of cut and patch work, as judged solely by the Architect. The Contractor shall remove and replace work judged by the Architect to be cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The Contractor shall provide materials for cutting and patching which will result in equal or better work than work being cut and patched, in terms of performance characteristics and including visual effect where applicable. The Contractor shall comply with requirements, and use materials identical with original materials where feasible and where recognized that satisfactory results can be produced thereby.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Inspection of Concealed Conditions (for construction existing prior to this Contract, if applicable) - Prior to beginning installation or preparation of shop drawings for each unit of

work involving exposure of existing concealed construction, the Contractor shall remove the minimum of finishes, substrates and other existing construction as necessary to expose existing conditions where work is required behind existing surfaces. The Contractor shall verify that work can proceed in accordance with the requirements of the Contract Documents. The Contractor shall prepare detailed drawings of any existing conditions which differ substantially from conditions indicated or implied by the Contract Documents and the existing construction visible prior to exposure of concealed conditions. Submit drawings and a cost proposal to the Construction Manager for transmittal to the Architect a minimum of fourteen (14) calendar days prior to the scheduled installation of work in that area or the preparation of any required submittals relating to the area in question.

- B. Inspection of Concealed Conditions (for Work installed under this Contract) – In the event work is required behind existing surfaces previously installed under this Contract, the Contractor shall remove the minimum of finishes, substrates and other existing construction as necessary to expose existing conditions where work is required behind existing surfaces. Inspect and assess all conditions affecting the continued performance of the Work, and immediately report any circumstances which could have an adverse effect on the performance of the Work to the Construction Manager.
- C. Temporary Support - The Contractor shall provide shoring and protection and/or temporary support for work to be cut, to prevent failure. Do not endanger other work.
- D. Protection - The Contractor shall provide protection of other work during cutting and patching, to prevent damage and provide protection of the Work from adverse weather conditions. The Contractor shall not cut or alter work of another contractor without written consent of the Construction Manager.

3.2 CUTTING AND PATCHING

- A. The Contractor shall employ skilled tradesmen to perform all cutting, coring and patching and who have experience working with the materials involved. Except as otherwise indicated or approved by the Construction Manager or the Architect, the Contractor shall proceed with cutting and patching at earliest feasible time in each instance, and complete work without delay.
- B. The Contractor shall cut work by methods least likely to damage work to be retained and work adjoining. Employ the original installing subcontractor to perform cutting and patching for weather-exposed or moisture-resistant elements, and for exterior or interior surfaces exposed to view.
- C. In general, where physical cutting action is required, the Contractor shall cut work with sawing and grinding tools, not with hammering and chopping tools. Make cuttings to neat, straight lines and only to the size required to accommodate the construction to be installed. Core drill openings through finished concrete work.
- D. The Contractor shall patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work. Where feasible, inspect and test patched areas to demonstrate integrity of work.
- E. The Contractor shall restore exposed finishes of patched areas and extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching and refinishing. Where a patch occurs in a smooth painted surface, the Contractor shall extend the final paint

coat over entire unbroken surface containing patch, after patched area has received prime and base coats.

END OF SECTION

SECTION 01 74 23

FINAL CLEANING

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Periodic clean-up during construction - See General Requirements Section 01 50 00 for additional details of these requirements.
- B. Refer to appropriate sections of the Technical Specifications for special cleaning instructions for specific work. Lacking such specific instructions, provide final cleaning on all delivered materials and equipment as specified herein.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The Contractor is to use only cleaning materials as recommended by manufacturer of surface to be cleaned.
- B. The Contractor is to use cleaning materials only on surfaces as recommended by the manufacturer of the cleaning material.

PART 3 - EXECUTION

3.1 FINAL CLEANING WORK

- A. At the completion of the Work, the Contractor will remove all trash and debris and clean all surfaces associated with his work, and leave the project ready for occupancy by the County.
- B. Experienced workmen or professional cleaners only are to be employed for final cleaning.
- C. Paved surfaces are to be broom clean. Other porous surfaces are to be raked clean. All stone and non-porous surfaces shall be wiped clean.
- D. All surfaces shall have all stains removed.
- E. Electrical work, including lighting fixtures, is to be thoroughly cleaned.
- F. Prior to acceptance of any area of the project by the County, the Contractor is to notify the Construction Manager as each area becomes ready for inspection. The final clean-up will be inspected by the Construction Manager with the Architect and the County as required.

- G. The Construction Manager will notify the Contractor in writing if any clean-up is unacceptable. If the Contractor fails to comply after receiving written notice from the Construction Manager, the Construction Manager will perform whatever corrective action is necessary, with the resultant costs to be borne by the Contractor.
- H. The Contractor will maintain cleaning services until the Project or portion thereof is accepted by County.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Comply with requirements for administrative procedures stated in this and other sections of the Project Manual in closing out the Work. Closeout procedures are summarized in this Section.
- B. Contract requirements shall be met when construction activities have successfully produced, in order, completion of these three closeout stages:
 - 1. Substantial Completion
 - 2. Final Completion
 - 3. Final Payment
- C. The Contractor shall provide all written notices and supporting documentation as described in Paragraphs 2 and 3 below when requesting Substantial Completion and Final Completion, respectively. Partial submittals of the required documents shall not represent a valid request, and the County, Architect, and Construction Manager shall not be liable for any delays in the Substantial and Final Completion dates arising there from.

1.2 SUBSTANTIAL COMPLETION

- A. Reference the *Owner-Contractor Agreement*, Article 9, regarding Substantial Completion.
- B. When the Work is substantially complete, the Contractor shall submit to the Construction Manager:
 - 1. a written notice that the Work, or designated portion thereof, is substantially complete.
 - 2. an original Certificate of Occupancy for the Project.
 - 3. a list of items to be completed or corrected (hereinafter referred to as a "Punch List").
 - 4. a request for a Substantial Completion inspection on a date acceptable to the Architect and the Construction Manager.
 - 5. Project record documents, operation & maintenance manuals, warranties, and certificates for review and approval.
- C. Within a reasonable time after receipt of such notice, the Architect, the Construction Manager, the Contractor, and the County will make a joint inspection to determine the status of completion. County representatives for this inspection shall include, but not be limited to, the user department(s) and the Department of Personnel, Workers Compensation & Office Services Division. The Punch List submitted by the Contractor will be reviewed in detail during the inspection, with items added or deleted to indicate Work to be corrected or completed.

- D. After completion of the joint inspection described in Paragraph 1.2-C above, the Construction Manager will consolidate all Punch List comments and transmit them to the County Department of Public Buildings & Grounds (DPB&G). Within a reasonable amount of time after receipt of such consolidated Punch List, DPB&G shall conduct its own inspection, to include, but not be limited to, the installation and operation of all mechanical, electrical, plumbing, and other building systems. The consolidated Punch List will be reviewed in detail during the inspection, with items added or deleted to indicate Work to be corrected or completed.
- E. The County, the Architect, and/or the Construction Manager reserve the right to issue a revised Punch List based on the inspections described in 1.2-C and 1.2-D above. The Construction Manager will reproduce and distribute copies of any revised Punch List to the Contractor and see that the items requiring correction or completion are given prompt attention by the Contractor. Depending on the number and type of items on the Punch List, the Construction Manager may withhold the issuance of the Certificate of Substantial Completion until corrections required by said Punch List are made or all parties are satisfied that they will be made.
- F. Should the Architect and/or the Construction Manager determine that the Work is not substantially complete:
 - 1. The Construction Manager will promptly notify the Contractor in writing, on behalf of the Architect, giving the reasons therefore.
 - 2. The Contractor shall remedy the deficiencies in the Work, and then send a second written notice of Substantial Completion to the Construction Manager.
- G. Paragraphs 1.2-B through 1.2-D will be repeated.
- H. Should it become necessary to perform more than one (1) reinspection due to the inaccurate claims of the status of completion made by the Contractor, the Construction Manager may deduct the costs of such reinspections from the final payment, including but not limited to costs incurred by the Construction Manager and the Architect, and costs incurred by the Owner for payment of compensation to the Construction Manager and the Architect, for services performed for the reinspection(s). Also refer to General Requirements Section 01 45 00, *Quality Control*.
- I. When the Architect and the Construction Manager concur that the Work is substantially complete, the Construction Manager will:
 - 1. Prepare a Certificate of Substantial Completion accompanied by the Contractor's Punch List of items to be completed or corrected, as verified and amended by the Architect, the Construction Manager, and the County.
 - a. Contract responsibilities are not altered by inclusion or omission of required Work for the Punch List.
 - b. The Construction Manager will coordinate with both the County and the Contractor to establish each parties' responsibilities with respect to security, maintenance, heat, utilities, damage to the Work, and insurance, all of which shall be clearly delineated on the Certificate of Substantial Completion.
 - 2. Sign the Certificate of Substantial Completion and submit it to the County, the Architect, and the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

1.3 FINAL COMPLETION

- A. Reference the *Owner-Contractor Agreement*, Article 9, regarding Final Completion.
- B. To attain Final Completion, the Contractor shall complete the activities pertaining to Substantial Completion Certificate and complete work on all Punch List items. Only then shall a written request to the Construction Manager for final inspection be submitted.
- C. When the Work is complete, the Contractor shall submit to the Construction Manager written certification that:
 - 1. the Contract Documents have been complied with in their entirety.
 - 2. the Work has been inspected for compliance with Contract Documents.
 - 3. the Work has been completed in accordance with Contract Documents.
 - 4. the Work is completed and ready for final inspection.
- D. The Construction Manager, Architect, Contractor and County will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- E. Should the Architect and/or Construction Manager determine that the Work is incomplete or defective:
 - 1. The Construction Manager will promptly notify the Contractor in writing, listing the incomplete or defective Work.
 - 2. The Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Construction Manager that the Work is complete.
- F. Paragraphs 1.3-B through 1.3-D will be repeated.
- G. Should it become necessary to perform more than one (1) reinspection due to failure of the Work to comply with the claims of status of completion made by the Contractor, the Construction Manager may deduct the costs of such reinspections from the final payment, including but not limited to costs incurred by the Construction Manager and the Architect, and costs incurred by the Owner for payment of compensation to the Construction Manager and the Architect, for services performed for the reinspection(s). Also refer to General Requirements Section 01 45 00, *Quality Control*.
- H. When the Architect and the Construction Manager find that the Work is acceptable under the Contract Documents, the Contractor will be requested to make a final closeout submittal.

1.4 CONTRACTOR'S CLOSEOUT SUBMITTALS

- A. The Contractor shall provide to the Construction Manager the following documents in the quantity of one original and one copy unless otherwise noted. Note that with the exception of Subparagraphs A.7, A.8, A.10, and A.11 below, submittal for approval shall have already been made prior to Substantial Completion. Submittal under this Paragraph would be for a final submittal should revisions or additional copies be required of previously submitted documentation.
 - 1. Evidence of Compliance with all requirements of governing authorities:
 - a. Certificate(s) of Occupancy
 - b. Certificates of Inspection, for Mechanical, Electrical, Plumbing, Fire Protection, and others as may be required.
 - 2. Project Record Documents: Refer to Section 01 78 39 of the General Requirements.
 - 3. Operation & Maintenance Manuals: Refer to Section 01 78 23 of the General Requirements.
 - 4. Subcontractor List: A complete listing of all subcontractors and their suppliers, indicating business addresses, telephone numbers, contact names, and items supplied by

- each.
5. Manufacturer List: A listing of manufacturers of major materials, equipment and systems installed in the Work, and local contact addresses and phone numbers.
 6. Warranties: Refer to Section 01 78 36 of the General Requirements, and individual sections of the Technical Specifications.
 7. Payment of Debts and Claims and Consent of Surety: The Contractor shall submit adequate evidence that the Contractor has paid all obligations to date arising out of the Contract using AIA Document G706. Contractor shall also submit AIA Document G707, indicating written consent of its Surety to final payment.
 8. Release of Claims and Liens: The Contractor and each subcontractor shall also submit AIA Document G706A, indicating that the releases for waivers submitted are complete to the best of its knowledge and information.
 9. Final Approvals and Certificates:
 - a. Plans and Certificates approved by the Fulton County Development Services Department which were maintained at the jobsite shall be amended to show construction changes and resubmitted as required by law.
 - b. Contractors requiring filing shall complete all Fulton County inspections and permits records before Application for Final Payment. Submit all approvals and certificates required by the Specifications, Drawings and applicable codes and regulations of all relevant departments or agencies of Fulton County, State of Georgia, and local authority having jurisdiction.
 10. Shop Drawings, Manufacturer's Literature and Test Data (one copy only): The Contractor shall submit through the Construction Manager to the County, before final acceptance, all reviewed shop drawings (with all corrections noted), plus sets of all approved catalog cuts, equipment manuals, etc. All materials shall be indexed by Specification section. This submittal shall include a list of each room and its paint manufacturers and/or wall covering number for the County's use.
 11. No partial submittals of the above items are to be made to the Construction Manager. All items of each category are to be collected by the Contractor and delivered at one time to the Construction Manager, together with a letter of transmittal listing all items. Where items are to be delivered to the County's representative, the Contractor shall include a copy of the transmittal letter listing all enclosures, signed by the County's representative acknowledging receipt.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 78 23

OPERATING AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Refer to individual sections of the Technical Specifications for specific requirements for instructions, maintenance manuals, and operating data, to be submitted by the Contractor in order to provide the County with all necessary documentation to adequately maintain and service materials, systems and equipment for the Project.
- B. The Contractor shall compile all such specified instructions, maintenance manuals and operating data as specified under the appropriate Technical Specification sections, and submit as described below in comprehensive sets of Operation and Maintenance Manuals.
- C. All complete Operation and Maintenance Manuals shall be submitted prior to the Contractor's request to receive a Certificate of Substantial Completion.

1.2 SUBMITTAL REQUIREMENTS

- A. Develop a sequential program for the development of the Operation and Maintenance Manuals. This program shall provide a step-by-step review of the development of the manuals. The following is an abbreviation of the required sequence of development of the manuals.
 - 1. Submittal of the Table of Contents
 - 2. Submittal of draft sections for County's, Architect's and Construction Manager's review
 - 3. Submittal of list of proposed attachments and appendices
 - 4. Submittal of initial draft of complete manual
 - 5. Submittal of final copies of all manuals with approved contents
- B. After all approvals have been obtained, submit to the Construction Manager four (4) sets of bound, clear and complete instructions for maintenance of materials, finishes, machinery and other items to ensure proper care and reasonable life expectancy thereof.
- C. Print or type, in orderly sequence, the required information for each item:
 - 1. Include data for all finishes, whether painted, coated, fabric, polished and satin finish metals, glass, natural finishes on wood, natural stone, manufactured stone and various masonry finishes to the extent that such finishes occur on the project.
- D. Bind each set of data in a manageable number of 8 ½" by 11" sturdy three-ring binders, indexed and clearly labeled by Specification Section and item description. Each set shall be indexed and tabbed for the completed manual regardless of its completeness at the time of its submittal.
- E. Additional data will be added behind its tabbed location as received by the Construction Manager. Include an index for the completed set in each binder. Mark identification on both front and spine of each binder.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 78 36

WARRANTIES

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Unless additional maintenance or performance warranties are required, all the Work shall be warranted by the Contractor for one year after the date of Substantial Completion of the Contract.
- B. Project warranties submitted by the Contractor do not reduce the County's warranty rights provided under State laws and regulations.
- C. Where products, materials, equipment, or systems are not properly performing or operating, the warranty shall not be considered in effect until corrective work is provided and the items are properly performing or operating.
- D. Warranties shall not include replaceable items such as light bulbs or cleaning materials, or damage by wear, vandalism or unusual climatic phenomenon, except water and air leaks caused by such phenomena.
- E. Warranties shall be signed by representatives that are expressly authorized to bind the Contractor to the warranties' terms and conditions. This requirement shall also apply to signatures on warranties of subcontractors, installers, manufacturers, and other entities engaged by the Contractor which are required by the Contract Documents.

1.2 DEFINITIONS

- A. Warranties on the Work are in several categories, including those of the Owner-Contractor Agreement, and including (but not necessarily limited to) the following specific categories related to individual units of Work specified in Division 2 through 17 of the Technical Specifications:
 - 1. Special Project Warranty (Guarantee): A warranty specifically written and signed by the Contractor for a defined portion of the Work; and, where required, countersigned by a subcontractor, installer, manufacturer and/or other entity engaged by the Contractor.
 - 2. Specified Product Warranty: A warranty which is required by the Contract Documents, to be provided for a manufactured product incorporated into the Work; regardless of whether the manufacturer has published a similar warranty without regard for specific incorporation of product into the Work, or has written and executed a special project warranty as a direct result of Contract Document requirements.
The Contractor shall issue four (4) copies of a special product warranty if required by the Technical Specifications. Examples of items which will require a special product warranty include roofing, waterproofing, certain insulation, caulking, wood and automatic doors, carpet and certain equipment.
 - 3. Coincidental Product Warranty: A warranty which is not specifically required by Contract Documents (other than as specified in this Section), but which is available on a product incorporated into the Work, by virtue of the fact that manufacturer of product has

published a warranty in connection with purchases and uses of product without regard for specific applications except as otherwise limited by terms of warranty.

- B. Refer to the individual sections of the Technical Specifications for the determination of portions of the Work which are required to be specifically or individually warranted, and for the specific requirements and terms of those warranties (or guarantees).

1.3 SCOPE OF WARRANTIES

- A. Scope: The Contractor shall submit to the Construction Manager for transmittal to the Architect, upon completion of all the Work under the Contract, its written warranty made out to the County and in a form satisfactory to the Architect and the County, warranting all of the Work under the Contract to be free from faulty materials and improper workmanship, and warranting the Work against injury in the proper and usual use thereof. Under the warranty, the Contractor shall replace Work as may be found by the County to be improper or imperfect and to make good all damage caused to other work or materials by the imperfection or removal and replacement of the imperfect Work.
- B. Time Limit / Individual Warranties: A specific warranty of the Contractor may cover a longer period than that stated above where so stipulated in the Contract Documents. Warranties under service policies and warranties for individual pieces of equipment shall be assigned and delivered to County prior to the date of Final Acceptance, but said individual warranties shall in no way modify or shorten the one year overall warranty to be provided by the Contractor.
- C. Extended Warranties: Certain extended warranties by the Contractor or subcontractors, or maintenance contracts which are longer than one year's duration, may be required by the Contract Documents. At the completion of the Work, all such warranties or maintenance contracts covering materials, workmanship, maintenance, or other items as specified, shall be forwarded in duplicate to the Architect through the Construction Manager, together with a letter addressed to the County giving a summary of each said warranty as follows:
 - 1. Character of Work covered by warranty
 - 2. Name of subcontractor furnishing warranty
 - 3. Period of warranty
 - 4. Conditions of warranty
- D. General Limitations: It is recognized that specific warranties are intended primarily to protect County against failure of the Work to perform as required, and against deficient, defective and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in the Work which result from:
 - 1. unusual and abnormal phenomena of the elements,
 - 2. the County's misuse, maltreatment or improper maintenance of the Work,
 - 3. vandalism after the time of Substantial Completion, or
 - 4. insurrection or acts of aggression, including war.
- E. Cost: Contractor warranties shall provide for the correction of work performed without additional charge. Any additional expense or damage resulting from imperfect work or the removal or replacement of imperfect work shall also be covered by said Contractor warranties.

1.4 CONTRACTOR OBLIGATIONS

- A. Related Damages and Losses: The Contractor shall be responsible for the correction of warranted Work which has failed. The Contractor shall remove and replace other Work which has been damaged as a result of such failure, or which must be removed and replaced to provide access for correction of warranted Work.
 - 1. Consequential Damages: Except as otherwise indicated or required by governing regulations, special project warranties and product warranties are not extended to cover damage to building contents (other than Work of the Contractor) which occurs as a result of failure of warranted Work.
- B. Reinstatement of Warranty Period: Except as otherwise indicated, when Work covered by a special project warranty or product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement for a period of time equal to original warranty period of time, starting on date of acceptance of replaced or restored Work.
- C. Replacement Cost, Obligations: Except as otherwise indicated, costs of replacing or restoring failing warranted units or products is the Contractor's obligation, without regard for whether the County has already benefited from use through a portion of anticipated useful service lives.
- D. Contractor's Procurement Obligations: Do not purchase, subcontract for, or allow others to purchase or subcontract for materials or units of work for the Project where a special project warranty, specified product warranty, certification or similar commitment is required, until it has been determined that entities required to countersign such commitments are willing to do so.
- E. Rejection of Warranties: The County reserves the right, at the time of Substantial Completion or thereafter, to reject coincidental product warranties submitted by the Contractor, which in the opinion of the County tend to detract from or confuse interpretation of the requirements of the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TRANSFER OF WARRANTIES TO OWNER

- A. Format: The warranties shall cover all the Work done under this Contract. All Contractor warranties shall bear the endorsement of the Construction Manager in writing, as per the attached format on the following page:

FORMAT FOR THE TRANSFER OF WARRANTIES TO OWNER

TO: Fulton County Board of Commissioners

c/o: Fulton County Construction Manager

Re: (Work Covered in Warranty)

Project: _____

Name of Contractor: _____

Address of Contractor: _____

Dear County's Representative,

The undersigned warrants to the County that he will be responsible for all faulty or defective materials, equipment and workmanship, in the Work or portion thereof as referenced above, and that he will remedy any defects due thereto and pay for all damage to other work resulting thereof which shall appear within a period of _____ () year(s) from the date of Substantial Completion, as defined in the Contract Documents.

(Add additional conditions of warranty as noted in various technical sections of the Specifications.)

During the warranty period, upon written notice from County, the undersigned shall proceed with due diligence at the undersigned's sole expense to remove and replace properly any defective materials and equipment or perform any labor necessary to correct any such defect in the above. In case that the undersigned fails to remedy such defects, then the County may furnish such materials and equipment or labor as are necessary to correct the work, and the undersigned agrees to reimburse the County for any expense therefore promptly and fully.

Signed: _____ ** Date: _____

Type/Print Name: _____

Witness: _____ **

Construction Manager endorsement of the above-noted warranty:

Signed: _____ Date: _____

*** Signatures must be notarized.*

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 GENERAL

- A. Definition: Record Documents are defined to include those documents or copies relating directly to performance of the Work. Record Documents show changes in Work in relation to way in which Work was shown and specified by the original Contract Documents, and show additional information of value to County's records, but not indicated by the original Contract Documents. Record Documents include marked-up copies of Construction Drawings, Specifications, Field Orders and Change Orders, reviewed copies of Shop Drawings, Product Data and Samples, a final product list, and test records, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information on Work which is otherwise recorded only schematically or not at all. Certain portions of the Contract Documents may indicate specific Record Document requirements which extend the requirements of this Section.
- B. Throughout progress of the Work, maintain and continually update an accurate record of changes in the Contract Documents.
- C. Provide access to all Record Documents for the County's, Architect's, and Construction Manager's reference and review throughout the progress of the Work.
- D. As a condition of Substantial Completion of the Work, the Contractor shall deliver Record Documents to the Construction Manager as provided below.

1.2 MAINTENANCE OF DOCUMENTS

- A. One copy of current Record Documents shall be maintained at the Contractor's jobsite office at all times.
- B. Delegate responsibility for maintenance of Record Documents to one person.
- C. Provide files and racks for suitable storage of documents, and file all documents and samples in a neat and orderly manner.
- D. Protect Record Documents from loss in a secure location. Maintain documents in a clean, dry, legible condition, and in good order. Record Documents are not to be used for construction purposes.

1.3 RECORDING OF CHANGES AND OTHER PERTINENT INFORMATION

- A. Record all changes and other pertinent information concurrently with construction progress.

- B. Accuracy of Records: Coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other documents where such entry is required to show change. The accuracy of records shall be such that future searches for maintenance or analysis purposes may reasonably rely on information obtained from the Record Documents.
- C. Do not permanently conceal any of the Work until changes or other pertinent information has been recorded on the appropriate Record Documents with dimensions from a permanent reference point.
- D. Drawings:
 - 1. Mark the drawing that is most capable of showing actual physical condition, fully and accurately.
 - 2. Where Shop Drawings are marked up, mark cross reference on Contract Drawings at corresponding location.
 - 3. Mark with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of Work at same general location.
 - 4. Mark the location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 5. Indicate all changes of dimension and detail, whether a field change or a directed change. Note Change Order number, Request for Information number, and/or similar identification associated with the initiation of each specific change.
 - 6. Provide Contractor's construction details which may not have been shown on the original Contract Documents.
- E. Specifications:
 - 1. Legibly mark each Section of the Technical Specifications with the manufacturer, trade name, catalog number, serial number and supplier of each product and item of equipment actually installed in the construction.
 - 2. Indicate all field changes and directed changes. Note Change Order number, Request for Information number, and/or similar identification associated with the initiation of each specific change.
- F. Shop Drawings, Product Data and Samples: Maintain as Record Documents. Legibly annotate any changes made after review(s).
- G. Label each Record Document "Project Record" in neat, large letters. This label shall appear in the same location on every record drawing.

1.4 SUBMITTAL OF RECORD DOCUMENTS

- A. With its request for Substantial Completion of the Work, the Contractor shall furnish one marked-up print set of all Record Drawings and Specifications for review by the Construction Manager.
- B. Submittals will be reviewed for adequacy only and returned with comments, if any, to the Contractor.
- C. The Contractor shall incorporate all review comments into the Record Documents.
- D. After incorporation of review comments in the Record Documents, the Contractor shall submit

the following as a final submittal:

1. Drawings: one (1) compact disk or USB flash drive containing reproducible set (full-size, and ½ size copies) and three print sets of final marked-up drawings.
 2. Specifications: two (2) sets of final marked-up specifications.
 3. Shop Drawings, Product Data and Samples: one (1) copy each.
 4. Test records, executed Change Orders, field orders, requests for information, supplemental instructions, and other pertinent documentation: two (2) copies each.
- E. The final submittal shall include a transmittal letter containing the date, Project name and number, Contractor's name and address, title and number of each Record Document, certification that each document as submitted is complete and accurate, and the signature of the Contractor or of its authorized representative.
- F. All revisions to and final submittal of Record Documents shall be completed to the acceptance of the Construction Manager and the County prior to Final Completion of the Work and final payment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 78 43

SPARE PARTS AND MAINTENANCE MATERIALS

PART 1 - GENERAL

1.1 GENERAL

- A. The Contractor shall furnish all labor, materials, tools, equipment and services for the provision of spare parts and maintenance materials as required in conjunction with all of the Work performed, as indicated or as required, in accordance with the provisions of the Contract Documents.

PART 2 - PRODUCTS

2.1 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Refer to the individual sections of the Technical Specifications for items of Work required.
 - 1. Spare parts shall be as specified in the Technical Specifications, or if not specifically specified, as adequate to fulfill one year's usage of such parts.
 - 2. Maintenance materials ("attic stock") shall be as specified in the Technical Specifications.

2.2 PACKAGING AND LABELING

- A. Package all parts and materials in sturdy boxes suitable in size to accommodate the quantity of items being packaged.
- B. All boxes shall have a single, standardized label which shall provide locations to write or type all necessary information. This label shall include the Project name, and shall be large enough so as to be easily read from a distance of several feet. The following information shall be included on each label:
 - 1. Manufacturer's name, part or trade name and stock number.
 - 2. The piece of equipment or finish for which the part or material is to be used.
 - 3. Name, address and phone number of the closest supplier.

PART 3 - EXECUTION

3.1 DELIVERY

- A. Spare parts and maintenance materials shall be submitted directly to the County, with a letter of transmittal which shall itemize all items being submitted, and which shall be signed by an representative of the County as acknowledgement of receipt.
- B. Delivery of all parts and materials shall take place at a single time, unless previous approval is

obtained from the Construction Manager. The time and location(s) of delivery shall be as determined by the County.

- C. A copy of all signed letters of transmittal shall be provided to the Construction Manager.
- D. The Contractor shall be responsible for the safe storage of all parts and materials until the designated time of inventory and acceptance by the County.

END OF SECTION

SECTION 02 41 19

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 the existing built-up roof membrane, roof insulation down to the existing roof deck, existing parapet wall flashing, mechanical equipment curb flashing, existing pitch pocket and pipe vent flashing, and existing metal coping. Demolition of existing scupper boxes for replacement with TPO scupper boxes. Removal and reinstallation of existing conductor heads at scupper box locations. Disconnect and temporary removal and reinstallation of the existing parapet mounted lightning protection terminals and roof mounted lightning protection cables. Disconnect, temporary removal and reinstallation of existing parapet wall mounted light fixture and electrical outlet. Disconnect and temporary raising of existing curb mounted mechanical units and lowering, resetting and reconnection of existing curb mounted mechanical equipment.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and store.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or 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 structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's building manager's on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of elevator and stairs.
 - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces that might be misconstrued as damage caused by demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.
- D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- E. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been temporarily removed, disconnected and reinstalled / reconnected.

1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. 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 and using approved contractors 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.

1.10 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

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 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 Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
 - 1. Comply with requirements specified in Section 013233 "Photographic Documentation."
 - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off utilities with utility companies.
 - 3. 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.

3.4 PROTECTION

- A. Temporary Protection: 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. Cover and protect equipment that has not been removed..
- B. Remove temporary barricades and protections where hazards no longer exist.

3.5 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.
 - 2. Do not use cutting torches on roof.
 - 3. At curb mounted mechanical equipment verify condition, connections and operations prior to disconnecting the equipment.
 - 4. Maintain fire watch during and for at least (1) hour after flame-cutting operations.
 - 5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 6. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting roof framing.
 - 7. Dispose of demolished items and materials promptly.
- B. 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.
- 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.

3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight. See Section 07 54 00 – FULLY ADHERED THERMOPLASTIC OLEFIN (TPO) ROOFING SYSTEM for new roofing requirements.

- 1. Remove existing roof membrane, flashings, copings, and roof accessories.
 - 2. Remove existing roofing system down to substrate.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.

- 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.

3.8 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

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Provide wood, nails, bolts, screws, framing anchors and other rough hardware, and other items needed, and perform rough carpentry for the construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Code and Standards:
 - 1. In addition to complying with the pertinent codes and regulations of governmental agencies having jurisdiction, unless otherwise specifically directed or permitted by the Architect comply with:
 - a. "Product Use Manual" of the Western Wood Products Association for selection and use of products included in that manual.
 - b. Plywood Specification and Grade Guide" of the American Plywood Association.
 - c. Standard Specifications for Grades of California Redwood Lumber" of the Redwood Inspection Bureau for Redwood, when used.

1.03 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01 66 00.
- B. Protection:
 - 1. Deliver the materials to the job site and store, in a safe area, out of the way of traffic and shore up off the ground surface.
 - 2. Identify framing lumber as to grades, and store each grade separately from other grades.
 - 3. Protect materials with adequate waterproof outer wrapping.
 - 4. Use extreme care in off loading of lumber to prevent damage, splitting and breaking of materials.

PART 2 PRODUCTS**2.01 GRADE STAMPS**

- A. Identify framing lumber by the grade stamp of the West Coast Lumber Inspection Bureau, or such grade stamp as is approved in advance by the Architect.
- B. Identify plywood as to species, grade and glue type by the stamp of the American Plywood Association.
- C. Identify other materials of this Section by the appropriate stamp of the agency approved in advance by the Architect.

2.02 MATERIALS

- A. Provide materials in the quantities needed for the work shown on the Drawings, and meeting or exceeding the following standards of quality.

- 1. Plywood –Pressure Treated:

- a. 3/4 inch Sheathing: Structural II, C-C, exterior; or standard sheathing with exterior glue.

- 2.. Wood Preservative: Ammoniacal copper aresnite, or 5% solution of pentachlorophenol.

- 3. Wood Blocking; Pressure Treated

- 4. Rough Hardware:

- a. Steel items:

- 1) Comply with ASTM A7 or ASTM A36.

- 2) Use galvanized at exterior locations.

- b. Machine Bolts: Comply with ASTM A307.

- c. Lag bolts: Comply with Federal Specifications FF-B-561.

- d. Nails:

- 1) Use common except as otherwise noted.

- 2) Comply with Federal Specification FF-N-1.

- 3) Use galvanized at all locations.

2.03 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 EXECUTION**3.01 SURFACE CONDITIONS**

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 DELIVERIES

- A. Stockpile materials sufficiently in advance of need to assure their availability in a timely manner for this Work.
- B. Make as many trips to the job site as are needed to deliver materials of this Section in a timely manner to ensure orderly progress of the Work.

3.03 COMPLIANCE

- A. Do not permit materials not complying with the provisions of this Section to be brought onto or to be stored at the job site.
- B. Promptly remove non-complying materials from the job site and replace with materials meeting the requirements of this Section.

3.04 WORKMANSHIP

- A. Produce joints which are tight, true and well nailed, with members assembled in accordance with the Drawings and with pertinent codes and regulations.
- B. Selection of lumber pieces:
 - 1. Carefully select the members.
 - 2. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing, and will allow making of proper connections.
 - 3. Cut out and discard defects which render a piece unable to serve its intended function.
 - 4. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook mildew, fungus, or mold, as well as for improper cutting and fitting.
- C. Do not shim any framing component.

3.05 BLOCKING

- A. Install blocking as required to support items of finish openings, both vertical and horizontal, at roof.

3.07 INSTALLATION OF PLYWOOD SHEATHING

- A. Placement:

1. Place plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise shown on the Drawings.
 2. Center joints accurately over supports, unless otherwise shown on the Drawings.
- B. Protect plywood from moisture by use of waterproof coverings until the plywood in turn has been covered with the next succeeding component or finish.

3.07 FASTENING

A. Nailing:

1. Use only common wire nails or spikes of the dimension shown on the Drawings.
2. For conditions not covered in the Drawings, provide penetration into the piece receiving the point of not less than 1/2 the length of the nail or spike, provided, however, that 16d nails may be used to connect two pieces of 2 inch (nominal) thickness.
3. Nail without splitting wood.
4. Prebore as required.
5. Remove split members and replace with members complying with the specific requirements.

B. Bolting:

1. Drill holes 1/16 inch larger in diameter than the bolts being used.
2. Drill straight and true from one side only.
3. Do not bear bolt threads on wood, but use washers under head and nut where both bear on wood, and use washers under all nuts.

C. Screws:

1. For lag screws and wood screws, prebore holes same diameter as root of threads, enlarging holes to shank diameter for length of shank.

END OF SECTION

SECTION 07 54 00

FULLY ADHERED THERMOPLASTIC OLEFIN (TPO) ROOFING SYSTEM

PART 1 GENERAL

1.01 GENERAL NOTES

- A. Preceding job start up, contractor shall decide to his satisfaction that all specifications contained herein are workable.
- B. Contractor will perform all work by competent, trained, and properly equipped personnel in strict accordance with good roofing practices and applicable industry standards.
- C. Contractor will observe all published safety prevention policies and practices relating to application of roofing system and related work. Contractor will follow application, safety, etc. information as published in the most current edition of the manufacturer's fully adhered TPO Roofing System Technical Specification.

1.02 WORK INCLUDED

- A. Work under this section covers the installation of a new adhered TPO roofing system on the Medical Examiner Office. In addition, contractor shall include all related items of work as noted herein or indicated on the drawings or otherwise required to complete the specified elements of work and provide the necessary warranties for this work.
- B. Contractor will install the roof system to the metal deck and dispose of existing roofing materials which are to be removed properly. Any asbestos removal shall comply with state and local codes and requirements and shall be disposed of in a legal manner.

1.03 SECTION INCLUDES

- A. Substrate preparation.
- B. Wood nailer installation.
- C. Membrane installation.
- D. Membrane flashing installation.

1.04 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry
- B. Section 07 62 00 - Sheet Metal, Flashing and Trim.
- C. Section 07 92 00 - Joint Sealers

1.05 DEFINITIONS

- A. American Society for Testing and Materials (ASTM): 1916 Race St., Philadelphia, PA 19103.
- B. ANSI/SPRI: American National Standards Institute/Single-Ply Roofing Institute

1.06 SYSTEM DESCRIPTION

- A. Reinforced THERMOPLASTIC OLEFIN high temperature sheet roofing that is adhered to acceptable substrate with manufacturer's fully adhered TPO system bonding adhesive. Description:

1. Roof Membrane: .060 Self-Adhering TPO
2. Cover board Type: Manufacturer's high density, closed-cell polyisocyanurate core foam with coated glass facer
3. Insulation Type: Tapered closed-cell polyisocyanurate foam core laminated to a perforated black glass reinforced mat facer on both major surfaces.
4. Insulation Type: Flat closed-cell polyisocyanurate foam core laminated to a perforated black glass reinforced mat facer on both major surfaces.
5. Deck Type: Steel

1.07 SUBMITTALS

- A. Product Data:
 1. Submit copies of Manufacturer's Technical Information Sheets (TIS) for primary products used including roof membrane, splice tape, fasteners, and batten strip.
- B. Samples:
 1. Submit samples of roof membrane, fasteners, and walkway pads
- C. Application Information:
 1. Submit copy of job related manufacturer's details including flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, drains, and any other relevant details
- D. Letter attesting that contractor is a currently licensed Red-Shield roofing contractor.
- E. Warranty: Submit warranty sample.
- F. Pre Installation Notice:
 1. Submit copy of the manufacturer's Pre Installation Notice (PIN) that has been accepted and approved by the manufacturer with submittals prior to starting the project.
- G. Drawings:
 1. Submit manufacturer's shop drawing for tapered insulation.
 - a. Shop drawings shall show complete layout of the tapered system and shall comply with the drainage patterns required. Only the manufacturer's tapered insulation shop drawings will be acceptable.
 1. The responsibility of providing shop drawings for this project lies solely with the manufacturer of the tapered insulation system. Shop drawings by others will not be acceptable.
 2. Shop drawings shall include: Outline of roof, location of drains, scuppers or gutters, profile of tapered insulation components, indications of minimum and maximum insulation thicknesses, and the average "R" value for the completed insulation system.
 3. The roofing contractor shall verify all roof dimensions and drain locations and confirm same with the manufacturer.
 4. Approved shop drawings shall be returned to the manufacturer before insulation is delivered to the jobsite.

1.08 QUALIFICATIONS

- A. Manufacturer:
 1. Company providing a no dollar limit, single source roof system warranty that is backed by corporate assets in excess of one billion dollars.

2. System supplier must have ISO 9002 certification
3. Manufacturer must be able to provide the project with the membrane, edge metal and polyisocyanurate insulation and coverboard that is produced in their facilities.

B. Applicator:

1. Shall be manufacturer's certified Licensed Contractor licensed in the state of Georgia.
2. Shall have at least five years experience in installing heat welded systems.
3. Shall have a full service estimating, installation and repair service location within 50 miles of the project to provide ongoing warranty and response services as needed.

1.09 REGULATORY REQUIREMENTS

- A. Conform to applicable local building code requirements using IBC 2012 and ASCE7-10 to determine the uplift pressure.
 1. Wind Design Speed: 115 MPH
 2. Exposure Rating: C
 3. Category: II
 4. Enclosed Building
- B. Underwriters Laboratories, Inc. (UL): Class **A** Fire Hazard Classification.
- C. All edge securement systems shall be designed in accordance with ANSI/SPRI ES-1.

1.10 QUALITY INSPECTION/OBSERVATION

- A. Inspection by Manufacturer: Provide a final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer.
 1. Technical Representative shall not perform any sales functions.
 2. Contractor shall complete any necessary repairs required for issuance of warranty.

1.11 PRE-INSTALLATION CONFERENCE

- A. Before start of roofing work, attend a conference to discuss the proper installation of materials, delivery and storage / staging of materials, and site access / egress.. Attendees shall include all parties directly affecting work of this Section, the general contractor, and the owner's representative.

1.12 DELIVERY, STORAGE AND HANDLING

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

1.13 ENVIRONMENTAL REQUIREMENTS

- A. Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice.
- B. Do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application. Consult Manufacturer's Technical Specifications on cold weather application.

- C. All roofing products shall be LOW VOC and LOW ODOR products.
- D. Membrane shall be a high temperature membrane without restrictions as to U.V. or temperature exposure on the roof.

1.14 FIELD 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.

1.15 WARRANTY

- A. Manufacturer's no dollar limit, non-prorated warranty from the manufacturer of the roofing membrane as follows with no exceptions.
 - 1. Warranty coverage: 25-years.
 - 2. Warranty shall be transferable and transfer cannot be at manufacturer's discretion nor require an inspection but shall be transferable upon notification in writing to manufacturer and payment of the standard transfer fee.
 - 3. Warranty coverage to include: roofing membranes, insulation, fasteners, clips, adhesives, accessories and edge metal.
 - 4. The warranty shall cover metal finishes, materials, labor and correct and incorrect workmanship on system installation, seaming and/or flashing. Manufacturer cannot exclude unapproved details or workmanship.
 - 5. All roofing systems tie-ins, flashing and terminations must be covered under the Warranty.
 - 6. Warranty will begin upon completion of the project and completion of the warranty application procedures.
 - 7. Warranty cannot defer warranty coverage to installing contractor for any period of warranty coverage.
- B. Roof system must be inspected at completion of installation. Manufacturer cannot deny coverage for any items not installed in compliance with manufacturer's application requirements and standards after warranty is issued or as a part of terms and conditions of the warranty. The manufacturer's technical field representative/inspector will conduct final inspections. The manufacturer field representative must be a non-sales employee of the roofing system manufacturer who is responsible for field quality control and contractor training.
- C. Roof system manufacturer must be a separate legal entity from the installer of the roofing system.
- D. Warranty can NOT limit the exposure of the membrane to any temperature.

PART 2 PRODUCTS

2.01 NAILERS FOR FLANGES AND ROOF ACCESSORIES

- A. Description: Structural Grade No. 2 or better Southern Pine, Douglas Fir, or Exterior Grade plywood. All wood shall be pressure treated for rot resistance.
 - 1. Nailer width: Minimum 3 ½ in. (nominal) wide or as wide as the nailing flange of each roof accessory.

2. Nail thickness: Reference drawings for nailer thickness .
- B. Reference Standards:
 1. Southern Pines: PS 20; SPIB Grading Rules.
 2. Western Woods: PS 20; WWPB Grading Rules.
 3. Plywood: PS 1; APA Grade Stamps.
 4. Pressure preservative treatment: AWPB LP2.

2.02 MANUFACTURERS - MEMBRANE MATERIALS

- A. Acceptable Manufacturer's: upon certification that their current product meets all requirements of this specification 14 days in advance of bid date:
 1. **Basis of Design:** Firestone adhered single-ply membrane system:
Reinforced Ultra Ply Self Adhering TPO sheet roofing that is adhered to acceptable substrate with UltraPly TPO bonding adhesive.
 2. Carlisle Syntec: Sure-Weld Self Adhering TPO Roofing System
 3. Johns Manville
 4. GAF
 5. No others will be considered.

2.03 SELF-ADHERING TPO SHEET ROOFING AND FLASHING MEMBRANE

- A. Description: Reinforced, self-adhering TPO synthetic single-ply high temperature membrane composed of Thermoplastic Polyolefin polymer and Ethylene Propylene Rubber with a pre-applied polymer adhesive.
 1. Membrane Type: .060 Reinforced TPO Self-Adhering
 2. Color: White
 3. Membrane: Manufacturer's sheet capable of withstanding reflective light and high heat without restriction.

Testing	Minimum Values	Typical Values (SI Units)
Thickness, min, mm (in.)		
Sheet-overall	1.0 (0.039)	0.060± 10%
Coating over scrim	0.381 (0.015)	0.018± 10%
Tensile strength, min, MPa (psi)	NA	
Breaking strength, min, kN (lbf)	1.0 (225)	300
Elongation, ultimate, min, %	NA	
Elongation at break, min, %	15 ^A	25 ^A
Tensile set, max, %	NA	
Tear strength, min, kN/m (lbf/in.)	NA	
Tearing strength, min, N (lbf)	245 (55)	245 (55)
Brittleness point, max, °C (°F)	-30 (-22)	-60 (-51)
Ozone resistance, no cracks	Pass	Pass
Properties after heat aging: (retained values)		
Tensile strength, % min	NA	
Breaking strength, % min	90%	90%
Elongation, ultimate, % min	NA	

Elongation at break, % min	90% ^A	90%
Tear strength, % min	NA	
Tearing strength, % min	90%	90%
Weight Change (Mass), max %	±4 ^B	±4 ^B
Linear dimensional change, max, %	±2	-1.0
Water absorption, max, mass %	±4 ^B	+1.0 ^B
Factory seam strength, min, kN/m (lbf/in.)	75% of Sheet strength	75% of Sheet strength
Weather resistance:		
Visual inspection	Pass	Pass
Tensile strength, % min	NA	
Breaking strength, % min	90%	90%
Elongation, Ultimate, % min	NA	
Elongation at break, min, %	90% ^A	90% ^A
PRFSE, min, %	N/A	

B. Reference Standards:

- D 412 Test Methods for Vulcanized Rubber and Thermo-plastic Rubbers and Thermoplastic Elastomers--Tension
- D 471 Test Method for Rubber Property--Effect of Liquids
- D 573 Test Method for rubber--Deterioration in an Air Oven
- D 624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
- D 751 Test Methods for Coated Fabrics
- D 1149 Test Method for Rubber Deterioration--Surface Ozone Cracking in a Chamber
- D 1204 Test Method for linear Dimensional Changes of Non-rigid thermoplastic Sheeting or Film at Elevated Temperature
- D 1822 Test Method for Tensile-Impact Energy To Break Plastics and Electrical Insulating Materials
- D 2137 Test Methods for Rubber Property--Brittleness Point of Flexible polymers and Coated Fabrics
- D 5538 Practice for Thermoplastic Elastomers Terminology and Abbreviations
- G 155 Practice for Operating Light Exposure Apparatus (Xenon-arc Type) With and Without Water for Exposure of non-metallic Materials
- G 154 Practice for Operating Light and Water-Exposure Apparatus (Fluorescent UV Condensation Type) for Exposure of Nonmetallic Materials

2.04 ROOF INSULATION COMPONENTS

A. BASE LAYER

POLYISOCYANURATE ROOF INSULATION

A. Description: Roof insulation consisting of closed cell polyisocyanurate foam core and a perforated black glass reinforced mat laminated to the face.

1. Thickness: Base Layer to be 2.5"
2. Nominal Size: 48 in. x 96 in. when mechanically attached and 48 in x 48 in when adhered with low-rise foam.
3. **Total System Average R-Value shall be LTTR=20**

B. Reference Standards:

1. FS HH-I-1972/Gen.
 2. FS HH-I-1973/3.
 3. ASTM C 209 - Water Absorption.
 4. ASTM E 96 - Water Vapor Transmission of Materials.
 5. ASTM D 1621 - Compressive Strength.
 6. ASTM D 1622 - Density.
 7. ASTM D 2126 - Dimensional Stability.
 8. ASTM E 84 - Flame Spread
- C. Acceptable Products/Producers:
1. ISO 95+ Polyisocyanurate Insulation by Firestone. *Basis of Design*
 2. SecurSheild Polyisocyanurate Insulation by Carlisle
 3. R-Panel Roof Insulation by Johns Manville

B. INTERMEDIATE LAYER

TAPERED POLYISOCYANURATE ROOF INSULATION

- A. Description: Flat and Tapered roof insulation consisting of closed cell polyisocyanurate foam core and a perforated black glass reinforced mat laminated to the face.
1. Minimum Thickness: 1"
 2. Nominal Size: 48 in. x 48 in.
 3. System Slope: 3/16" to match slope existing roof slope.
- B. Reference Standards:
1. FS HH-I-1972/Gen.
 2. FS HH-I-1973/3.
 3. ASTM C 209 - Water Absorption.
 4. ASTM E 96 - Water Vapor Transmission of Materials.
 5. ASTM D 1621 - Compressive Strength.
 6. ASTM D 1622 - Density.
 7. ASTM D 2126 - Dimensional Stability.
 8. ASTM E 84 - Flame Spread
- C. Acceptable Products/Producers:
1. Tapered ISO 95+ Polyisocyanurate Insulation by Firestone *Basis of Design.*
 2. SecurSheild Polyisocyanurate Insulation by Carlisle
 3. R-Panel Roof Insulation by Johns Manville

C. TOP LAYER

COVER BOARD

- A. Description: High density, closed cell polyisocyanurate foam core with a coated glass facer.
1. Nominal thickness: 1/2"
 2. Nominal Size: 48 in. x 96 in.
- B. Reference Standards:
1. ASTM C518 LTTR=2.5 additional to above system.
 2. ASTM D1621 Compression Strength = 120 psi MINIMUM
 3. UL Classified
 4. FM Approved
- C. Acceptable Products/Producers:
1. Firestone ISOGARD HD *Basis of Design*
 2. Carlisle SecurSheild HD Composite

3. GAF
4. Approved Equal

D. INSULATION ATTACHMENT

A. Insulation attachment to metal deck.

1. Description: Standard duty threaded fastener with fluorocarbon polymer coating and drill point tip. Length shall be sufficient to penetrate deck a minimum of $\frac{3}{4}$ " in steel where present.
2. Reference Standard: SAE 1022, Heat Treated
3. Product/Producer:
 - a. Heavy Duty (HD) fasteners by Manufacturer..

B. All additional layers of Insulation and coverboards.

1. Description: Two part polyurethane adhesive (Part A is isocyanate side; Part B is polyol side) designed to attach insulation to insulation.
 - i. Contractor may NOT install these layers with mechanical attachment. Must adhere.
2. Product/Producer:
 - i. Polyurethane Adhesive by Manufacturer.

2.05 SELF-ADHERING TPO SHEET ROOFING SYSTEM COMPONENTS

A. Roof Flashing:

1. Description: .060 TPO membrane

B. TPO Flashing:

1. Description: Non-reinforced, TPO, single-ply flashing composed of Thermoplastic Polyolefin polymer, and Ethylene Propylene Rubber.
 - a. Nominal Thickness: .060 inch

C. Bonding Adhesive: Not Applicable for this application.

1. Description: SBR-based, formulated for compatibility with the TPO membrane & a wide variety of substrate materials, including masonry, wood, and insulation facings.
2. Product/Producer:
 - a. TPO Bonding Adhesive by Manufacturer.

D. Pourable Sealer:

1. Description: 2-Part urethane, 2-color for reliable mixing.

E. Seam Plates:

1. Description: Steel with barbs and a Galvalume coating.
2. Reference Standard: Corrosion-resistant to meet FM-4470 criteria.

F. Termination Bar:

1. Description: 1.3" X 0.10" thick aluminum bar with integral caulk ledge.

G. Membrane Fasteners:

1. Description: Heavy duty threaded fastener with fluorocarbon polymer coating and drill point tip capable of penetrating 20-gauge steel. Length shall be sufficient to penetrate deck a minimum of $\frac{3}{4}$ " for steel and 1" for wood.
2. Reference Standard: SAE 1022, Heat Treated
3. Product/Producer:
 - a. Heavy Duty (HP) fasteners by Manufacturer

H. TPO Cut Edge Sealant:

1. Polymeric sealant for use where exposed reinforcement is encountered.
2. Product/Producer;
 - a. TPO Cut Edge Sealant.

- I. TPO General Purpose Sealant:
 - 1. Polymeric one part general purpose sealant
 - 2. Product/Producer,
 - a. TPO General Purpose Sealant by Manufacturer
- J. TPO Coated Metal:
 - 1. Galvanized Steel with Manufacturers bonded TPO Coating.
 - 2. Product/Producer,
 - a. TPO Coated Metal by Manufacturer
- K. TPO Molded Flashing Accessories:
 - 1. TPO membrane Pre-Molded for a variety of flashing details (i.e. Pipe Boots, Inside-Outside corners, etc.)
 - 2. Product/Producer,
 - a. TPO System Pre-molded Flashing Accessories by Manufacturer

2.06 VAPOR BARRIER

None

2.07 METAL EDGE AND/OR COPING

- A. Edge Metal and/or Coping:
 - 1. Description: Provide prefabricated 24 gauge Steel with Kynar finish in manufacturers standard colors to be selected by owner. Edge metal must have ANSI/SPRI ES-1 test approval and certification of manufacturer production facility approval.
 - 2. Acceptable Manufacturer's / Products
 - a. **Basis of Design:** Firestone: AnchorGard or EdgeGard
 - b. Approved Equal

2.08 MISCELLANEOUS

- A. Roof Walkway Pads:
 - 1. Description: Reinforced TPO Walkway Pads, .130" X 30" X 50' with patterned traffic bearing surface.
- B. Grease Guards:
 - 1. Description: .060 TPO sacrificial membrane welded to the roofing membrane for a minimum of a 3 foot radius around any kitchen roof top exhaust fan that has a grease trap.
- C. TPO molded inside corners.
- D. TPO molded outside corners.
- E. TPO molded pipe boots.

PART 3 INSTALLATION

3.01 EXAMINATION

- A. Examine roof deck to determine that it is sufficiently rigid to support roofers and their mechanical equipment and that deflection will not strain or rupture roof components or deform deck.
- B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
- C. Examine roof substrate to verify that it is properly sloped to drains.

- D. Start work with sealants and adhesives at 60° - 80° F.
- E. Fumes from adhesive solvents may be drawn into the building during installation through rooftop intakes. Appropriate measures must be taken to assure that fumes from adhesive solvents are not drawn into the building through air intakes.
- F. Remove existing roof system components to the deck.
- G. The surface must be clean, dry, smooth, free of sharp edges, fins, loose or foreign materials, oil, grease and other materials that may damage the membrane. All roughened surfaces that could cause damage shall be properly repaired before proceeding.
- H. All surface voids of the immediate substrate greater than 1/4" wide must be properly filled with an acceptable insulation or suitable fill material.

3.02 PROTECTION OF OTHER WORK

- A. Protect metal, glass, plastic, and painted surfaces from adhesives and sealants.
- B. Protect neighboring work, property, cars, and persons from spills and overspray from adhesives, sealants and coatings and from damage related to roofing work.
- C. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

3.03 MATERIAL STORAGE AND HANDLING

- A. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition.
- B. Consult container labels and Material Safety Data Sheets (MSDS) for specific safety instructions.
- C. Deliver materials to job site in their original containers as labeled by the manufacturer.

3.04 WOOD NAILER LOCATION AND INSTALLATION

- A. Total wood nailer height shall match the total thickness of insulation being used and shall be installed with a 1/8" gap between each length and at each change of direction.
- B. Wood nailers shall be firmly fastened to the deck. Mechanically fasten wood nailers to resist a force of 200 lbs. per lineal foot.

3.05 VAPOR BARRIER APPLICATION

None

3.06 ROOF INSULATION APPLICATION: GENERAL

- A. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before the onset of inclement weather.
- B. Lay roof insulation in courses parallel to roof edges.
- C. Neatly fit insulation to all penetrations, projections, and nailers. Insulation shall be fit tightly, with gaps not greater than 1/4". All gaps greater than 1/4" shall be filled with acceptable insulation. Under no circumstances shall the roofing membrane be left unsupported over a space greater than 1/4". Miter roof insulation edges at ridge, valley and other similar non-planar conditions.
- D. When installing multiple layers of insulation, all joints between layers shall be staggered at least 6 in.

3.07 INSULATION ATTACHMENT

- A. Base Layer: Polyisocyanurate insulation
 - 1. Base Layer Attachment: Mechanically attached or adhered.
- B. Intermediate Layer and Tapered Insulation: Polyisocyanurate tapered insulation
 - 1. Top Layer Attachment: Adhered. No exception. Can not attach with fasteners.
- C. Top Layer: Manufacturer's High Density Cover Board .
 - 1. Top Layer Attachment: Adhered.

3.08 INSULATION APPLICATION

- A. INSULATION
 - 1. Using the Manufacturer's Heavy-Duty Fasteners and Firestone insulation plate engage fastener into Wood Deck or using Manufacturer's recommended polyurethane adhesive to adhere the insulation to the steel deck or previous layers of insulation at the depth and rate specified in the Manufacturer's Technical Information Manual.

3.09 MEMBRANE INSTALLATION

- A. Place membrane panel, over the substrate in it's final position.
- B. After making sure the sheet is placed in its final position allowing for a 3" lap, fold it back evenly onto itself so as to expose the underside.
 - 1. Where self-adhering TPO Membrane has been cut to expose reinforcing membrane, Manufacturer's TPO System Cut Edge Sealant or TPO System General Purpose Sealant must be used to encapsulate exposed edge.
- C. Sweep the mating surface of the membrane with a stiff broom to remove any dirt that may have accumulated.
- D. Starting at the fold, roll the previously coated portion of the sheet into the coated substrate slowly and evenly so as to minimize wrinkles.
- E. To ensure proper contact, compress the bonded half of the sheet to the substrate with a stiff push broom.
- F. Fold the unadhered half of the membrane sheet back onto itself, and repeat the procedure to complete the bonding of the sheet.

3.10 MEMBRANE LAP SPLICING

- A. Lap splice areas that have been contaminated must be wiped down with a dry or damp (water only) clean cloth prior to heat welding and allow to completely dry.
- B. All field and flashing splices on the horizontal surface shall be completed using an automatic heat welder that has been designed for hot air welding of thermoplastic membranes.
- C. Hand held welders are only to be used on vertical welds or where an automatic welder is not practical or cannot be used.
- D. Seams made with the automatic welder shall be a minimum of 1-1/2" wide. Seams made with hand welders shall be a minimum of 2" wide. Use 2" wide silicone or silicone coated steel hand rollers to assure proper mating of surfaces as hand heat welding proceeds.

E. Seams for self-adhering membranes shall be accomplished as per manufacturer's recommendations to abut the adjoining sheets and strip in with a welded TPO cover strip.

- F. Probe all completed welds using a slotted screwdriver or cotter pin puller type tool to verify seam integrity. Do not probe welds until they have had time to cool to ambient conditions. Any welds found to be insufficiently welded need to be repaired on a daily basis.

3.11 MEMBRANE SECUREMENT

- A. Secure membrane at all locations where the membrane terminates or goes through an angle change greater than 1" in 12" except for round pipe
- B. Penetrations less than 18" in diameter and square penetrations less than 4" square.

3.12 BASE SHEET APPLICATION

None

3.13 FLASHING - PENETRATIONS

- A. General:
1. Remove all existing flashings (i.e. lead, asphalt, mastic, etc.).
 2. Flash all penetrations passing through the membrane.
 3. The flashing seal must be made directly to the penetration.
- B. Pipes, Round Supports, etc.:
1. Flash with Manufacturer's Pre-Molded TPO Pipe Flashings where practical.
 2. Flash using TPO system membrane when Pre-Molded Flashing is not practical.
- C. Structural Steel Tubing:
1. Use a field fabricated pipe flashing detail provided that the minimum corner radius is greater than 1/4" and the longest side of the tube does not exceed 12". When the tube exceeds 12" use a standard curb detail.
- D. Pipe Clusters and Unusual Shaped Penetrations:
1. Fabricate penetration pockets to allow a minimum clearance of 1" between the penetration and all sides.
 2. Secure penetration pockets per Manufacturer's Details
 3. Fill penetration pockets with Pourable Sealer, so as to shed water. Pourable Sealer shall be a minimum of 2" deep.
- E. Hot Pipes:
1. Protect the TPO system components from direct contact with steam or heat sources when the in-service temperature is in excess of 140° F. In all such cases flash to an intermediate insulated "cool" sleeve per Manufacturer's details.
- F. Flexible Penetrations:
1. Provide a weathertight gooseneck set in Water Block Seal and secured to the deck.
 2. Flash in accordance with Manufacturer's Details
- G. Scuppers:
1. Remove any existing scuppers and provide a new welded watertight scupper.
 2. Set welded watertight scupper in Water Block Seal and secure to the structure.
 3. Flash in accordance with Manufacturer's Details.

3.14 FLASHING - WALLS, PARAPETS, MECHANICAL EQUIPMENT CURBS, etc.

- A. General:
Using the longest pieces practical, flash all walls, parapets, curbs, etc., a minimum of 8" high per Manufacturer's Details.
- B. Evaluate Substrate:
Evaluate the substrate and overlay per Manufacturer's specifications as necessary.
- C. If project is a Retrofit or Tear-Off remove all flashings.
- D. Remove excessive asphalt to provide a smooth, sound surface for new flashings.
- E. Apply TPO System Bonding Adhesive at about the same time to both the membrane flashing and the surface to which it is being bonded so as to allow approximately the same drying time. Apply TPO Bonding Adhesive by rolling the adhesive on to the mating surfaces evenly, avoiding globs or puddles.
- F. Allow TPO Bonding Adhesive to flash off until tacky. Touch the TPO Bonding Adhesive surface with a clean, dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, pushing straight down to check for stringing, also push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness. If either motion exposes wet or stringy adhesive when the finger is lifted, then it is not ready for mating. Flash off time will vary depending on ambient air conditions.
- G. Roll the flashing into the adhesive evenly and carefully so as to minimize wrinkles.
- H. To ensure proper contact, compress the flashing to the substrate with a stiff push broom.
- I. Complete the splice between membrane flashing and the main roof sheet by hot air welding. Provide lap splices in accordance with Manufacturer's details.
- J. Provide termination directly to the vertical substrate as shown in Manufacturer's Details.
- K. Install TPO-Joint covers at field and flashing splice intersections as required by Manufacturer..
- L. Install intermediate flashing attachment as required by Manufacturer's Specifications and Details

3.15 TEMPORARY CLOSURE (NOT WARRANTED BY MANUFACTURER)

- A. Temporary closures that ensure that moisture does not damage any completed section of the new roofing system are the responsibility of the roofing contractor. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.

3.16 ROOF WALKWAYS

- A. Walkways may consist of Manufacturer's TPO System Walkway material. Heat weld the perimeters of the walkway material to the TPO System membrane per Manufacturer's specifications. Walkways should be installed around all roof top equipment, at the entrance of the roof access, and as indicated on the drawings.

3.17 SHEET METAL WORK

- A. Install Firestone supplied sheet metal as shown on roof drawings.
- B. Follow current industry guidelines for installation or Manufacturer's requirements, whichever is more stringent.

3.18 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed as required by the manufacturer
- B. Correct identified defects or irregularities.

3.19 CLEAN-UP

- A. Clean all contaminants from building and surrounding areas.
- B. Remove trash, debris, equipment from project site and surrounding areas.
- C. Repair or replace damaged building components or surrounding areas to the satisfaction of the building owner.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Flashings.
 - 2. Manufactured reglets with counterflashing.

1.3 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.4 SUBMITTALS

- A. Product Data: For each of the following
 - 1. Underlayment materials.
 - 2. Epoxy seam sealer.
- B. Shop Drawings: For sheet metal flashing and trim.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Distinguish between shop- and field-assembled Work.
 - 3. Include identification of material, thickness, weight, and finish for each item and location in Project.
 - 4. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
 - 5. Include details of termination points and assemblies.
 - 6. Include details of roof-penetration flashing.
 - 7. Include details of edge conditions, including eaves, ridges, valleys, rakes, crickets, flashings, and counterflashings.
 - 8. Include details of special conditions.

9. Include details of connections to adjoining work.
 10. Detail formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches.
- C. Samples: Four (4) 12-inch by 12-inch samples of each sheet metal material. Show pattern, finish, color, and thickness.

1.5 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.
1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
 2. Protect stored sheet metal flashing and trim from contact with water.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.6 WARRANTY

- A. Guarantee materials and workmanship for two years.
- B. Special Warranty on Finishes: 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. Finish Warranty Period: 20 year guarantee for PVDF coating from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, 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. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Aluminum Sheet: ASTM B209, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth surface.
 - 1. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 2. Color: As selected by Architect from manufacturer's full range.
 - 3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal 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.
 - 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. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
 - 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Elastomeric Sealant: ASTM C920, elastomeric polyurethane, polysulfide, or silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- D. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.
- E. Reglets: Units of type, material, and profile required, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory- mitered and -welded corners and junctions and with interlocking

counterflashing on exterior face, of same metal as reglet.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Fry Reglet Corporation.
 - b. Hohmann & Barnard, Inc.
 - c. National Sheet Metal Systems, Inc.
2. Source Limitations: Obtain reglets from single source from single manufacturer.
3. Material: Aluminum, 0.024 inch thick.
4. Surface-Mounted Type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
5. Finish: Mill With manufacturer's standard color coating.

2.4 FABRICATION, GENERAL

- A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.
 1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
 2. 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.
 3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
 4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances:
 1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
 2. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in

accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.

- 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 cited sheet metal standard for application, but not less than thickness of metal being secured.
- G. Seams:
 - 1. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.
- H. Do not use graphite pencils to mark metal surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with installer present, for compliance with requirements for installation tolerances, substrate, 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.
 - 3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
 - 1. Install fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of sealant.
 - 3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
 - 5. Install continuous cleats with fasteners spaced not more than 12 inches o.c.
 - 6. Space individual cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
 - 7. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.

8. Do not field cut sheet metal flashing and trim by torch.
 9. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure- treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
1. Coat concealed side of uncoated-aluminum sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
1. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.
 2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
 3. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated.
 - a. Embed hooked flanges of joint members not less than 1 inch into sealant.
 - b. Form joints to completely conceal sealant.
 - c. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way.
 - d. Adjust setting proportionately for installation at higher ambient temperatures.
 - 1) Do not install sealant-type joints at temperatures below 40 deg F.
 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.
- ### 3.3 INSTALLATION OF ROOF FLASHINGS
- A. Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard.
1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.

2. Install work with laps, joints, and seams that are 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 minimum of 4 inches over base flashing. Install stainless steel draw band and tighten.
- C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing.
 1. Insert counterflashing in reglets or receivers and fit tightly to base flashing.
 2. Extend counterflashing 4 inches over base flashing.
 3. Lap counterflashing joints minimum of 4 inches.
 4. Secure in waterproof manner by means of snap-in installation and sealant or lead wedges and sealant unless otherwise indicated.
- 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 INSTALLATION OF MISCELLANEOUS FLASHING

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

3.5 INSTALLATION TOLERANCES

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

3.6 CLEANING

- 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.

3.7 PROTECTION

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. On completion of sheet metal flashing and trim installation, remove unused materials

and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.

- C. Maintain sheet metal flashing and trim in clean condition during construction.
- D. 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, as determined by Architect.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

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. Exterior joints in vertical and horizontal surfaces.
 - a. Joints between scupper boxes, masonry and metal coping.
 - b. Other joints as indicated.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.
- B. Provide joint sealants for exterior applications that have been produced and installed to establish and maintain watertight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.
- C. Provide products that will not produce off-gassing of VOC's after product is installed and properly cured.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product.
 - 1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.
 - 2. Provide Material Safety Data Sheets (MSDS) for the following:
 - a. Elastomeric joint sealants.
 - b. Primer.
 - c. Cleaners for nonporous surfaces.
- 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. 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.
- D. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.
- E. Qualification data complying with requirements specified in "Quality Assurance" article. Include list of completed projects with project names addresses, names of architects and owners, plus other information specified.
- F. Compatibility and adhesion test reports from elastomeric sealant manufacturer indicating that materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.
- G. Product test reports for each type of joint sealants indicated, evidencing compliance with requirements specified.
- H. Preconstruction field test reports, indicating which products and joint preparation methods demonstrate acceptable adhesion to joint substrates.
- I. Field-Adhesion-Test Reports: For each sealant application tested.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
- B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealants and joint backer materials from a single manufacturer for each different product required.
- C. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by a qualified independent testing laboratory on current product formulations within a 24-month period preceding date of Contractor's submittal of test results.
 - 1. Test elastomeric sealants for compliance with requirements specified by reference to ASTM C920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.
 - 2. Include test results performed on joint sealants after they have cured for 1 year.

1.6 PRECONSTRUCTION TESTING

- A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
 2. Conduct field tests for each kind of sealant and joint substrate.
 3. Notify Architect seven days in advance of dates and times when test joints will be erected.
 4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
 - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
 6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.7 FIELD 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.
 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.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, 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. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.
- C. Provide VOC-compliant sealants. Products must not produce off-gassing after proper curing is achieved.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920.
- B. One part, multi-purpose polyurethane sealant: Uses / Locations: Roof flashing and membranes.
 - 1. Type: Type S (ASTM C 920).
 - 2. Grade NS (ASTM C 920).
 - 3. Class: 35 (ASTM C 920).
 - 4. Use: NT, M, A, O and I.
 - 5. Shore A Hardness: 20 (ASTM C 661).
 - 6. Movement Capability: 25 (ASTM C 719).
 - 7. Extrusion Rate: 5 ml/min.
 - 8. Use Related to Exposure: NT (non-traffic).
 - 9. Basis of Design:
 - a. AP Sealant by Firestone

2.3 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing. Provide backing and filler material by sealant manufacturer to greatest extent possible, or products recommended by sealant manufacturer.
- B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non-extruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
 - 1. Open-cell polyurethane foam.
 - 2. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, non-outgassing in unruptured state.
- 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.

2.4 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: Non-staining, 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 performance of the Work.
- 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 concrete, masonry and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean metal, glass and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- 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 C1193 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 Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
 - 1. Provide concave joint configuration per Figure 5A in ASTM C1193, unless otherwise indicated.
 - 2. 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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

EXHIBIT G

EXHIBITS (DRAWINGS)

FULTON COUNTY JUVENILE JUSTICE CENTER ROOF REPLACEMENT

395 PRYOR STREET, S.W.
ATLANTA, GEORGIA 30312

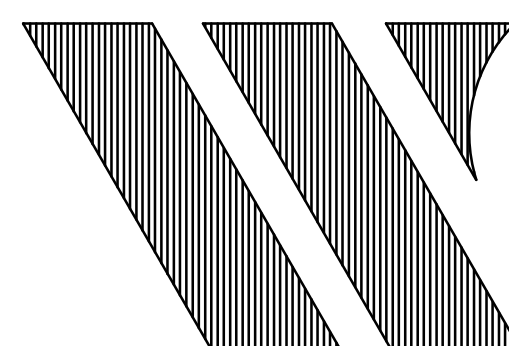
DATE:
1/2/2019



FOR:

FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT

FULTON COUNTY AIRPORT - 3977 AVIATION CIRCLE, 256
ATLANTA, GEORGIA 30316




Williams-Russell and Johnson, Inc.
ENGINEERS - ARCHITECTS - PLANNERS
260 Peachtree Street NW, 26th Floor
Atlanta, Georgia 30303

Office: (404) 853-6800
Fax: (404) 607-8890

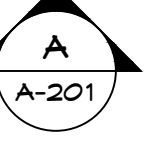
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O 1/2/2019 FINAL SUBMITTAL


SYMBOLS



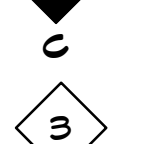
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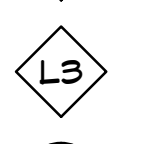
ELEVATION INDICATOR, EXTERIOR




ELEVATION INDICATOR, INTERIOR, MULTIPLE VIEW



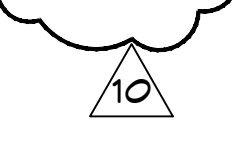
WINDOW TYPE IDENTIFIER



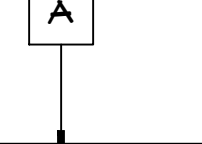
LOUVER TYPE IDENTIFIER, L=LOUVER, S=TYPE



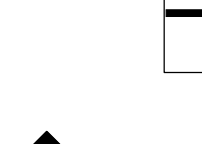
DOOR TYPE INDICATOR



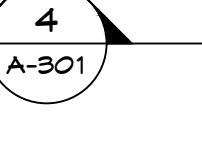
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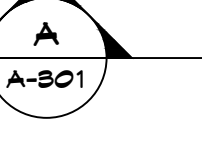
WALL TYPE INDICATOR



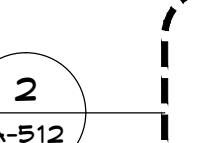
WALL SECTION INDICATOR



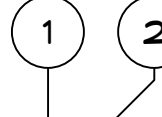
BUILDING SECTION INDICATOR



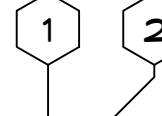
DETAIL INDICATOR, DASHED RECTANGLE



DETAIL INDICATOR, DASHED CIRCLE



NEW REFERENCE GRID INDICATOR




EXISTING REFERENCE GRID INDICATOR

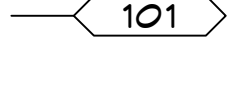
ROOM NAME

101


ROOM IDENTIFIER



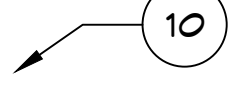
GRAPHIC SCALE
SCALE: 1" = 1'-0"



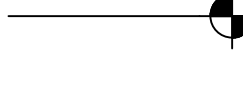
FURNITURE / EQUIPMENT INDICATOR




MATCH LINE
MATCH LINE INDICATOR



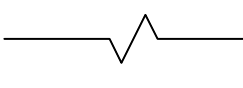
SPECIFIC CONSTRUCTION NOTES INDICATOR



ELEVATION IDENTIFIER



IDENTIFICATION DEVICE INDICATOR, ACCESSORIES



CUT LINE INDICATOR

4

DRAWING TITLE

1" = 1'-0"

DRAWING BLOCK TITLE, TYPICAL

2

A-501

DETAIL SECTION INDICATOR

LOCATION MAP

PROJECT SUMMARY

SCOPE OF WORK CONSISTS OF THE FOLLOWING:

- ROOF REPLACEMENT: DEMO ALL EXISTING ROOFING AND INSULATION AT ROOF AS INDICATED ON THE DRAWINGS. INSTALL NEW TPO MEMBRANE ROOFING WITH TAPERED INSULATION TO ROOF SCUPPERS AND ALL ASSOCIATED FLASHING AT CURBS, EQUIPMENT, ROOF PENETRATIONS AND PARAPETS. INSTALL WALK PADS ALONG DESIGNATED PATHWAYS TO EQUIPMENT AND ROOF ACCESS POINTS. INSTALL NEW METAL COPING AT PARAPET WALLS. INSTALL NEW SCUPPER BOXES AT ALL EXISTING SCUPPER LOCATIONS. REMOVE AND REINSTALL EXISTING LIGHTING PROTECTION TERMINALS AT THE ROOF AND PARAPETS.

CODE DATA

INTERNATIONAL BUILDING CODE 2012 EDITION, WITH GEORGIA AMENDMENTS (2014, 2015, AND 2017)
INTERNATIONAL ENERGY CODE 2009 EDITION, WITH GEORGIA AMENDMENTS (2011 AND 2012)

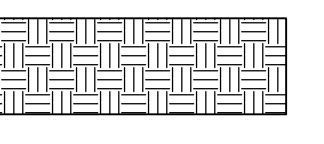
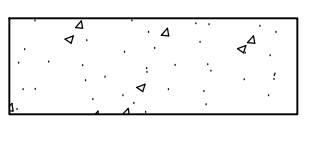
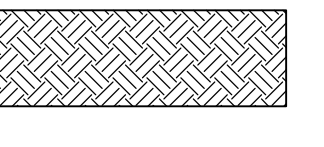
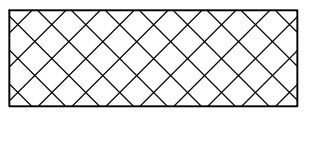
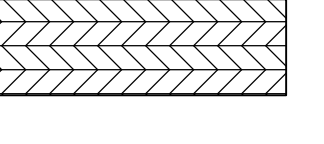
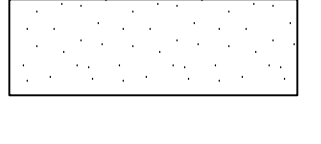
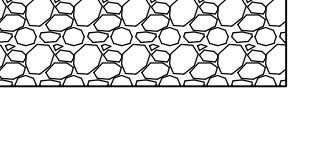
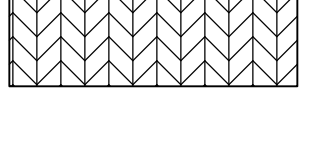
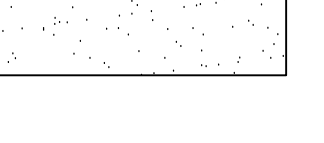
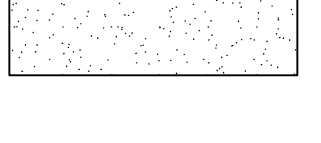
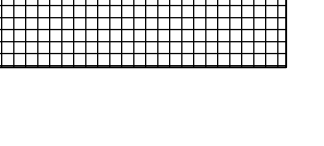
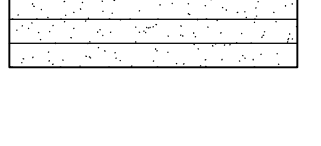
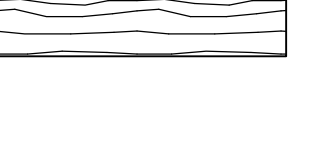

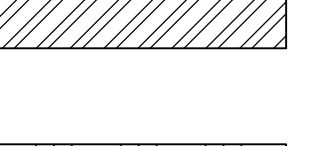
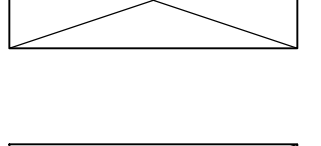
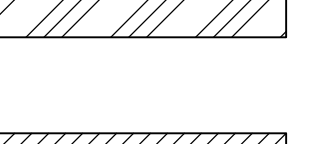
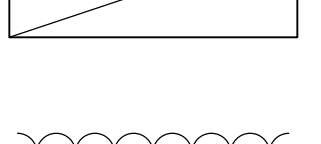

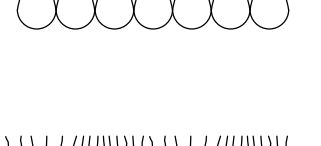


INDEX OF DRAWINGS

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G-002	INDEX OF DRAWINGS, CODE SUMMARY AND GENERAL INFORMATION
G-003	ABBREVIATIONS
G-004	ABBREVIATIONS
AD-101	ROOF DEMOLITION PLAN
A-101	ROOF MODIFICATION PLAN
A-102	ROOF PLAN WALK PAD AND CRICKET LAYOUT
A-501	ROOF DETAILS
A-502	ROOF DETAILS
A-503	TYPICAL ROOF DETAILS
A-504	TYPICAL ROOF DETAILS

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FULTON COUNTY JUVENILE JUSTICE CENTER ROOF REPLACEMENT
1515 WOOD STREET
ATLANTA, GEORGIA 30312
FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT
FULTON COUNTY AIRPORT, 2560 AVIATION CIRCLE, 256
ATLANTA, GEORGIA 30355

MATERIAL DESIGNATION

	EARTHWORK, COMPACTED FILL		CONCRETE, CAST IN PLACE
	EARTH, UNDISTURBED		CONCRETE BLOCK
	PLASTIC ON PLYWOOD		GROUT
	CRUSHED ROCK GRAVEL		WOOD, GLUE LAMINATED
	SAND		PARTICLE BOARD
	INSULATION, RIGID BOARD		BOARD, ORIENTED STRAND
	WOOD FINISH		PLYWOOD
	STEEL AND OTHER METALS		WOOD FRAMING, CONTINUOUS
	ALUMINUM		WOOD BLOCKING OR SHIM
	BRICK, COMMON/FACE		INSULATION, LOOSE FILL
	TILE, ACOUSTICAL CEILING		CARPET AND PAD

GENERAL NOTES

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK AND NOTIFY OWNER OF ANY DISCREPANCIES
- CONTRACTOR SHALL PROTECT THE EXISTING STRUCTURE FOR WHICH NO WORK IS REQUIRED FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT HIS OWN COST, ANY OF THE STRUCTURE THAT IS DAMAGED RESULTING FROM WORK ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF THE EXISTING ROOF COMPONENTS DESIGNATED AS PART OF THE SCOPE OF WORK FOR THIS PROJECT.
- CONTRACTOR SHALL COMPLY WITH APPLICABLE LOCAL ADOPTED BUILDING CODES OF THE AUTHORITY HAVING JURISDICTION
- THE BUILDING WILL BE IN OPERATION DURING THE DURATION OF THE CONSTRUCTION ASSOCIATED WITH THE WORK REQUIRED FOR THIS PROJECT. CONTRACTOR SHALL NOT DISRUPT THE OPERATIONS OF THE BUILDING DURING THE DURATION OF THE WORK REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL COORDINATE THE STORAGE OF CONSTRUCTION MATERIALS AND DUMPSTER ON SITE, PARKING FOR CONSTRUCTION CREW ON SITE, DELIVERY OF CONSTRUCTION MATERIALS, REMOVAL OF CONSTRUCTION DEBRIS AND HOURS OF WORK WITH THE FULTON COUNTY AUTHORIZED REPRESENTATIVE AND AUTHORIZED REPRESENTATIVES OF THIS FACILITY.
- CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR THE REPLACEMENT OF ANY DETERIORATED ROOF SHEATHING PLYWOOD CAP DISCOVERED DURING THE ROOF REPAIR OR REPLACEMENT.
- DISSIMILAR METALS SHALL BE ISOLATED FROM CONTACT WITH EACH OTHER TO PREVENT THE OCCURRENCE OF GALVANIC CHEMICAL REACTION BETWEEN DISSIMILAR METAL CONTACT.

SUBDATE: 1/22/2014 SUBTIME: 10:45:00 AM STANDARD TIME

PROJECT NO.: 3978

DATE: 1/22/2014

DESIGNED: FD

CHECKED: FD

DRAWN: SC

APPROVED: FD

INDEX OF DRAWINGS

CODE SUMMARY AND

GENERAL INFORMATION

3978

1/22/2014

FD

FD

SC

FD

INDEX OF DRAWINGS

CODE SUMMARY AND

GENERAL INFORMATION

3978

1/22/2014

FD

FD

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FD

INDEX OF DRAWINGS

CODE SUMMARY AND

GENERAL INFORMATION

3978

1/22/2014

FD

FD


SC

FD

RELEASED FOR CONSTRUCTION

STATE OF GEORGIA
John C. Russell
FRANKLIN CASKLEN
 EXPIRATION DATE **12/1/17**
 REGISTRATION NO. **PA000027**
REGISTERED ARCHITECT

Williams Russell and Johnson, Inc.
 100 Peachtree Street NW, 26th Floor
 Atlanta, Georgia 30303
 Office: (404) 853-6800
 Fax: (404) 807-8890




FULTON COUNTY JUVENILE JUSTICE CENTER ROOF REPLACEMENT

305 PINEHURST STREET, S.W.
 ATLANTA, GEORGIA 30312


FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT

1000 W. Peachtree Street, Suite 256
 ATLANTA, GEORGIA 30316


FULTON COUNTY JUVENILE JUSTICE CENTER ROOF REPLACEMENT




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FULTON

IT	ISOLATION TRANSFORMER
ITS	INTERTEK TESTING SERVICES
IN	IRRIGATION WATER
INH	INSTANTANEOUS WATER HEATER
J	
JAL	JALOUSIE
JAN	JANITOR
JAN CLO	JANITOR CLOSET
J-BOX	JUNCTION BOX
JR	JUNIOR
JB	JANITOR'S SINK
K	
K	KILO
K	KELVIN, THOUSAND
K VALUE	THERMAL CONDUCTIVITY
KA	CYLINDER LOCKS KEYPED ALIKE
KB	KNEE BRACE
KG	KITCHEN CABINET
KGAL	KILOCALORIE
KD	KILN DRIED, KNOCKED DOWN
KG	KILOGRAM
KHZ	KILOHERTZ
KIP	THOUSAND POUNDS
KIP FT	THOUSAND FOOT/POUNDS
KIT	KITCHEN
KL	KILOLITER
KLF	KIPS PER LINEAR FOOT
km	KILOMETER
km ²	SQUARE KILOMETER
km/h	KILOMETER PER HOUR
km/s	KILOMETER PER SECOND
kn	KNOCKOUT
KNO	KNOCK OUT PANEL
KPS	KILOPASCAL
KPL	KICKPLATE
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAh	KILOVOLT AMPERE PER HOUR
KVAR	KILOVOLT AMPERE REACTIVE
KN	KILOWATT
KNH	KILOWATT HOUR
KNHm	KILOWATT HOUR METER
KNY	KEYWAY
L	
L	ANGLE, LITER
L CL	LINEN CLOSET
L COL	LALLY COLUMN
LIL	LATCH AND LOCK
LIP	LATH AND PLASTER
L/S	LITER PER SECOND
LA	LEAVING AIR, LIGHTNING ARRESTER
LAB	LABORATORY
LAD	LADDER
LAS	LASING
LAM	LAMINATE
LAM GL	LAMINATED GLASS
LANH	LAUNCH
LAY	LAYER
LAQ	LACQUER
LAT	LATITUDE, LATTICE, LEAVING AIR TEMPERATURE
LATL	LATERAL
LAU	LAUNDRY
LAV	LAVATORY
LB	POUND
LBF	POUND-FORCE
LBF/FT	POUND-FORCE PER FOOT
LBF/SF	POUND-FORCE PER SQUARE FOOT
LBF/CF	POUND-FORCE PER CUBIC FOOT
LBF/HF	POUND-FORCE PER HORSEPOWER
LBF/H	POUND-FORCE PER HOUR
LBF/N	POUND-FORCE PER INCH
LBF/SI	POUND-FORCE PER SQUARE INCH
LBF/MIN	POUND-FORCE PER MINUTE
LBR	LUMBER
LBS	POUND
LBS	LAUNDRY CHUTE
LCD	LINEAR CELING DIFFUSER
LCM	LOOSE CUBIC METER
LCM	LIGHTWEIGHT CONCRETE MASONRY UNIT
LCY	LOOSE CUBIC YARD
LD	LINEAR DIFFUSER
LD BRG	LOAD-BEARING
LDBT	LEAVING DRY BULB TEMPERATURE
LDP	LUMEN DIRT DEPRECIATION
LDS	LANDING
LDNK	LANDMARK
LDR	LEADER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LF INS	LOOSE FILL INSULATION
LG	LINE GROUND, LIQUID GAS
LH	LATENT HEAT, LEFT HAND
LHS	LATENT HEAT GAIN
LHR	LATENT HEAT RATIO, LEFT HAND REVERSE
LHS	LEFT HAND SIDE
LIB	LIBRARY
LM SN	LIMIT SWITCH
LIN	LINEAR
LINO	LINOLEUM
LIG	LIQUID, LIQUOR
LKNT	LOCKNUT
LKR	LOCKER
LKR RM	LOCKER ROOM
LQWASH	LOCKWASHER
LL	LEAD UNED, LIVE LOAD, LOW LEVEL, LOWER LEFT
LL GB	LEAD UNED GYPSUM BOARD
LLD	LAMP LUMEN DEPRECIATION

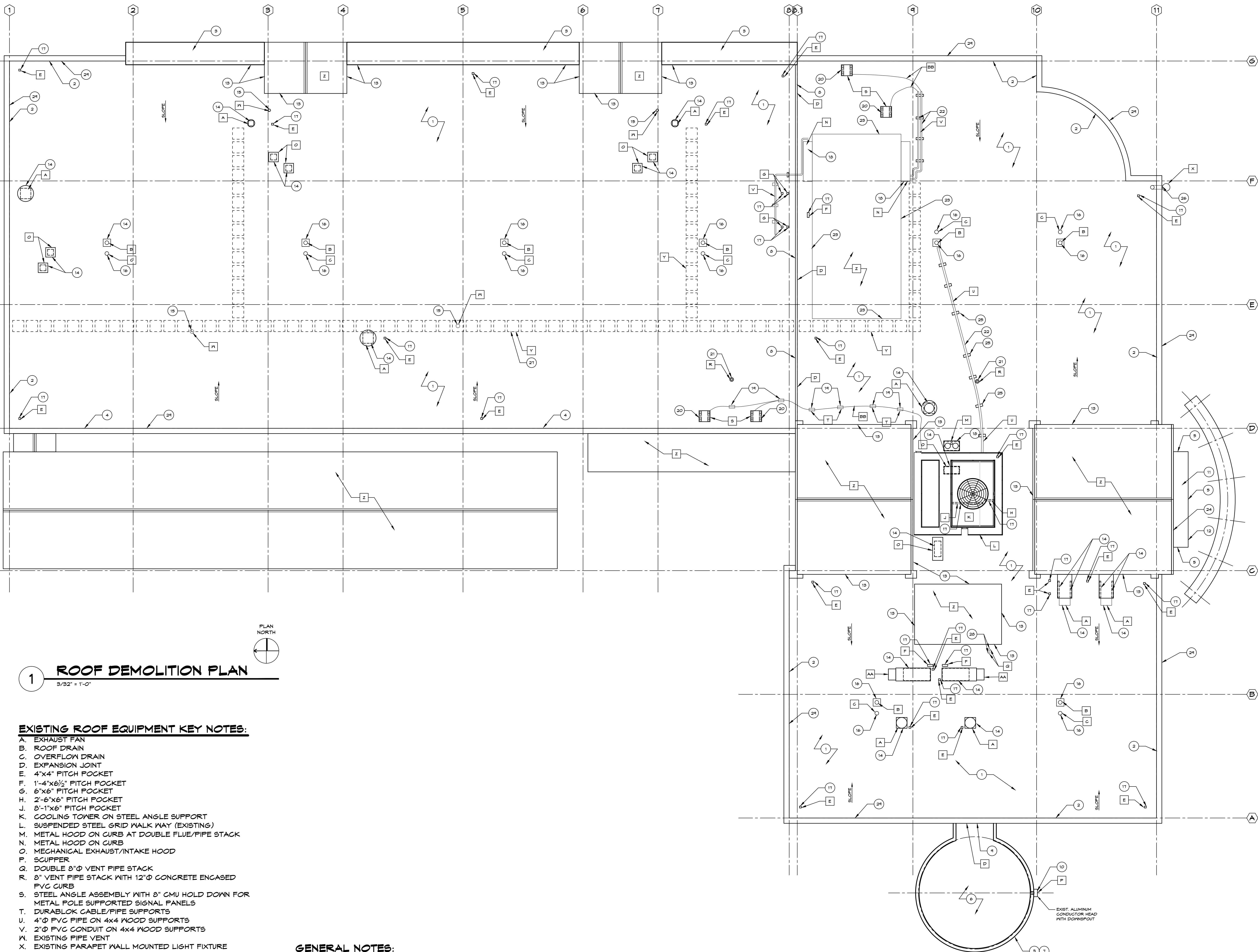
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LM	LIMEN
LMST	LIMESTONE
LN	LANE
LNDSOF	LANDSCAPE
LNG	LIQUID NATURAL GAS, LONGITUDE
LO	LOCK ON, LUBRICATING OIL
LOC	LOCATION
LOS	LOGARITHM
LONG	LONGITUDINAL
LQP	LUBRICATING OIL PUMP
LOS	LINE OF SIGHT
LOV	LUBRICATING OIL VENT
LOX	LIQUID OXYGEN
LP	LIGHT POLE, LIGHTPROOF, LIQUID PETROLEUM, LOW PRESSURE (MECHANICAL)
LPA6	LOW PRESSURE ALARM SWITCH
LPB	LOW PRESSURE BOILER
LPGR	LOW PRESSURE CONDENSATE RETURN
LPFT	LOW PRESSURE DRIP TRAP SET
LFF	LOW POWER FACTOR
LPG	LIQUID PETROLEUM GAS, LOW PRESSURE GAS
LPL	LIGHTPROOF LOUVER
LPR	LOW PRESSURE RETURN
LPS	LOW PRESSURE SODIUM, LOW PRESSURE STEAM
LPT	LOW POINT
LPV	LIGHTPROOF VENT
LPM	LUMENS PER MATT
LPR	LIVING ROOM
LRA	LOOKED ROTOR AMPS
LRS	LARGE
LRV	LOVERED ROOF VENT
LS	LARGE SCALE, LAWN SPRINKLING, LUMP SUM
LT	LIGHT
LT FLUOR	FLUORESCENT LIGHTING
LT GA	LIGHT GAUGE
LT SN	LIGHT SWITCH
LT XT	LIGHTWEIGHT
LTD	LIMITED
LTS	LIGHTING
LTS PNL	LIGHTING PANEL
LTHM	LOW TEMPERATURE HOT WATER
LTHS	LIGHTING
LUB	LUBRICATE
LV	LOW VOLTAGE
LVD	LOVERED
LVDPR	LOUVER DOOR
LVR	LOUVER
LVA	LOW WATER
LVN FLAS	LIGHTWEIGHT FLASTER
LVBT	LEAVING MET BULB TEMPERATURE
LVC	LIGHTWEIGHT CONCRETE
LVGO	LOW WATER CUT OFF
LWGC	LIGHTWEIGHT INSULATING CONCRETE
LWM	LOW WATER MARK
LWT	LEAVING WATER TEMPERATURE
LTYR	LAYER
LYT	LAYOUT
M	
m	METER
m ²	SQUARE METER
m ³	CUBIC METER
m/s	CUBIC METER PER SECOND
m/s	METER PER SECOND
M	MOMENT
MA	MILLIAMPERE
MA	MIXED AIR
MACH	MACHINE
MACH RM	MACHINE ROOM
MAG	MAGNET
MAHOS	MAHOGANY
MAINT	MAINTENANCE
MAN	MANUAL
MAT	MIXED AIR TEMPERATURE
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAU	MAKE UP AIR UNIT
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MB	MACHINE BOLT, MAIL BOX, MIXING BOX
MBF	THOUSAND BOARD FEET
MBH	MOP/BROOM HOLDER
MBM	THOUSAND FEET BOARD MEASURE
MBR	MASTER BEDROOM, MEMBER
MBU	BRITISH THERMAL UNIT (1000)
MBUH	THOUSAND BU PER HOUR
ME	MANHOLE COVER, MECHANICAL CONTRACTOR, MEDICINE CABINET, METAL-GLAD, MOISTURE CONTENT, MOMENT CONNECTION
MC	MINIMUM CIRCUIT AMPS
MCA	MINIMUM CIRCUIT BREAKER, METAL CORNER BEAD
MCB	MOTOR CONTROL CENTER
MCC	MOTOR CONTROL CENTER
MCF	THOUSAND CUBIC FEET
MCH	MAIL CHUTE
MD	MANUAL DAMPER, METAL DECK
MDG	MOTOR DIRECT CONNECT
MDO	MEDIUM DENSITY OVERLAY
ME	MECHANICAL ENGINEER
MEAS	MEASURE
MECH RM	MECHANICAL ROOM
MECH	MEDICAL, MEDIUM
MEK	METHYL ETHYL KETONE
MEL	MELAMINE
MEMB	MEMBRANE
MEMO	MEMORANDUM

MER	MERIDIAN
MEZZ	MEZZANINE
MF	MASTIC FLOOR, MILL FINISH
MFD	MANUFACTURED
MFG	MANUFACTURING
MFMA	MAPLE FLOORING MANUFACTURERS ASSOCIATION, METAL FRAMING MANUFACTURERS ASSOCIATION
MFR	MANUFACTURER, MASS FLOW RATE
MFR REG	MANUFACTURER'S RECOMMENDATION
MG	MOTOR GENERATOR
MSD	MILLION GALLONS PER DAY
MSPH	ONE THOUSAND GALLONS PER HOUR
MST	MANAGEMENT
MH	MANHOLE COVER, MECHANICAL CONTRACTOR, MEDICINE CABINET, METAL-GLAD, MOISTURE CONTENT, MOMENT CONNECTION
MHD	MASTHEAD
MHZ	MEGAHERTZ
MIA	MICROBIOLOGICAL INSTITUTE OF AMERICA
MIC	MICROPHONE
MID	MIDDLE
ML STD	MILITARY STANDARD
MM	MINIMUM, MINUTE
MIR	MIRROR
MISC	MISCELLANEOUS
MIT	MITER
MKD	MASTERKEYED
MKR	MARKER
ML	MATERIALS LIST, METAL LATH, MONOLITHIC
MLP	METAL LATH AND PLASTER
MLDS	MOLDING (MOLDINGS)
MLPK	MILLIPONK
mm	MILLIMETER
mm ²	SQUARE MILLIMETER
mm ³	CUBIC MILLIMETER
MO	MASONRY OPENING, MOTOR OPERATED
MOCF	MAXIMUM OVERCURRENT PROTECTION
MOP	MODIFY, MODIFY, MODULO, MOTOR OPERATED DAMPER
MOP BIT	MODIFIED BITUMEN
MODEM	MODULATOR-DEMODULATOR
MON	MONITOR, MONUMENT
MOPR	MOP RACK
MOS	METAL OXIDE SEMICONDUCTOR
MOT	MOTOR
MOV	MOTOR OPERATED VALVE
MP	MEDIUM PRESSURE
MPS	MEDIUM PRESSURE GAS, MILES PER GALLON
MPI	MILES PER HOUR
MPR	MEDIUM PRESSURE RETURN
MPS	MEDIUM PRESSURE STEAM
MPT	MALE PIPE THREAD
MR	MOISTURE RESISTANT
MRF	MARBLE FLOOR
MRT	MARBLE THRESHOLD
MS	MACHINE SCREEN, MOP SINK, MOTOR STARTER
MS	MILLISECOND
MSB	MOP SERVICE BASIN
MSF	ONE THOUSAND SQUARE FEET
MSL	MEAN SEA LEVEL
MSIRE	MOISTURE
MSK	MASTER SWITCH
MT	METAL THRESHOLD, MOUNT
MTD	MEAN TEMPERATURE DIFFERENCE
MTD	MOUNTED
MTS	MEETINGS, MOUNTING
MTWM	MEDIUM TEMPERATURE HOT WATER
MTL	METAL
MTLB	METAL BASE
MTLD	METAL DOOR
MTLF	METAL FLASHING
MTLP	METAL PARTITION
MTLR	METAL ROOF
MTS	MANUAL TRANSFER SWITCH
MTX	MATRIX
MULL	MULLION
MULT	MULTIPLE
MUNG	MUNGIFAL
MY	MILLIVOLT
MVA	MEGAVOLT-AMPERE
MYBL	MOVABLE
MYV	MANUAL VOLUME DAMPER
MY	MILLIKWATT
MYN	MEGAWATT, MICROWAVE
MYH	MEGAWATT HOUR
MYP	MEMBRANE WATERPROOFING
NZ	MULTIZONE
N	
N	NEWTON, NORTH
NA	NOT APPLICABLE
NAAM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
NAR	NARROW
NAT	NATURAL
NATL	NATIONAL
NBS	NATIONAL BUREAU OF STANDARDS
NC	NOISE CRITERIA, NORMALLY CLOSED
NCA	NICKEL COPPER ALLOY
NCOMBL	NONCOMBUSTIBLE
NE	NOT EXCEEDING, NORTHEAST
NEG	NEGATIVE
NEGTD	NEGOTIATED
NEI	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEU	NEUTRAL
NF	NEAR FACE
NFC	NATIONAL FIRE CODE

NFFA	NATIONAL FIRE PROTECTION ASSOCIATION
NFRG	NATIONAL FENESTRATION RATING COUNCIL
NFSD	NONFUSED
NI SL	NICKEL SILVER
NBS	NATIONAL INSTITUTE OF BUILDING SCIENCES
NG	NOISE ISOLATION CLASS, NOT IN CONTRACT
NGCOP	NICKEL COPPER
NIST	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
NKL	NICKEL
NL	NIGHT LIGHT
NLB	NONLOADBEARING
NM	NON-METALLIC
NMAG	NONMAGNETIC
NO	NORMALLY OPEN, NUMBER
NOG	NOTICE OF CLARIFICATION
NOM	NOMINAL
NON STD	NONSTANDARD
NONFLM	NONFLAMMABLE
NORM	NORMAL
NP	NO FANT
NPCA	NATIONAL PAINT AND COATINGS ASSOCIATION
NPL	NAMEPLATE, NICKEL PLATED
NR	NOISE REDUCTION
NRG	NOISE REDUCTION COEFFICIENT
NRGA	NATIONAL ROOFING CONTRACTORS ASSOCIATION
NRGP	NON-REINFORCED CONCRETE PIPE
NRP	NONREMOVABLE
NR	NARRON STYLE, NEAR SIDE, NO SCALE
NT WT	NET WEIGHT
NTS	NOT TO SCALE
NAM	NUMERAL
O	
O/O	OVER
O/O	OUT TO OUT
O	OXYGEN
OA	OUTSIDE AIR, OVERALL
OAD	OUTSIDE AIR DAMPER
OAS	OUTSIDE AIR GRILLE
OAI	OUTSIDE AIR INTAKE
OBM	OBSERVATION WINDOW
OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OCG	OCUPY
OCR	OIL CIRCUIT RECLOSER
OCT	OCTAGON
OD	OUTSIDE DIAMETER, OUTSIDE DIMENSION
OF	OUTSIDE FACE
OF/CI	OWNER FURNISHED/CONTRACTOR INSTALLED
OFD	OVERFLOW DRAIN
OFF	OFFICE
OF/CI	OWNER FURNISHED/OWNER INSTALLED
OF5	OUTSIDE FACE OF STUDS
OSA	OIL GAGE
OSL	OBSCURE GLASS
OH	OVERHEAD
OH DR	OVERHEAD (GOING) DOOR
OL	OVERLOAD
OLVL	OIL LEVEL
OP	OIL PROOF
OPH	OPPOSITE HAND
OPNG	OPENING
OPF	OPPOSITE
OPQ	OPAGUE
OPR	OPERABLE
OPRS	OIL PRESSURE
OPT	OPTIONAL, OPTIONAL
OR	OPERATING ROOM, OUTSIDE RADUS
ORD	ORDNANCE, OVERFLOW ROOF DRAIN
ORG	ORGANIC
ORIG	ORIGINAL
ORN	ORNAMENTAL
OS	MANUAL
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OSL	OIL SEAL
OSP	OPERATING STEAM PRESSURE
OTS	OIL TEMPERATURE GAUGE
OUT	OUTLET
OVC	OVERCURRENT
OVFL	OVERFLOW
OVRD	OVERDRIVE
OWSL	OBSCURE WIRED GLASS
OZ	OUNCE
P	
P	POLE, PUMP
Pa	PASCAL
PA	PIPE ANCHOR, POWER AMPLIFIER, PUBLIC ADDRESS
PANB	PANIC BOLT
PAR	PARALLEL, PARAPET
PARA	PARAGRAPH
PB	PULL STATION
PS CONC	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSFA	PSF ABSOLUTE
PSFG	PSF GAGE
PSH	PURSE SHELF
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAGE
PSL	PIPE SLEEVE
PT	PAINT, PIPE THREAD, PNEUMATIC TUBE, POST TENSIONED, PRESSURE TREATED
PT CONC	POST-TENSIONED CONCRETE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PTD	PAPER TOWEL DISPENSER, PRINTED
PTD	PAPER TOWEL DISPENSER AND RECEPTACLE

PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
PTRV	PRESSURE TEMPERATURE RELEASE VALVE
PUR	PURLINS
PV	PAVED
PV RD	PAVED ROAD
PVA	POLYVINYL ACETATE
PVC	POLYVINYL CHLORIDE (PLASTIC)
PFV	POLYVINYL FLUORIDE (PLASTIC)
PVS	PAVING
PN	PASS WINDOW
PWR	POWER
Q	
Q	HEAT TRANSFER, RATE OF FLOW
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QCR	QUALITY CONTROL REVIEW
QM	QUALITY MANAGEMENT
QRY	QUARRY
QT	QUARRY TILE
QTB	QUARRY TILE BASE
QTF	QUARRY TILE FLOOR
QTR	QUARTER
QTY	QUANTITY
QIAD	QUADRANGLE, QUADRANT
QIAD	QUALITY
QUOT	QUOTATION
R	
R	RADIUS, RANGE, RISER, THERMAL RESISTANCE
RED	RESEARCH AND DEVELOPMENT
RA	RETURN AIR
RA FAN	RETURN AIR FAN
RA GR	RETURN AIR GRILLE
RAB	RABBETED
RAC	ROOM AIR CONDITIONER
RAD	RADIAN, RADIATOR, RETURN AIR DUCT
RAD HAZ	RADIATION HAZARD
RADN	RADIATION
RA	RETURN AIR TEMPERATURE
RB	RESILIENT BASE, RUBBER BASE
RB HK	ROBE HOOK
RBH	REINFORCED BRICK MASONRY
RC	RUBBER
RC	REINFORCED CONCRETE, REMOTE CONTROL
RCB	REINFORCED CONCRETE BOX
RCGP	REINFORCED CONCRETE GULVERT PIPE
RCF	REFLECTED CEILING LAM, REINFORCED CONCRETE PIPE
RCPTN	RECEPTION
RCVR	RECEIVER
RD	REFRIGERANT DISCHARGE, ROAD, ROOF DRAIN
RDC	REDUCER
RDG INS	RIGID INSULATION (SOLID)
REBAR	REINFORCING STEEL BARS
REC	RECEIVED
REC ROOM	RECREATION ROOM
REC'D	RECEIVED
RECIRC	RECIRCULATE
RECT	RECTANGLE
REF	REFERENCE, REFRIGERATOR
REFL	REFLECT
REFR	REFRACTORY, REFRIGERATION
REG	REGISTER, REGULATION
RENF	REINFORCED
REM	REMOVABLE
REP	REPAIR
REPL	REPLACE
REPRO	REPRODUCE
REQ	REQUIRE
REQD	REQUIRED
RESIL	RESILIENT
REST	RESTROOM
RET	RETURN
REV	REVISION, REVOLUTIONS
RF	RADIO FREQUENCY, RESILIENT FLOORING
RFG	ROOFING
RFGT	REFRIGERANT
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RH	RELATIVE HUMIDITY, RIGHT HAND, ROOF HATCH
RHC	REHEAT COIL
RHED	RHEOSTAT
RHG	REFRIGERANT HOT GAS
RHMS	ROUND HEAD MACHINE SCREEN
RHR	RIGHT HAND REVERSE
RWD	REDWOOD
RVL	RAIN WATER LEADER
RWR	RECESSED WASTE RECEPTACLE
RXY	RUNWAY
S	
S	SOUTH
S BM	BEAM, STANDARD
S/S	START/STOP
S1B	SURFACED ONE SIDE
S2B	SURFACED TWO SIDES
S4B	SURFACED FOUR SIDES
SA	SINGLE ACTING (DOOR), SUPPLY AIR
SA	SUPPLY AIR GRILLE
SALV	SALVAGE
SAMP	SAMPLE
SAN	SANITARY
SAPG	SUSPENDED ACOUSTICAL PLASTER GELING
SARA	SOCIETY OF AMERICAN REGISTERED ARCHITECTS
SAT	SATURATE, SUSPENDED ACOUSTICAL TILE

SATC	SUSPENDED ACOUSTICAL TILE CEILING
SB	SPLASH BLOCK
SECCI	SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL
SEB	STYRENE BUTADIENE STYRENE
SEBTR	SUBSTRATE
SC	SHADING COEFFICIENT, SOLID CORE
SCG	SHORT CIRCUIT CAPACITY
SCD	SEAT COVER DISPENSER
SCFM	STANDARD CUBIC FEET PER MINUTE
SCFS	STANDARD CUBIC FEET PER SECOND
SCH	SCHOOL
SCHED	SCHEDULE
SCHM	SCHEMATIC
SCMU	SOLID CONCRETE MASONRY UNIT
SCP	SCUPPER
SCR	SEMICONDUCTOR CONTROLLED RECTIFIER, SHOWER CURTAIN ROD
SCRN	SCREEN
SC	STRUCTURAL CLAY TILE
SCND	SOLID CORE WOOD DOOR
SD	SHOP DRAWINGS, SMOKE DETECTOR, SOAF DISPENSER, STORM DRAIN, SUPPLY DUCT
SOBL	SANDBLAST
SOS	SIDING
SDI	STEEL DECK INSSTITUTE, STEEL DOOR INSTITUTE
SOL	SADDLE
SDMH	STORM DRAIN MANHOLE
SDMPR	SMOKE DAMPER
SE	STRUCTURAL ENGINEER
SECT	SECTION
SEG	SEGMENT
SEL	SELECT
SEP	SEPARATE
SEP TNC	SEPTIC TANK
SF	SAFETY FACTOR, SQUARE FOOT (FEET), SUPPLY FAN
SFT HP	SHAFT HORSEPOWER
SFTND	SOFTWOOD
SG	STEAM GAGE
SGD	SLIDING GLASS DOOR
SGL	SINGLE
SGPH	GALLONS PER HOUR, STANDARD
SH	SENSIBLE HEAT, SHINGLES, SINGLE HUNG (WINDOW)
SHIFT	SHIFT (ELEVATOR)
SHG	SENSIBLE HEAT GAIN
SHLDR	SHOULDER
SHDR	SHOWER HEAD
SHDR	SHOWER DRAIN
SH	SHIRT, SHEET
SHT MTL	SHEET METAL FLASHING
SHTHS	SHEDDING
SHTR	SHUTTER
SHV	SHVELING
SHWR	SECONDARY HOT WATER RETURN
SHWS	SECONDARY HOT WATER SUPPLY
SI	INTERNATIONAL SYSTEM OF UNITS
SIG	SIGNAL
SIM	SIMILAR
SJ	SCORED JOINT, SLIP JOINT
SJ	STEEL JOIST INSTITUTE
SK	SKETCH



DEMOLITION KEY NOTES:

- EXISTING MODIFIED BITUMEN ROOF, PERLITE INSULATION, RIGID INSULATION AND CANT STRIP SHALL BE REMOVED DOWN TO THE EXISTING CONCRETE DECK.
- EXISTING METAL FLASHING AT PARAPET WALL SHALL BE REMOVED TO ALLOW FOR EXISTING ROOF SYSTEM REMOVAL AND NEW FLASHING AND ROOF SYSTEM INSTALLATION. THE EXISTING METAL WALL PANEL ALONG THIS WALL SHALL BE REMOVED, STORED AND SHALL BE PROTECTED FROM DAMAGE FOR REINSTALLATION.
- EXISTING METAL COPING SHALL REMAIN IN-TACT.
- EXISTING VERTICAL FLASHING PANEL SHALL BE UNSCREENED AND REMOVED TO ALLOW FOR THE REMOVAL OF THE EXISTING ROOF SYSTEM AND INSTALLATION OF NEW TPO ROOF SYSTEM. THE VERTICAL FLASHING PANELS SHALL BE REINSTALLED AFTER NEW TPO ROOF SYSTEM IS INSTALLED AT THIS SECTION OF ROOF. THE VERTICAL FLASHING PANEL SHALL BE STORED, PROTECTED FROM DAMAGE.
- EXISTING ALUMINUM COMPOSITE PANEL SHALL REMAIN IN PLACE AND SHALL BE PROTECTED FROM DAMAGE.
- EXISTING MODIFIED BITUMEN ROOF SYSTEM, PERLITE INSULATION, RIGID INSULATION, CANT STRIP, BASE FLASHING AND GAP FLASHING SHALL BE REMOVED DOWN TO EXISTING CONCRETE DECK.
- EXISTING CORNICE BAND SHALL REMAIN IN-TACT AND SHALL BE PROTECTED FROM DAMAGE.
- EXISTING EXPANSION JOINT COVER AND COMPRESSIBLE INSULATION SHALL BE REMOVED AND REPLACED.
- EXISTING EXPANSION JOINT COVER SHALL BE REMOVED AND REPLACED. EXISTING THROUGH WALL FLASHING AT MASONRY WALL SHALL REMAIN IN PLACE AND SHALL BE RE-USED WITH EXPANSION JOINT ASSEMBLY.
- EXISTING ALUMINUM SCUPPER BOX SHALL BE REMOVED AND REPLACED.
- EXISTING ROOF MEMBRANE AND RIGID INSULATION SHALL BE REMOVED DOWN TO EXISTING STEEL DECK. EXISTING WOOD BLOCKING SHALL REMAIN.
- EXISTING ALUMINUM FASCIA SHALL BE REMOVED AND REPLACED.
- EXISTING METAL FLASHING AT VERTICAL WALL PANEL SHALL REMAIN IN PLACE AND SHALL BE FOLDED UP TO ALLOW FOR THE REMOVAL OF EXISTING FLASHING SYSTEM AND INSTALLATION OF NEW TPO ROOF SYSTEM. THE EXISTING METAL WALL PANEL SHALL REMAIN IN PLACE AND SHALL BE PROTECTED FROM DAMAGE.
- EXISTING MODIFIED BITUMEN FLASHING ALONG WITH TERMINATION BARS AT CURB OF EXHAUST HOODS OR OTHER ROOF TOP MECHANICAL EQUIPMENT SHALL BE REMOVED AND REPLACED.
- EXISTING LEAD FLASHING AT PIPE VENT SHALL BE REMOVED AND REPLACED WITH NEW TPO PIPE VENT FLASHING.
- EXISTING DRAIN STRAINER AND CLAMPING RING AT ROOF DRAIN AND OVER FLOW DRAIN SHALL BE REMOVED AND REPLACED.
- FLASHING AT EXISTING PITCH POCKETS AND PITCH POCKET RESIDUE SHALL BE REMOVED. CLEAN ALL RESIDUE FROM PITCH POCKETS AND PREP FOR INSTALLATION OF NEW FLASHING SYSTEM.
- METAL HOOD SHALL REMAIN IN PLACE AND SHALL BE PROTECTED FROM DAMAGE.
- DURABLOK CABLE SUPPORT SHALL BE REMOVED STORED AND RE-INSTALLED AFTER NEW ROOF SYSTEM INSTALLATION IS COMPLETE.
- EXISTING STEEL ANGLE ASSEMBLY AND METAL POLE MOUNTED SIGNAL PANEL AND 8" CMU SHALL BE REMOVED AND REINSTALLED AT SAME LOCATION AFTER NEW TPO ROOF SYSTEM INSTALLATION IS COMPLETED.
- EXISTING FLASHING AT 8" VENT PIPE STACK WITH 12" CONCRETE CURB SHALL BE REMOVED AND REPLACED.
- EXISTING PVC CONDUIT SHALL REMAIN IN PLACE AND SHALL BE RAISED TO ALLOW FOR NEW TPO SYSTEM RENF.
- EXISTING FLASHING, CANT STRIP AND TERMINATION BARS AT CURB AT UNDERSIDE OF STEEL BEAM SUPPORT SHALL BE REPLACED.
- EXISTING FLASHING AT ALUMINUM WINDOW WALL SHALL REMAIN IN PLACE. BEND FLASHING UP AT ALUMINUM WINDOW WALL TO ALLOW FOR NEW INSULATION AND NEW TPO ROOF SYSTEM AND FLASHING INSTALLATION.
- EXISTING WOOD CONDUIT/PIPE SUPPORTS SHALL BE REMOVED.
- EXISTING PARAPET WALL MOUNTED LIGHT FIXTURE SHALL BE DISCONNECTED AND REMOVED TO ALLOW FOR REMOVAL OF EXISTING METAL PANEL AT PARAPET WALL AND METAL COPING. THE EXISTING LIGHT FIXTURE SHALL BE STORED AND PROTECTED FROM DAMAGE AND REINSTALLED AFTER THE EXISTING COPING AND METAL WALL PANEL IS REINSTALLED.
- EXISTING WALK PADS SHALL BE REMOVED.
- EXISTING FLASHING AT DOUBLE 8" PIPE VENT STACK SHALL BE REMOVED AND REPLACED.
- EXISTING METAL COPING AT PARAPET WALL SHALL BE REMOVED, STORED AND PROTECTED FROM DAMAGE TO ALLOW FOR REMOVAL OF EXISTING METAL WALL PANEL AT PARAPET WALL.

1 ROOF DEMOLITION PLAN 3/32" = 1'-0"

EXISTING ROOF EQUIPMENT KEY NOTES:

- A. EXHAUST FAN
- B. ROOF DRAIN
- C. OVERFLOW DRAIN
- D. EXPANSION JOINT
- E. 4"x4" PITCH POCKET
- F. 1'-4"x6 1/2" PITCH POCKET
- G. 6"x6" PITCH POCKET
- H. 2'-6"x6" PITCH POCKET
- I. 8'-1"x6" PITCH POCKET
- J. COOLING TOWER ON STEEL ANGLE SUPPORT
- K. SUSPENDED STEEL GRID WALKWAY (EXISTING)
- L. METAL HOOD ON CURB AT DOUBLE FLUE/PIPE STACK
- M. METAL HOOD ON CURB
- N. MECHANICAL EXHAUST/INTAKE HOOD
- O. SCUPPER
- P. DOUBLE 8" VENT PIPE STACK
- Q. 8" VENT PIPE STACK WITH 12" CONCRETE ENCASED PVC CURB
- R. STEEL ANGLE ASSEMBLY WITH 8" CMU HOLD DOWN FOR METAL POLE SUPPORTED SIGNAL PANELS
- T. DURABLOK CABLE/PIPE SUPPORTS
- U. 4" PVC PIPE ON 4x4 WOOD SUPPORTS
- V. 2" PVC CONDUIT ON 4x4 WOOD SUPPORTS
- W. EXISTING PIPE VENT
- X. EXISTING PARAPET WALL MOUNTED LIGHT FIXTURE
- Y. EXISTING WALK PADS
- Z. EXISTING STANDING SEAM METAL ROOF NOT IN CONTRACT
- AA. EXISTING ROOF TOP UNIT
- BB. EXISTING WIRE/CABLE

GENERAL NOTES:

- LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS ATTACHED TO THE TOP OF THE EXISTING ROOF MEMBRANE AND THE TOP AND SIDE OF THE EXISTING METAL COPING, TOP OF PIPE VENTS, TOP OF ROOF DRAIN DOME, AND OTHER EQUIPMENT IMPACTING THE REPLACEMENT OF THE EXISTING ROOF SYSTEM, PARAPET FLASHING AND METAL COPING. THE LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS SHALL BE REINSTALLED AND RECONNECTED AFTER INSTALLATION OF NEW ROOFING SYSTEM, PARAPET FLASHING AND METAL COPING.
- THE EXISTING WIDE FLANGE STEEL FRAME SUPPORT AT THE COOLING TOWER AND SUSPENDED STEEL GRID WALKWAY HAS NOT BEEN SHOWN ON THESE DRAWINGS FOR CLARITY OF THE ROOF SYSTEM REPLACEMENT.

STATE OF GEORGIA
FRANKLIN CASKLIN
DEAN
1/2/19
REGISTERED ARCHITECT

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FULTON COUNTY

FULTON COUNTY JUVENILE JUSTICE CENTER ROOF REPLACEMENT
1000 Peachtree Street NW, 26th Floor
Atlanta, Georgia 30303

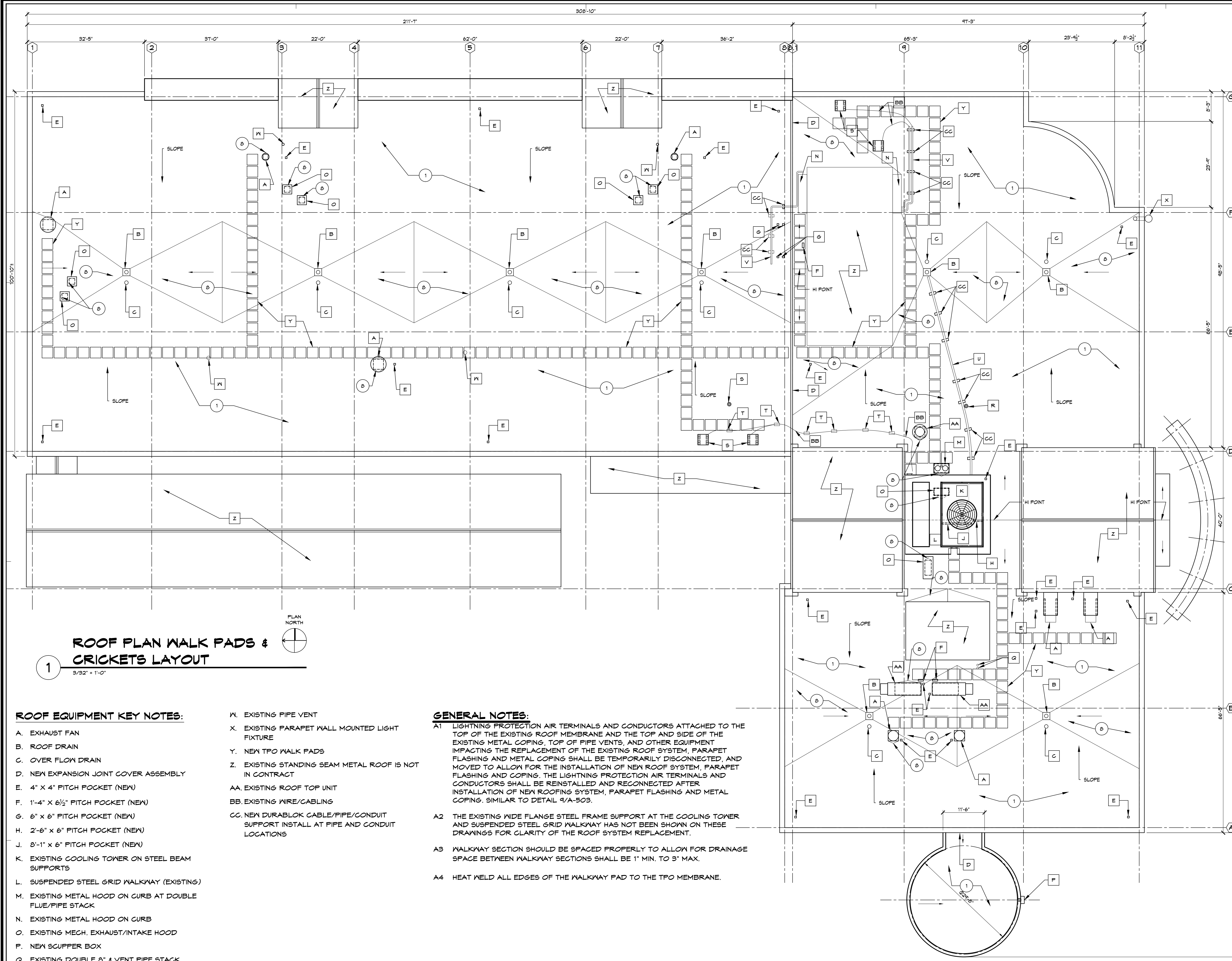
FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT
FULTON COUNTY AIRPORT - 3971 AVIATION CIRCLE, 256
ATLANTA, GEORGIA 30336

PROJECT NO.: 3978	DATE: 1/2/2019	CHECKED: FD	APPROVED: SC	DATE: 1/2/2019	FINAL SUBMITTAL	DATE: 1/2/2019	DESCRIPTION: PD
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ROOF DEMOLITION PLAN

AD-101

RELEASED FOR CONSTRUCTION



ROOFING REPLACEMENT KEY NOTES:

1. NEW SELF ADHERED TPO MEMBRANE ON 1/2" COVER BOARD ON RIGID INSULATION ON EXISTING CONC. DECK.
2. NEW TPO MEMBRANE ON RIGID INSULATION ON EXISTING METAL DECK.
3. EXISTING METAL COPING TO REMAIN IN-TACT.
4. INSTALL NEW TPO FLASHING MEMBRANE AT PARAPET WALL UNDER NEW METAL CAP FLASHING. REINSTALL EXISTING PARAPET METAL PANEL AFTER INSTALLATION ON NEW METAL CAP FLASHING.
5. INSTALL TPO FLASHING MEMBRANE UNDERNEATH EXISTING METAL CAP FLASHING AT BASE OF VERTICAL WALL PANEL. FOLD EXISTING METAL CAP FLASHING DOWN TO ORIGINAL POSITION AFTER TPO FLASHING MEMBRANE HAS BEEN INSTALLED. PROTECT VERTICAL WALL PANEL FROM DAMAGE.
6. REATTACH METAL WALL PANELS ALONG THE PARAPET WALL AFTER TPO FLASHING MEMBRANE HAS BEEN INSTALLED.
7. NEW EXPANSION JOINT COVER ASSEMBLY AND COMPRESSIBLE INSULATION ON EXISTING PRESSURE TREATED WOOD CURB. SEE DETAIL 6/A-502
8. FORM CRICKETS WITH TAPERED INSULATION. SLOPE CRICKETS 1/4" PER FOOT.
9. INSTALLED NEW DRAIN STRAINER DOME AND NEW CLAMPING RING AT EXISTING ROOF DRAIN AND OVERFLOW DRAIN. SIMILAR TO DETAILS 1 AND 2 ON SHEET A-504.
10. INSTALL NEW PITCH POCKET. SEE DETAIL 1/A-502.
11. INSTALL NEW PRE-FABRICATED ROOF PIPE VENT FLASHING COLLAR AT EXISTING PIPE VENT. SIMILAR TO DETAILS 3 AND 6 ON SHEET A-503.
12. EXISTING CURB OF EXISTING ROOFTOP EXHAUST FAN SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE AND TERMINATION BAR. SEE DETAIL 2 AND 4 ON SHEET A-502.
13. EXISTING CURB AT METAL HOOD WITH DOUBLE FLUE AND PIPE STACK SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE AND TERMINATION BAR. SIMILAR TO DETAIL 4/A-502.
14. EXISTING CURB AT EXISTING METAL HOOD SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE TERMINATION BAR AND COUNTER FLASHING. THE EXISTING METAL HOOD SHALL REMAIN IN-TACT AND SHALL BE PAINTED. SEE DETAIL 5/A-502.
15. NEW TPO COATED METAL SCUPPER SLEEVE WITH PRE-MOLDED TPO INSIDE/OUTSIDE CORNERS AND TPO FLASHING AT EXISTING SCUPPER LOCATION.
16. NOT USED.
17. NOT USED.
18. NEW EXPANSION JOINT COVER ASSEMBLY. CONNECT TO EXISTING THROUGH WALL FLASHING RECEIVER AT MASONRY WALL. SEE DETAIL 7/A-502
19. NEW ALUMINUM FASCIA ON PRESSURE TREATED WOOD BLOCKING AT EDGE OF CANOPY ROOF. TAPER ROOF SYSTEM FROM CENTER OF CANOPY ROOF TO SIDE EDGE TO ALLOW WATER TO DRAIN FROM ROOF ON EACH SIDE OF CANOPY.
20. EXISTING CURB UNDER STEEL BEAM SUPPORT SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE AND TERMINATION BAR. SEE DETAIL 8/A-502.
21. EXISTING CURB AT MECHANICAL EXHAUST/INTAKE HOOD SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE AND TERMINATION BAR. SEE DETAIL 3/A-502.
22. EXISTING STEEL ANGLE ASSEMBLY WITH CMU HOLD DOWN AND POLE MOUNTED SIGNAL PANEL SHALL BE RE-INSTALLED IN SAME LOCATION AFTER NEW TPO ROOF SYSTEM IS INSTALLED. INSTALL ADDITIONAL TPO PROTECTION LAYER UNDER STEEL SUPPORTS. EXTEND TPO PROTECTION LAYER 2" MINIMUM BEYOND PERIMETER ON STEEL SUPPORTS.
23. EXISTING METAL COPING AT THE PARAPET WALL SHALL BE RE-INSTALLED AFTER THE RE-INSTALLATION OF THE EXISTING METAL PANEL AT THE WALL OF THE PARAPET.
24. EXISTING PARAPET WALL MOUNTED LIGHT FIXTURE SHALL BE RE-INSTALLED AND RE-CONNECTED AFTER THE EXISTING METAL PANEL AT PARAPET WALL AND THE EXISTING METAL COPING HAS BEEN RE-INSTALLED.
25. THE EXISTING STEEL PIPE LEG SUPPORT AND WIDE FLANGE BEAM SHALL BE CLEANED OF RUST, PREPPED AND PROVIDED WITH NEW PAINT FINISH.

ROOF PLAN WALK PADS & CRICKETS LAYOUT

3/32" = 1'-0"

ROOF EQUIPMENT KEY NOTES:

- A. EXHAUST FAN
- B. ROOF DRAIN
- C. OVER FLOW DRAIN
- D. NEW EXPANSION JOINT COVER ASSEMBLY
- E. 4" X 4" PITCH POCKET (NEW)
- F. 1'-4" X 6 1/2" PITCH POCKET (NEW)
- G. 6" X 6" PITCH POCKET (NEW)
- H. 2'-6" X 6" PITCH POCKET (NEW)
- J. 8'-1" X 6" PITCH POCKET (NEW)
- K. EXISTING COOLING TOWER ON STEEL BEAM SUPPORTS
- L. SUSPENDED STEEL GRID WALKWAY (EXISTING)
- M. EXISTING METAL HOOD ON CURB AT DOUBLE FLUE/PIPE STACK
- N. EXISTING METAL HOOD ON CURB
- O. EXISTING MECH. EXHAUST/INTAKE HOOD
- P. NEW SCUPPER BOX
- Q. EXISTING DOUBLE 8" & VENT PIPE STACK
- R. EXISTING 8" DIAMETER VENT PIPE STACK WITH 12" DIAMETER CONCRETE ENCASED PVC CURB.
- S. STEEL ANGLE ASSEMBLY WITH 8" CMU HOLD DOWN FOR METAL POLE SUPPORTED SIGNAL PANEL
- T. EXISTING DURABLOK CABLE/PIPE SUPPORTS (RE-INSTALL)
- U. EXISTING 4" DIAMETER PVC PIPE ON NEW DURABLOK SUPPORTS
- V. EXISTING 2" DIAMETER PVC PIPE ON NEW DURABLOK SUPPORTS

- W. EXISTING PIPE VENT
- X. EXISTING PARAPET WALL MOUNTED LIGHT FIXTURE
- Y. NEW TPO WALK PADS
- Z. EXISTING STANDING SEAM METAL ROOF IS NOT IN CONTRACT
- AA. EXISTING ROOF TOP UNIT
- BB. EXISTING WIRE/CABLING
- CC. NEW DURABLOK CABLE/PIPE/CONDUIT SUPPORT INSTALL AT PIPE AND CONDUIT LOCATIONS

GENERAL NOTES:

- A1 LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS ATTACHED TO THE TOP OF THE EXISTING ROOF MEMBRANE AND THE TOP AND SIDE OF THE EXISTING METAL COPING. TOP OF PIPE VENTS, AND OTHER EQUIPMENT IMPACTING THE REPLACEMENT OF THE EXISTING ROOF SYSTEM, PARAPET FLASHING AND METAL COPING SHALL BE TEMPORARILY DISCONNECTED, AND MOVED TO ALLOW FOR THE INSTALLATION OF NEW ROOF SYSTEM, PARAPET FLASHING AND COPING. THE LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS SHALL BE REINSTALLED AND RECONNECTED AFTER INSTALLATION OF NEW ROOFING SYSTEM, PARAPET FLASHING AND METAL COPING. SIMILAR TO DETAIL 9/A-503.
- A2 THE EXISTING WIDE FLANGE STEEL FRAME SUPPORT AT THE COOLING TOWER AND SUSPENDED STEEL GRID WALKWAY HAS NOT BEEN SHOWN ON THESE DRAWINGS FOR CLARITY OF THE ROOF SYSTEM REPLACEMENT.
- A3 WALKWAY SECTION SHOULD BE SPACED PROPERLY TO ALLOW FOR DRAINAGE SPACE BETWEEN WALKWAY SECTIONS SHALL BE 1" MIN. TO 3" MAX.
- A4 HEAT WELD ALL EDGES OF THE WALKWAY PAD TO THE TPO MEMBRANE.

STATE OF GEORGIA
REGISTERED ARCHITECT
FRANKLIN CASKIN
DEAN
12/17
EXPIRATION DATE NO. 0000000000

Williams Russell and Johnson, Inc.
 280 Peachtree Street NW, 28th Floor
 Atlanta, Georgia 30303
 Office: (404) 853-8800
 Fax: (404) 607-8890

FULTON COUNTY JUVENILE JUSTICE CENTER ROOF REPLACEMENT
 11500 SHELLEY BLVD. S.W.
 ATLANTA, GEORGIA 30312

FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT
 FULTON COUNTY AIRPORT - 3971 AVIATION CIRCLE, 256
 ATLANTA, GEORGIA 30335

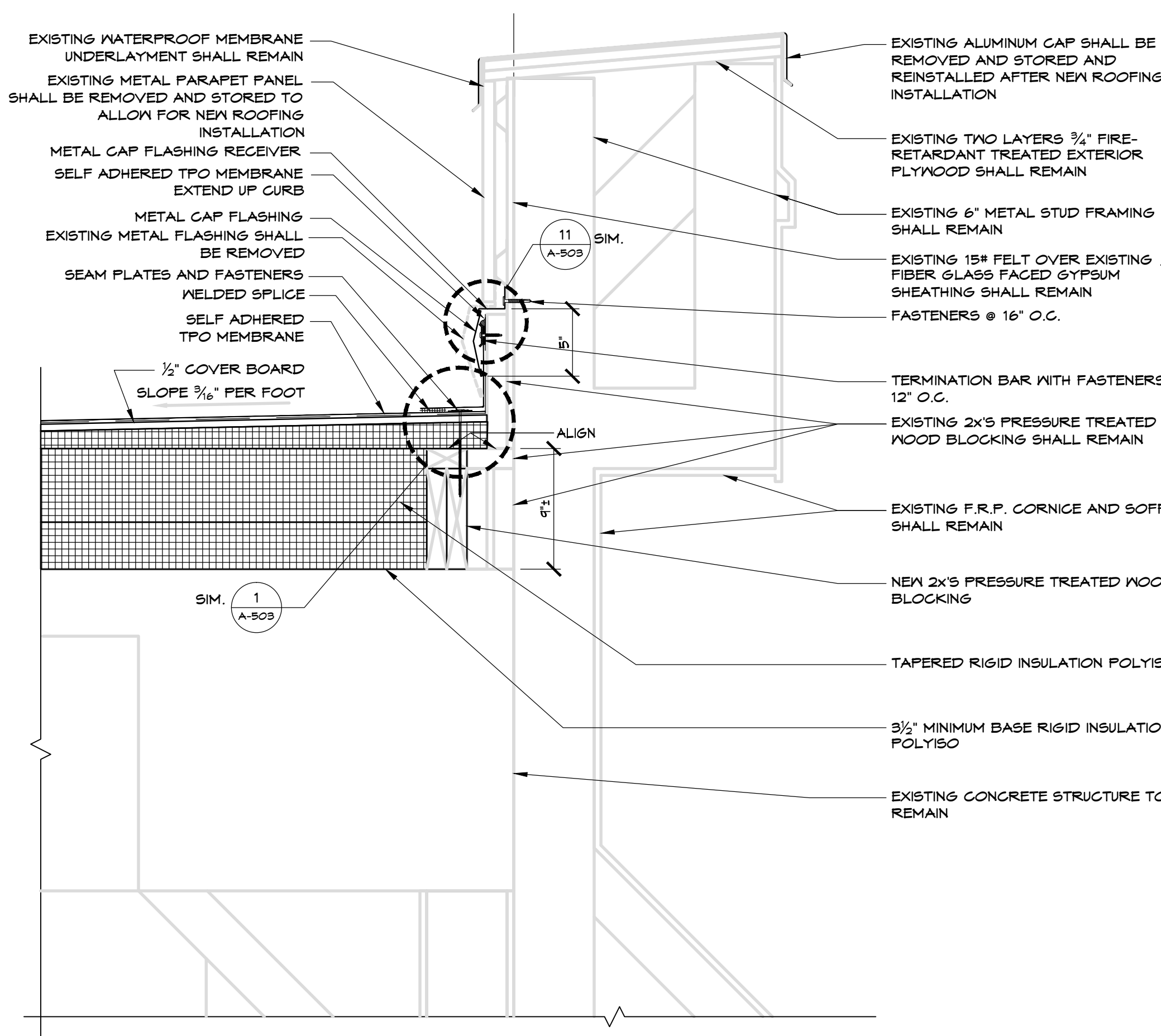
PROJECT NO.	DATE	REVISION	BY	DATE	DESCRIPTION
3978	1/2/2019	1	FD	1/2/2019	FINAL SUBMITTAL

ROOF PLAN WALK PAD AND CRICKET LAYOUT

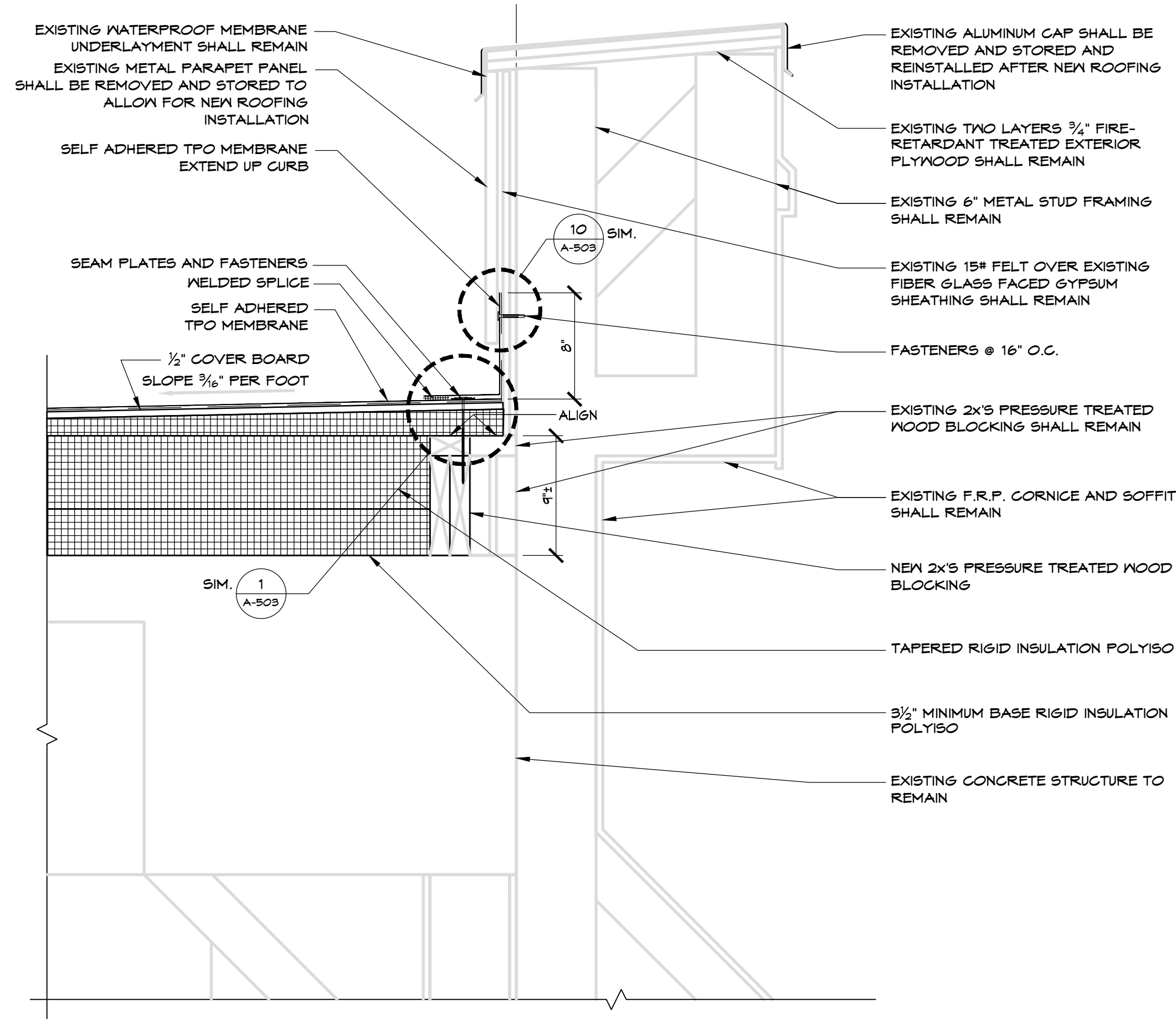
A-102

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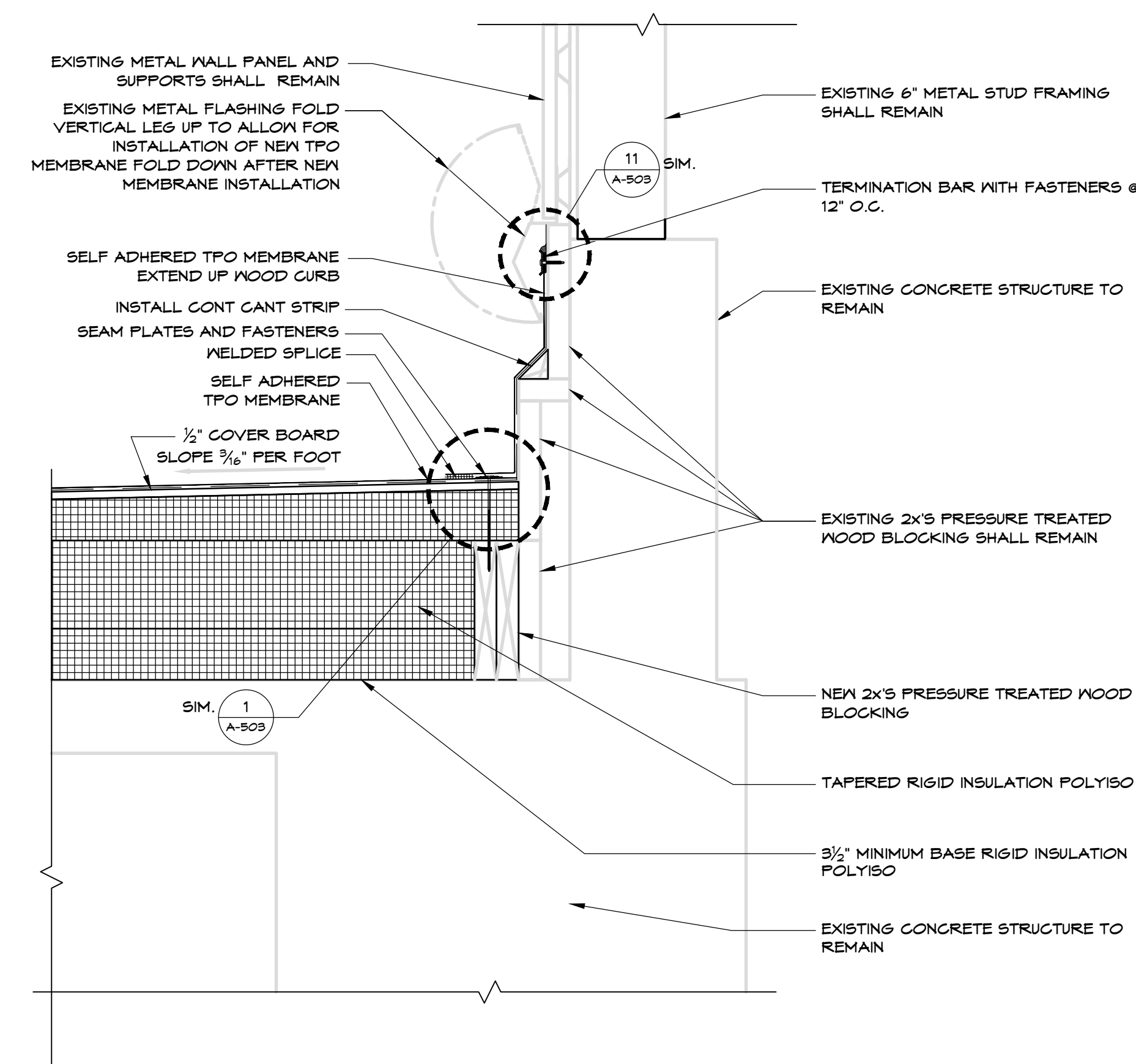
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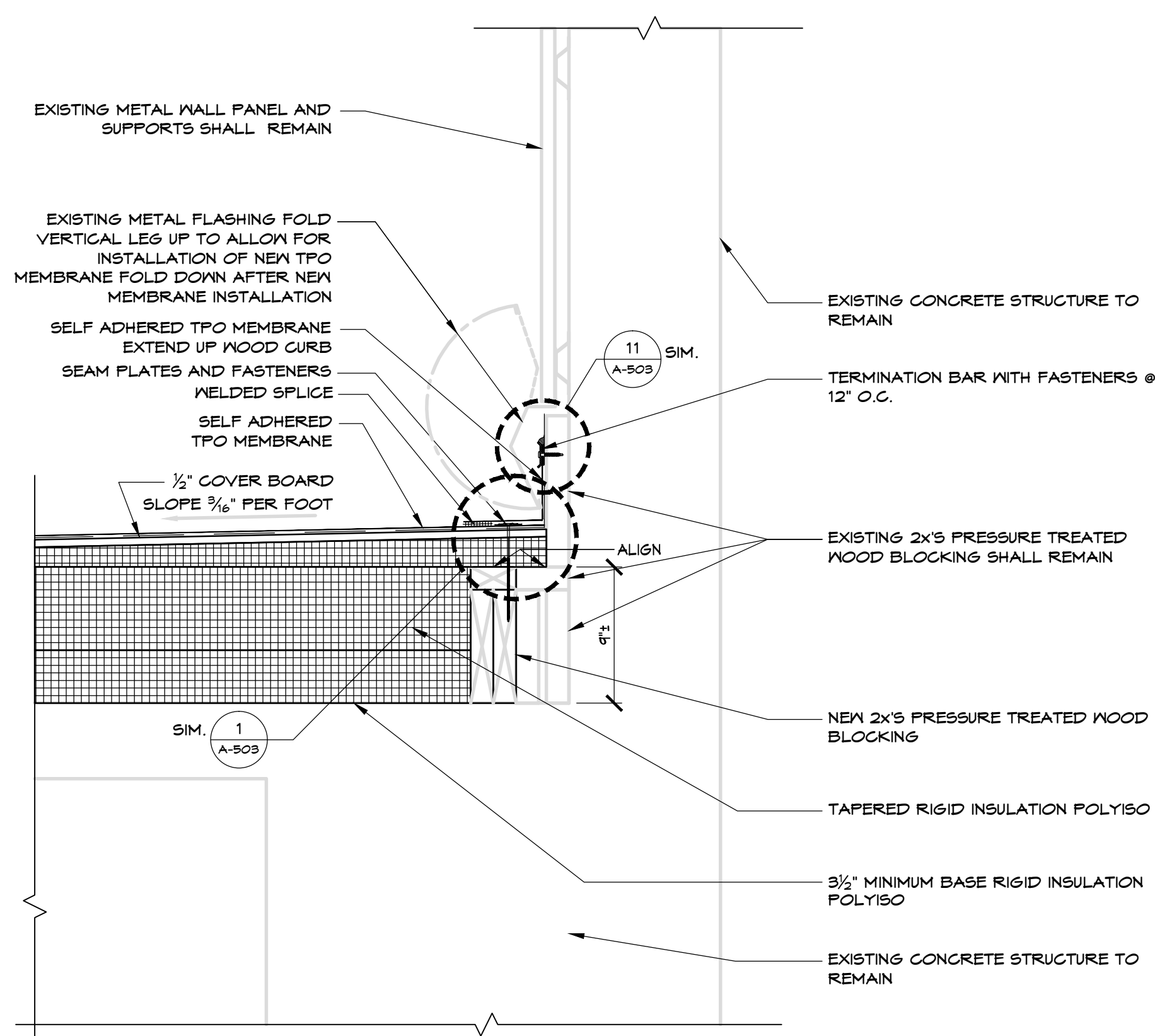
1 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



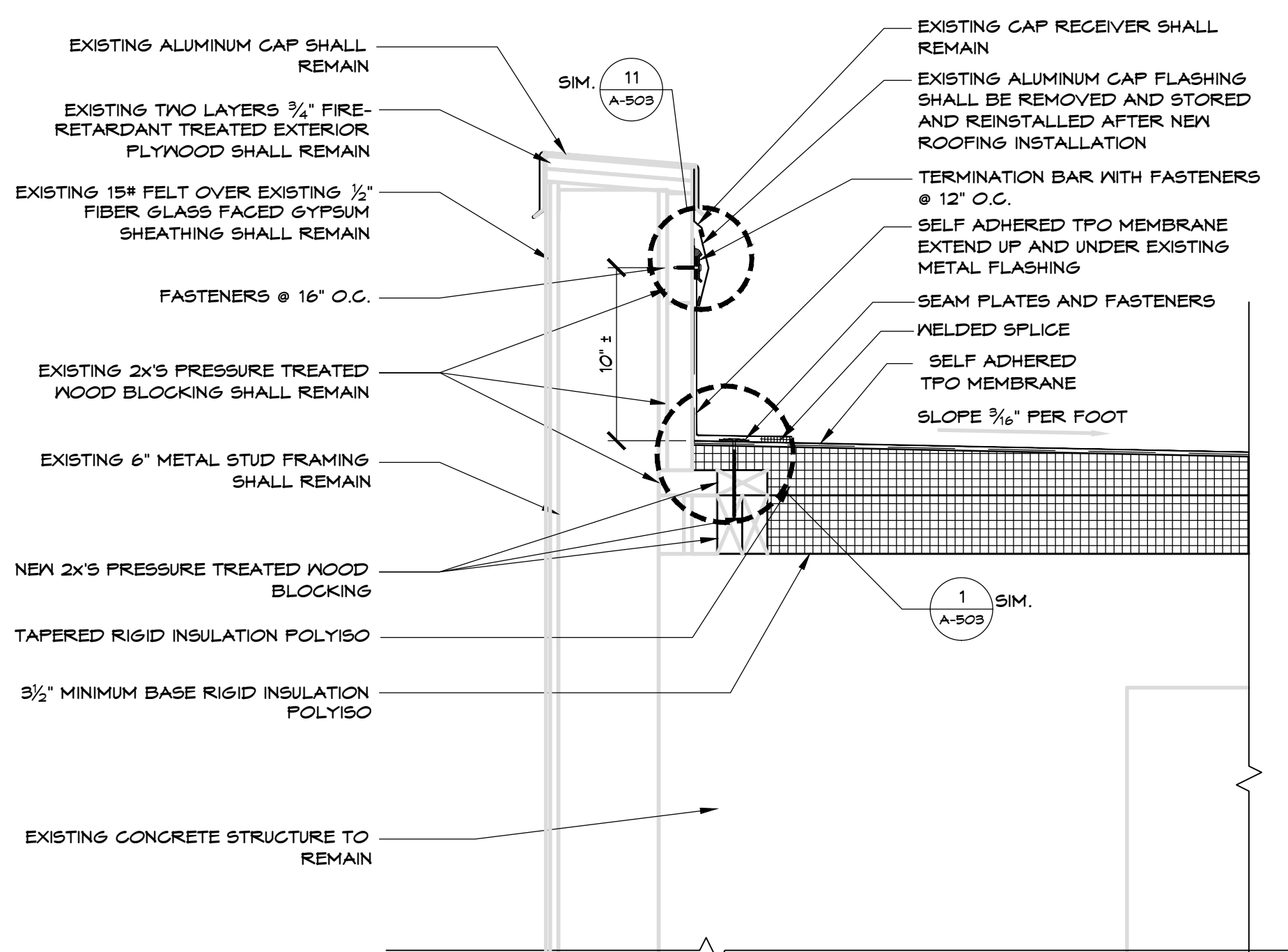
2 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



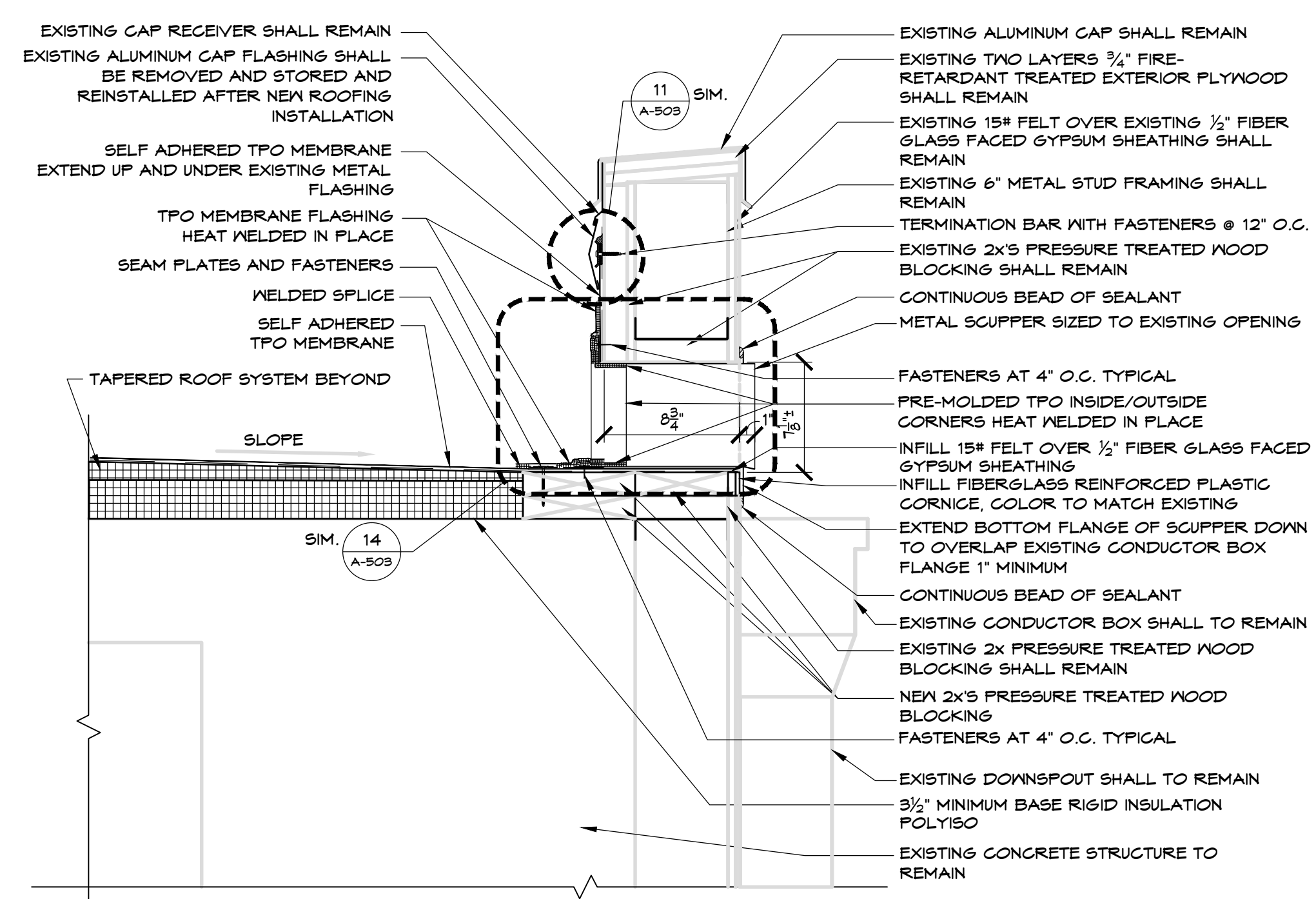
3 ROOF/WALL DETAIL



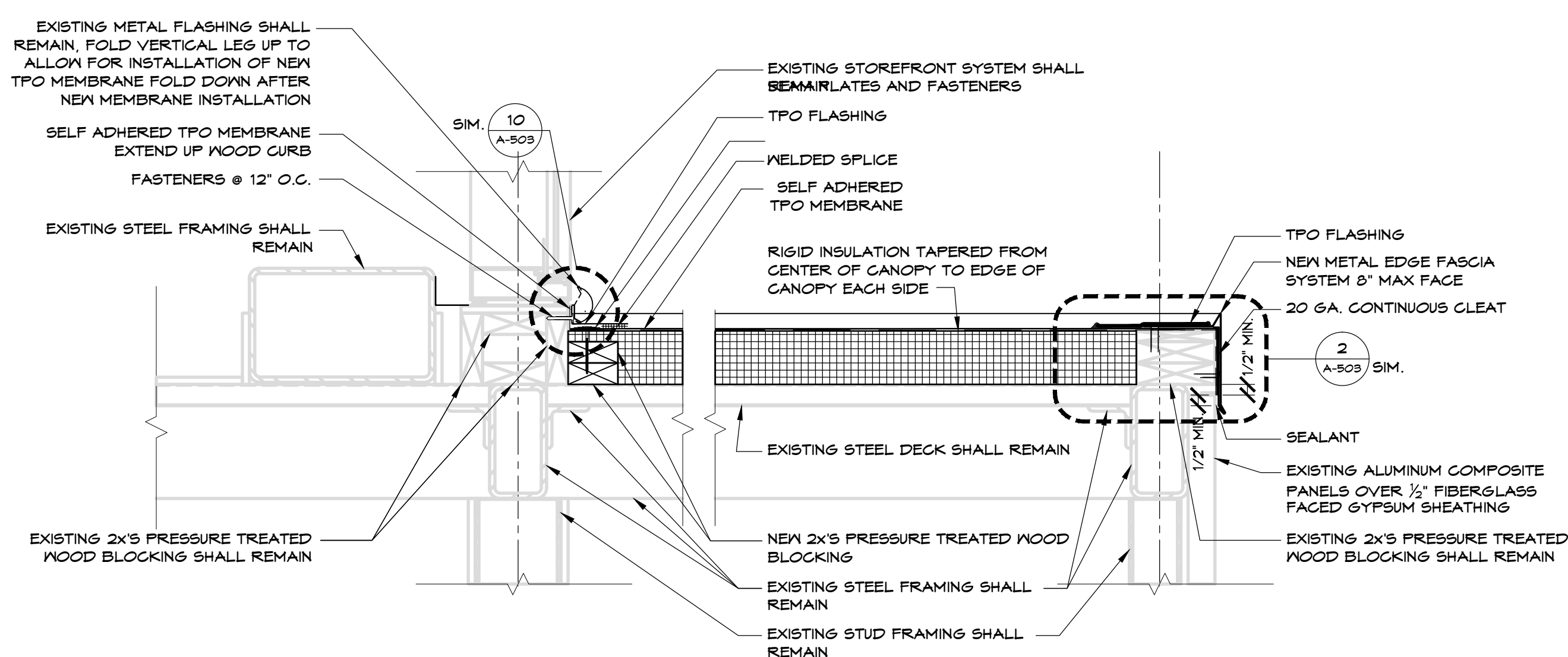
4 ROOF/WALL DETAIL



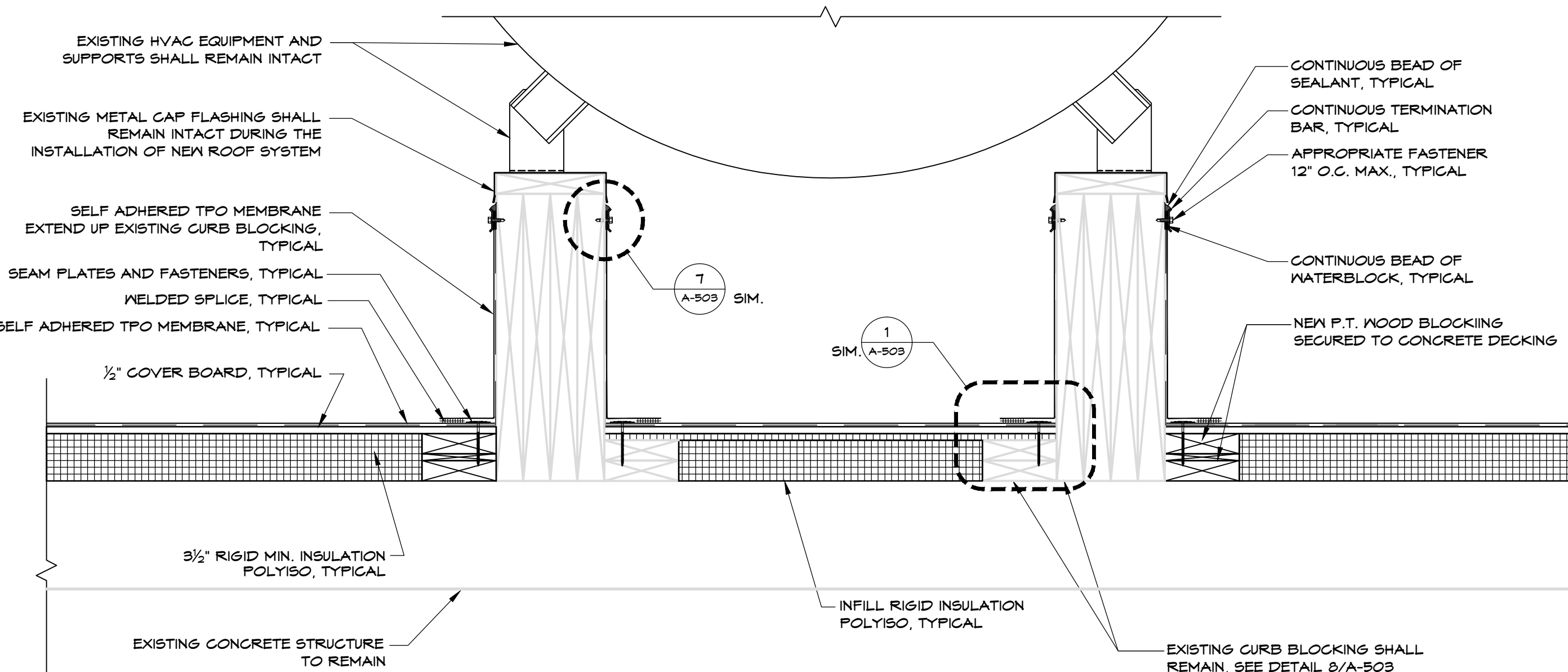
5 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



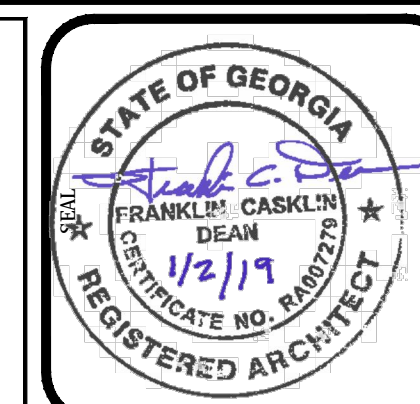
6 ROOF DETAIL @ PARAPET



7 ROOF/WALL DETAIL
1 1/2" = 1'-0"



8 ROOF CURB SUPPORT DETAIL



Williams-Russell and Johnson, Inc.
ENGINEERS • ARCHITECTS • PLANNERS
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**FULTON COUNTY JUVENILE JUSTICE CENTER ROOF
REPLACEMENT**
395 PICOAS STREET, 97A
FULTON, GEORGIA 30503

**FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND
ASSET MANAGEMENT**
FULTON COUNTY AIRPORT - 3811 AVIATION CIRCLE, 256

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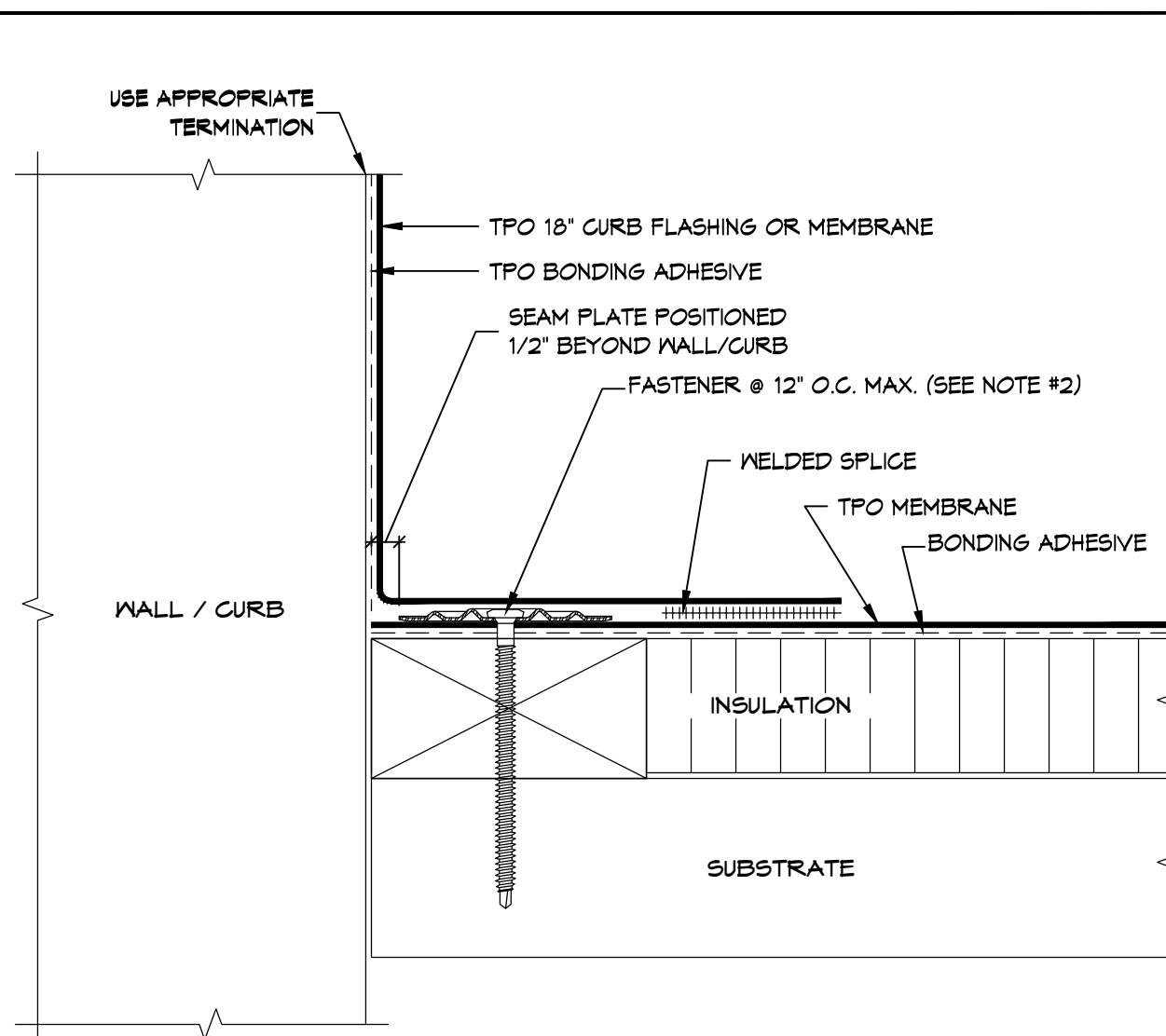
PROJECT NO.:	3978	
DATE:	1/2/2019	
DESIGNED:	CHECKED:	
FD	-	
DRAWN:	APPROVED:	
SC		FD

ROOF DETAILS

SHEET NUMBER

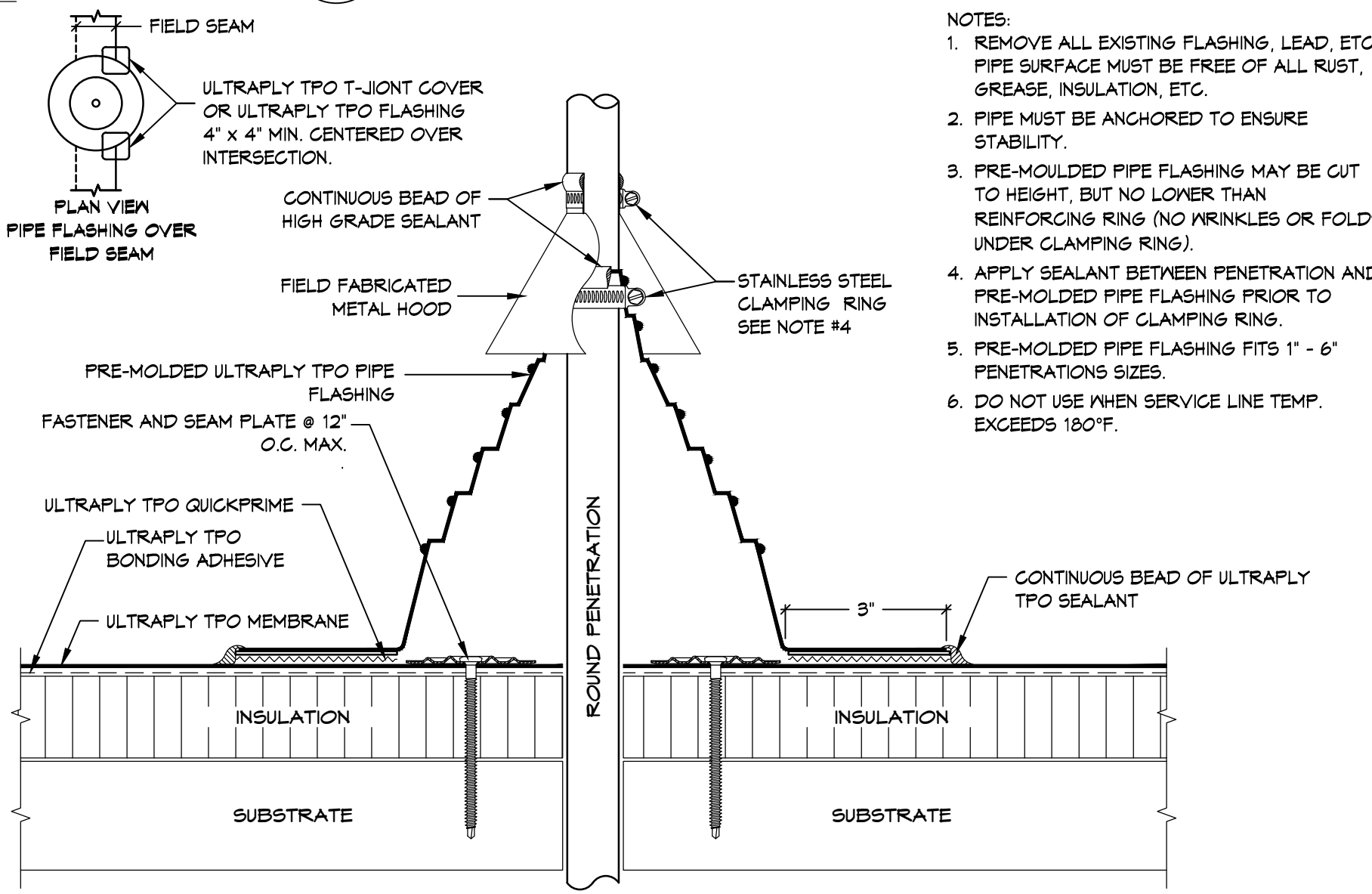
A-501





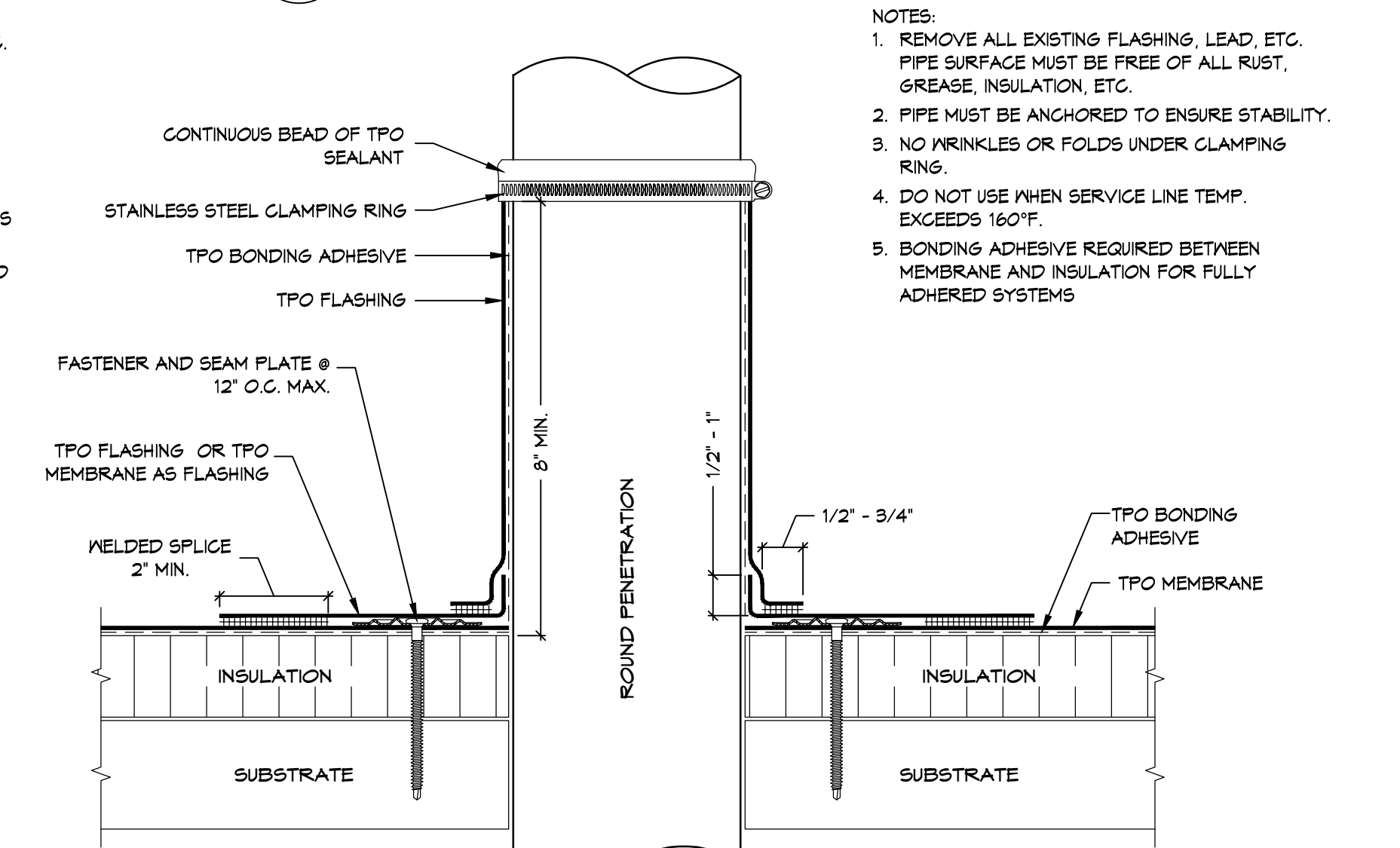
- NOTES:
1. MAXIMUM 6' LONG FASTENERS (WOOD BLOCKING MAY BE SUBSTITUTED FOR INSULATION TO REDUCE FASTENER LENGTH REQUIREMENTS).
 2. BONDING ADHESIVE REQUIRED BETWEEN MEMBRANE AND INSULATION FOR FULLY ADHERED SYSTEMS.

1 BASE TIE-IN DETAIL WITH SEAM PLATE TO DECK
N.T.S.



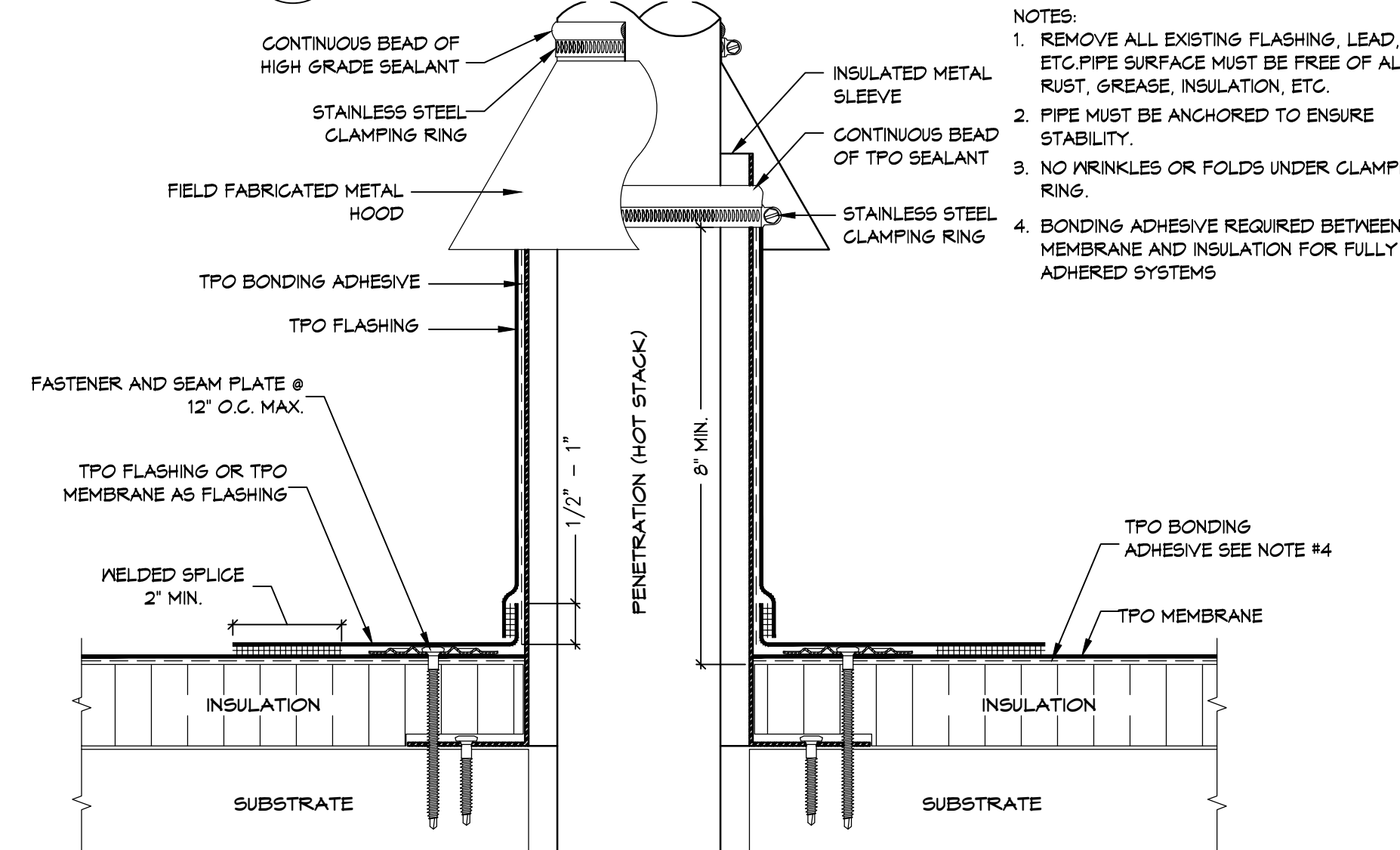
- NOTES:
1. REMOVE ALL EXISTING FLASHING, LEAD, ETC. PIPE SURFACE MUST BE FREE OF ALL RUST, GREASE, INSULATION, ETC.
 2. PIPE MUST BE ANCHORED TO ENSURE STABILITY.
 3. PRE-MOLDED PIPE FLASHING MAY BE CUT TO HEIGHT, BUT NO LOWER THAN REINFORCING RING (NO WRINKLES OR FOLDS UNDER CLAMPING RING).
 4. APPLY SEALANT BETWEEN PENETRATION AND PRE-MOLDED PIPE FLASHING PRIOR TO INSTALLATION OF CLAMPING RING.
 5. PRE-MOLDED PIPE FLASHING FITS 1" - 6" PENETRATIONS SIZES.
 6. DO NOT USE WHEN SERVICE LINE TEMP. EXCEEDS 180°F.

2 ROOF EDGE DETAIL
N.T.S.



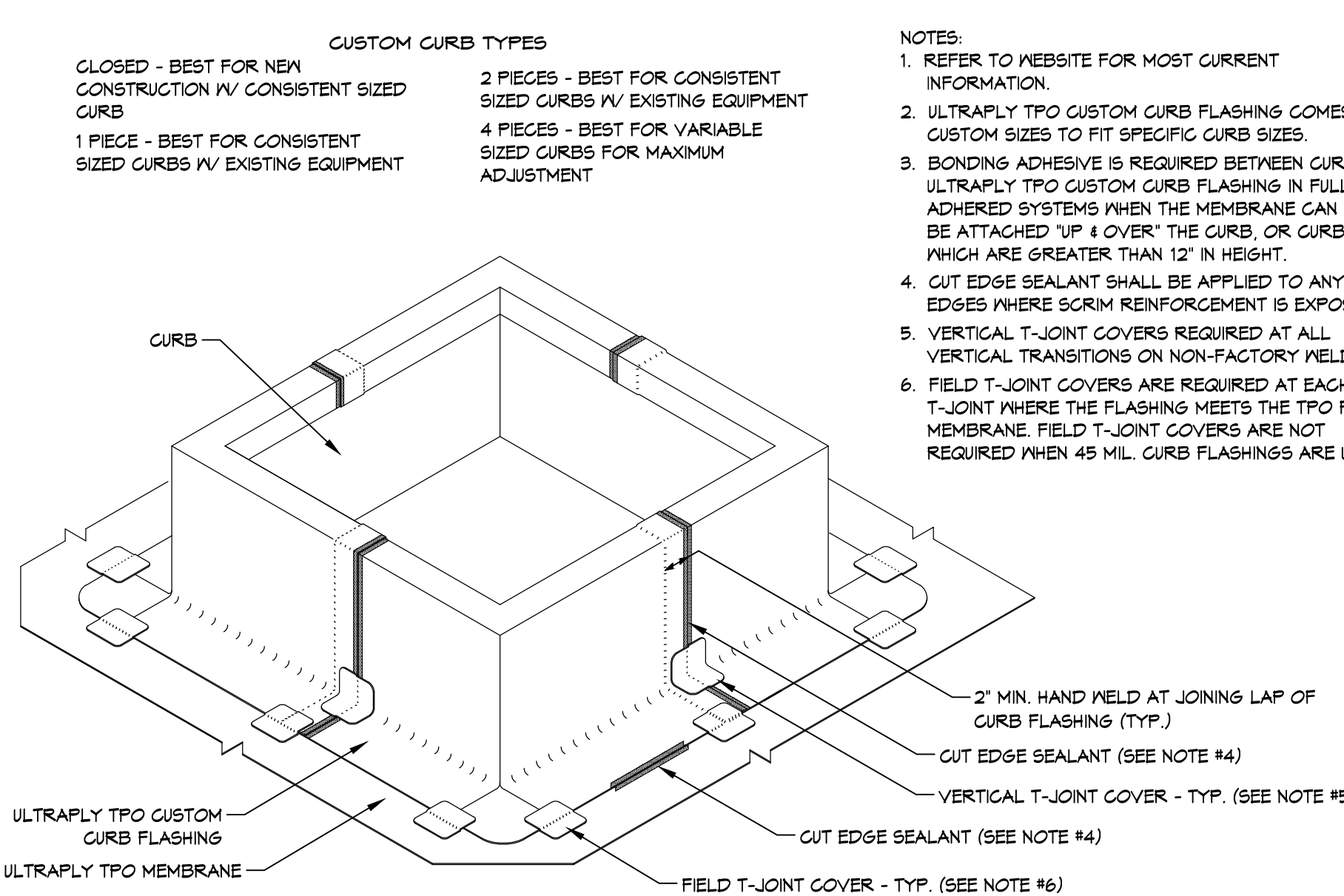
- NOTES:
1. REMOVE ALL EXISTING FLASHING, LEAD, ETC. PIPE SURFACE MUST BE FREE OF ALL RUST, GREASE, INSULATION, ETC.
 2. PIPE MUST BE ANCHORED TO ENSURE STABILITY.
 3. NO WRINKLES OR FOLDS UNDER CLAMPING RING.
 4. DO NOT USE WHEN SERVICE LINE TEMP. EXCEEDS 180°F.
 5. BONDING ADHESIVE REQUIRED BETWEEN MEMBRANE AND INSULATION FOR FULLY ADHERED SYSTEMS.

3 LARGE PIPE FLASHING PENETRATION
N.T.S.



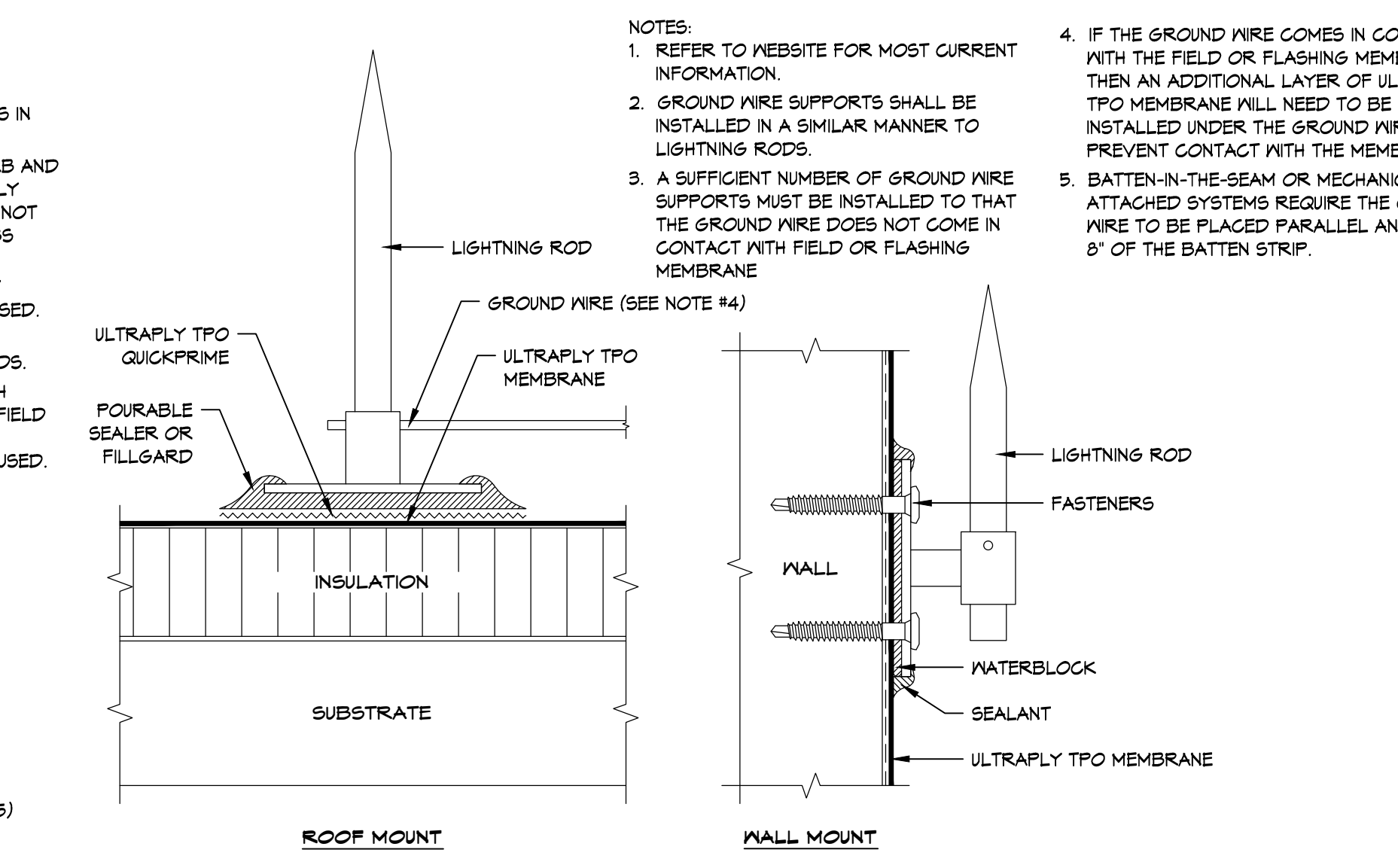
- NOTES:
1. REMOVE ALL EXISTING FLASHING, LEAD, ETC. PIPE SURFACE MUST BE FREE OF ALL RUST, GREASE, INSULATION, ETC.
 2. PIPE MUST BE ANCHORED TO ENSURE STABILITY.
 3. NO WRINKLES OR FOLDS UNDER CLAMPING RING.
 4. BONDING ADHESIVE REQUIRED BETWEEN MEMBRANE AND INSULATION FOR FULLY ADHERED SYSTEMS.

4 PENETRATION WITH QUICKSEAM PIPE FLASHING
N.T.S.



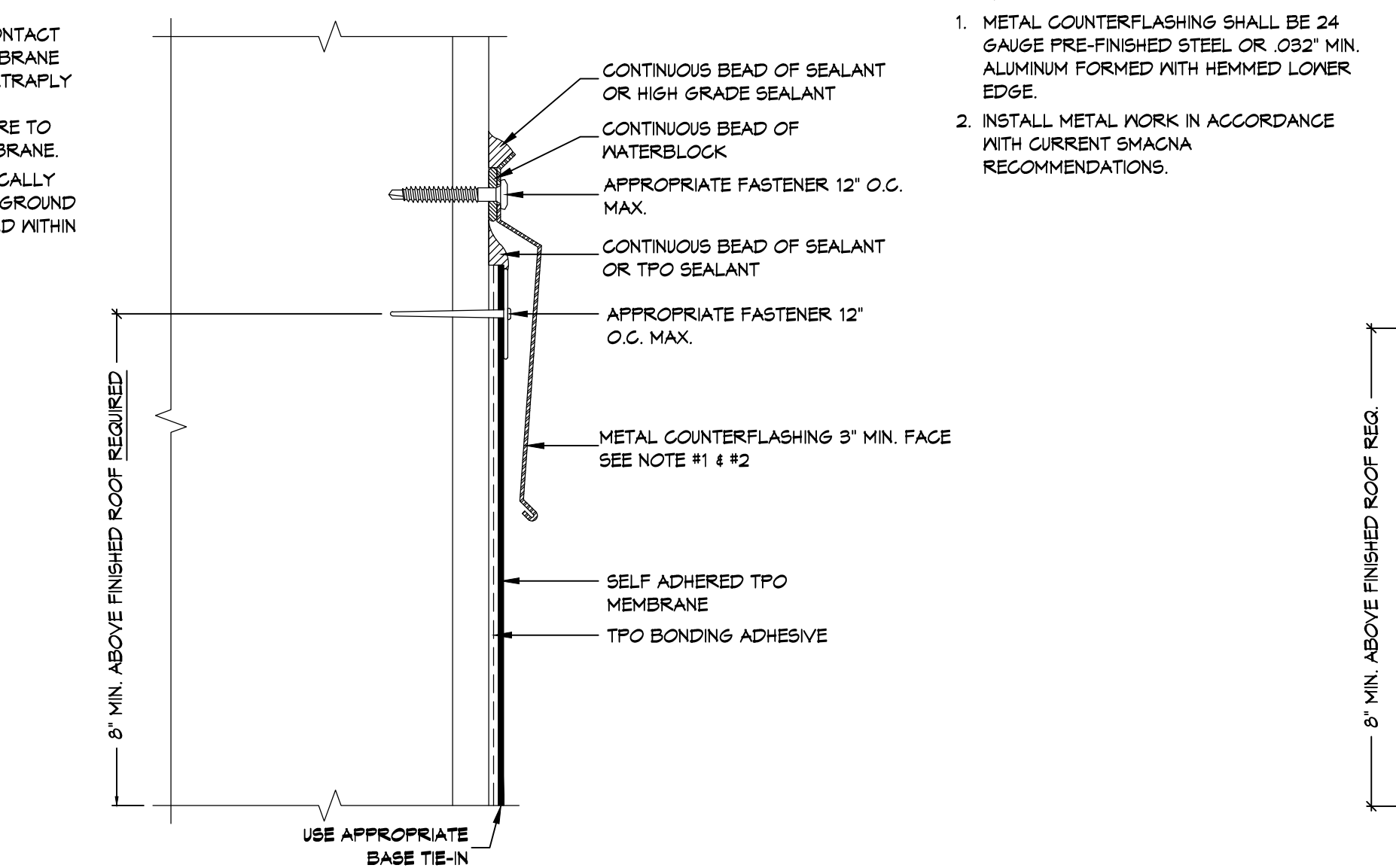
- NOTES:
1. REFER TO WEBSITE FOR MOST CURRENT INFORMATION.
 2. ULTRAFLY TPO CUSTOM CURB FLASHING COMES IN CUSTOM SIZES TO FIT SPECIFIC CURB SIZES.
 3. BONDING ADHESIVE IS REQUIRED BETWEEN CURB AND ULTRAFLY TPO CUSTOM CURB FLASHING IN FULLY ADHERED SYSTEMS WHEN THE MEMBRANE CAN NOT BE ATTACHED UP & OVER THE CURB OR CURBS WHICH ARE GREATER THAN 12" IN HEIGHT.
 4. CUT EDGE SEALANT SHALL BE APPLIED TO ANY EDGES WHERE SCUM REINFORCEMENT IS EXPOSED.
 5. VERTICAL T-JOINT COVERS REQUIRED AT ALL VERTICAL TRANSITIONS ON NON-FACTORY WELDS.
 6. FIELD T-JOINT COVERS ARE REQUIRED AT EACH T-JOINT WHERE THE FLASHING MEETS THE TPO FIELD MEMBRANE. FIELD T-JOINT COVERS ARE NOT REQUIRED WHEN 45 MIL CURB FLASHINGS ARE USED.

5 PIPE PENETRATION WITH TPO FLASHING
N.T.S.



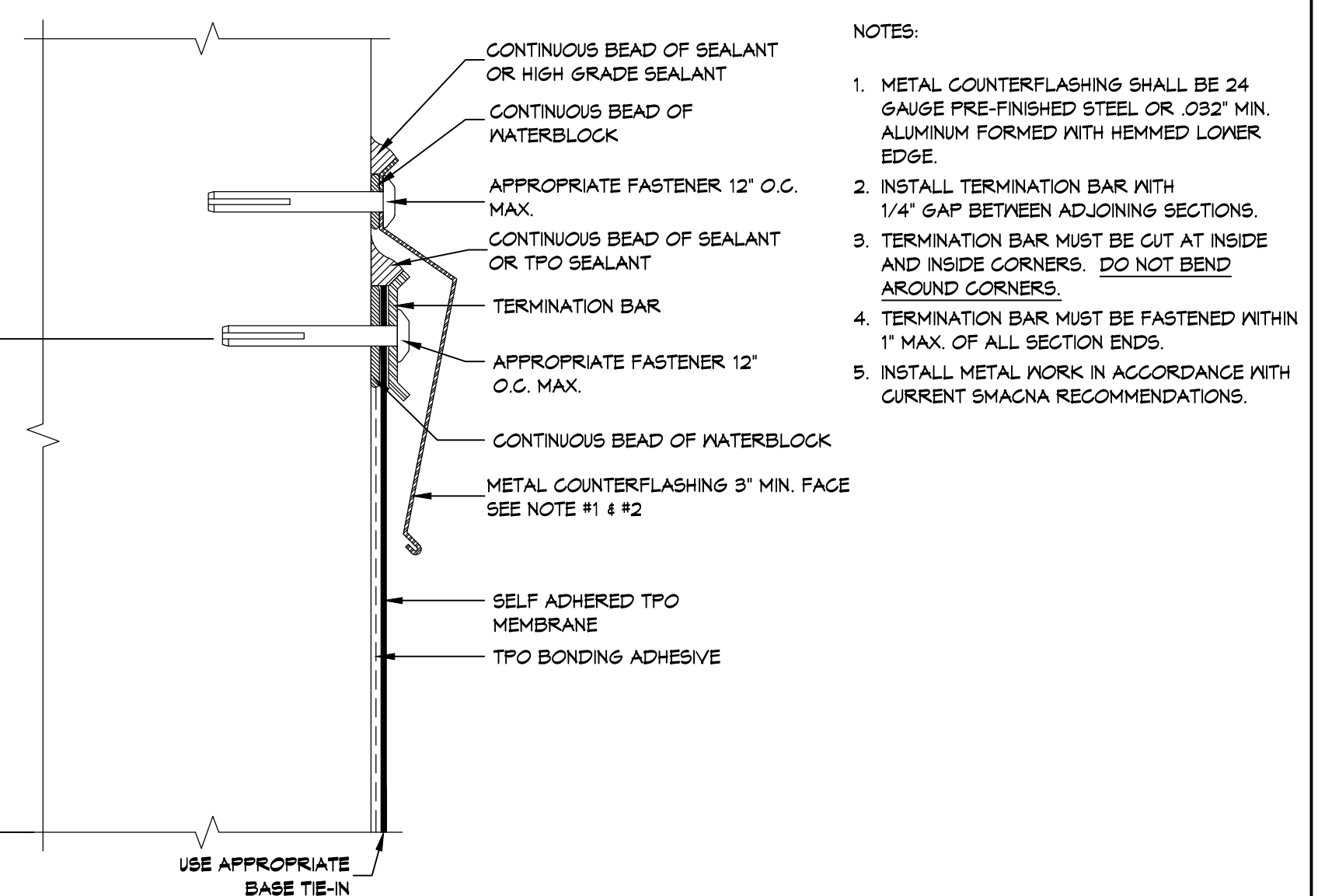
- NOTES:
1. REFER TO WEBSITE FOR MOST CURRENT INFORMATION.
 2. GROUND WIRE SUPPORTS SHALL BE INSTALLED IN A SIMILAR MANNER TO LIGHTNING RODS.
 3. A SUFFICIENT NUMBER OF GROUND WIRE SUPPORTS MUST BE INSTALLED TO THAT THE GROUND WIRE DOES NOT COME IN CONTACT WITH FIELD OR FLASHING MEMBRANE.
 4. IF THE GROUND WIRE COMES IN CONTACT WITH THE FIELD OR FLASHING MEMBRANE THEN AN ADDITIONAL LAYER OF ULTRAFLY TPO MEMBRANE WILL NEED TO BE INSTALLED UNDER THE GROUND WIRE TO PREVENT CONTACT WITH THE MEMBRANE.
 5. BATTEN-IN-THE-SEAM OR MECHANICALLY ATTACHED SYSTEMS REQUIRE THE GROUND WIRE TO BE PLACED PARALLEL AND WITHIN 6" OF THE BATTEN STRIP.

6 HOT STACK PIPE PENETRATION WITH TPO MEMBRANE
N.T.S.

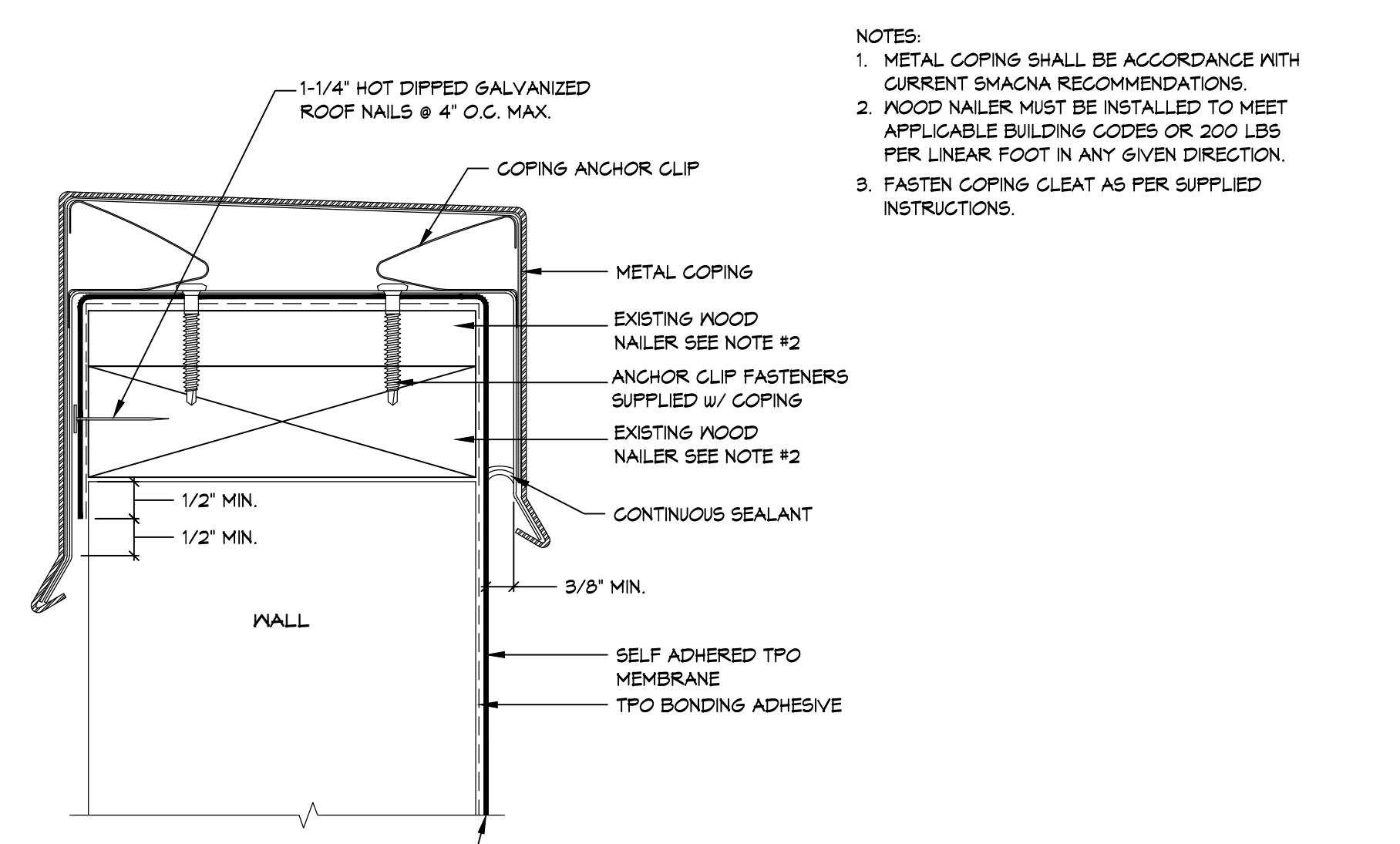


- NOTES:
1. METAL COUNTERFLASHING SHALL BE 24 GAUGE PRE-FINISHED STEEL OR .032" MIN. ALUMINUM FORMED WITH HEMMED LOWER EDGE.
 2. INSTALL METAL WORK IN ACCORDANCE WITH CURRENT SMACNA RECOMMENDATIONS.

7 TERMINATION BAR DETAIL
N.T.S.

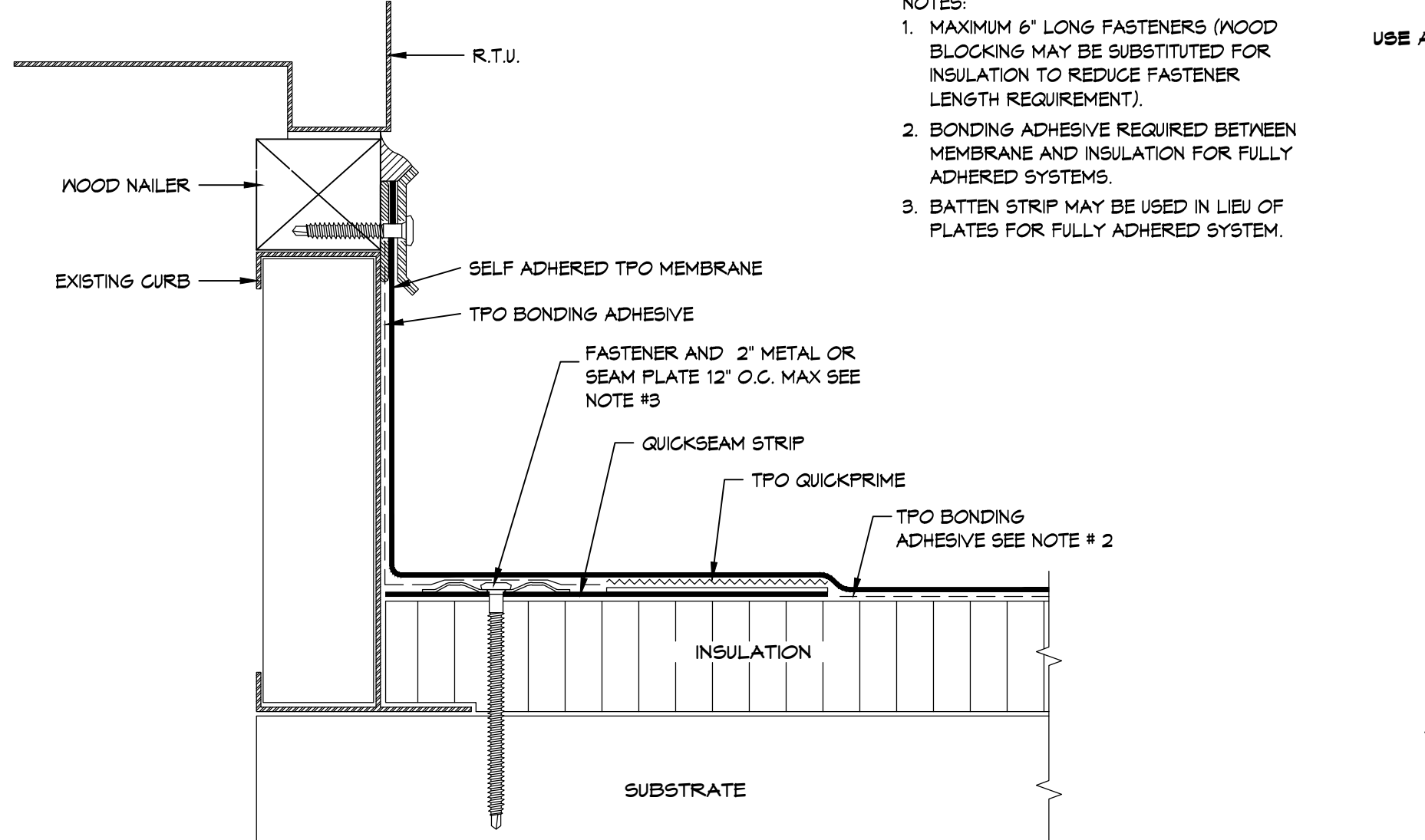


8 CUSTOM CURB FLASHING
N.T.S.



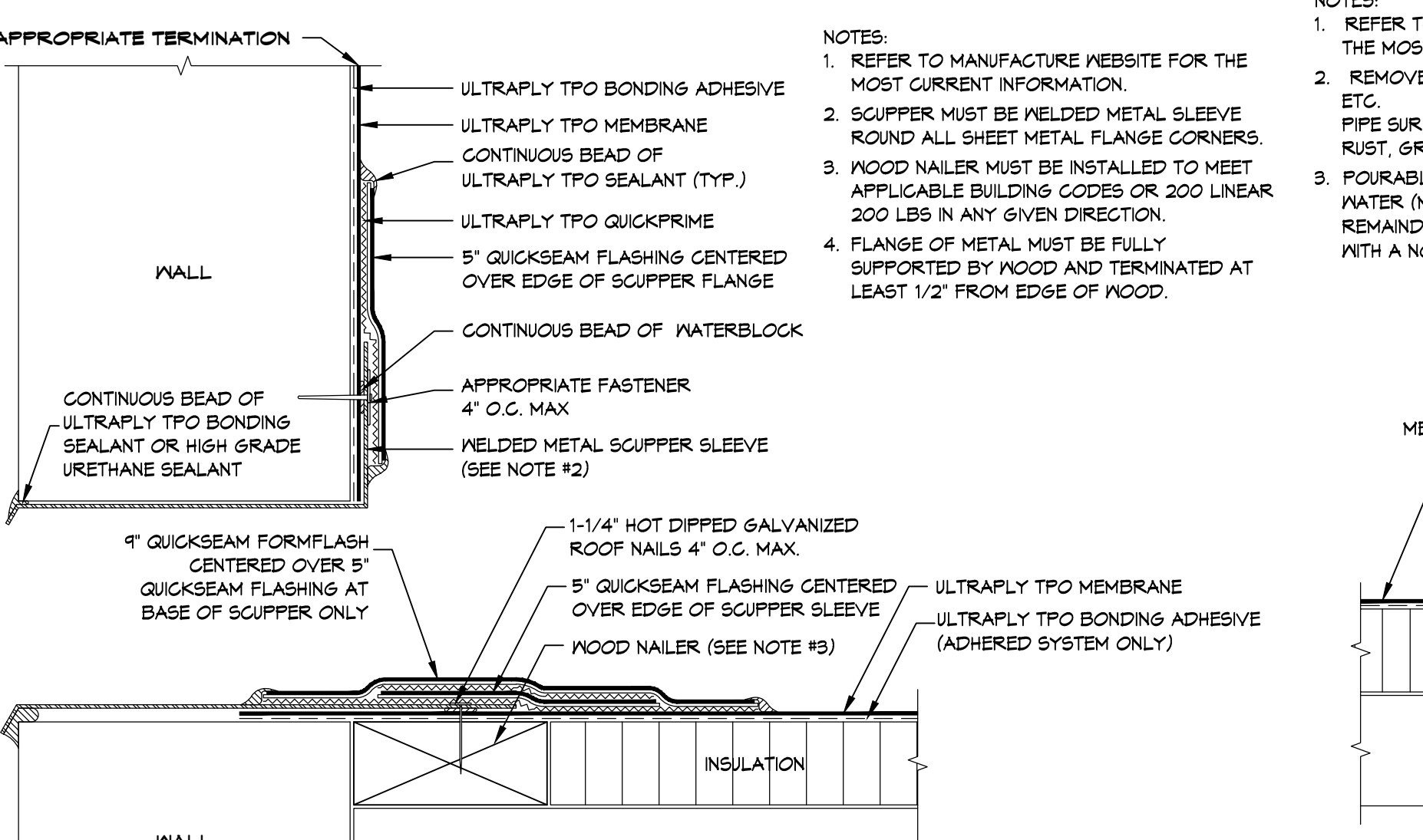
- NOTES:
1. REFER TO WEBSITE FOR MOST CURRENT INFORMATION.
 2. GROUND WIRE SUPPORTS SHALL BE INSTALLED IN A SIMILAR MANNER TO LIGHTNING RODS.
 3. A SUFFICIENT NUMBER OF GROUND WIRE SUPPORTS MUST BE INSTALLED TO THAT THE GROUND WIRE DOES NOT COME IN CONTACT WITH FIELD OR FLASHING MEMBRANE.
 4. IF THE GROUND WIRE COMES IN CONTACT WITH THE FIELD OR FLASHING MEMBRANE THEN AN ADDITIONAL LAYER OF ULTRAFLY TPO MEMBRANE WILL NEED TO BE INSTALLED UNDER THE GROUND WIRE TO PREVENT CONTACT WITH THE MEMBRANE.
 5. BATTEN-IN-THE-SEAM OR MECHANICALLY ATTACHED SYSTEMS REQUIRE THE GROUND WIRE TO BE PLACED PARALLEL AND WITHIN 6" OF THE BATTEN STRIP.

9 LIGHTNING ROD DETAIL
N.T.S.

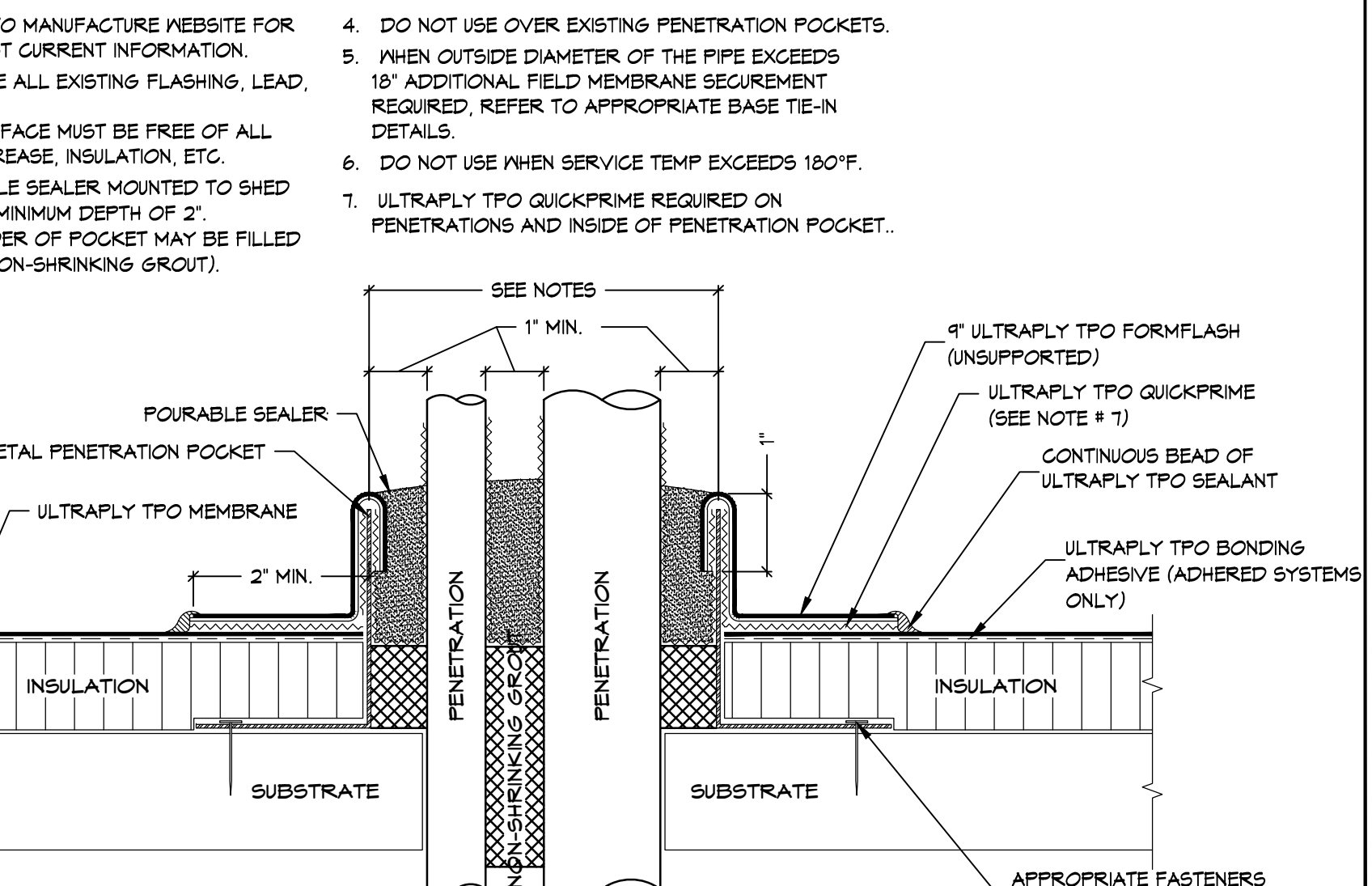


- NOTES:
1. REFER TO MANUFACTURE WEBSITE FOR THE MOST CURRENT INFORMATION.
 2. REMOVE ALL EXISTING FLASHING, LEAD, ETC.
 3. PIPE SURFACE MUST BE FREE OF ALL RUST, GREASE, INSULATION, ETC.
 4. DO NOT USE WHEN SERVICE TEMP. EXCEEDS 180°F.
 5. ULTRAFLY TPO QUICKPRIME REQUIRED ON PENETRATIONS AND INSIDE OF PENETRATION POCKET.

10 SURFACE MOUNTED TERMINATION WITH COUNTERFLASHING DETAIL
N.T.S.



11 SURFACE MOUNTED TERMINATION BAR WITH COUNTERFLASHING
N.T.S.



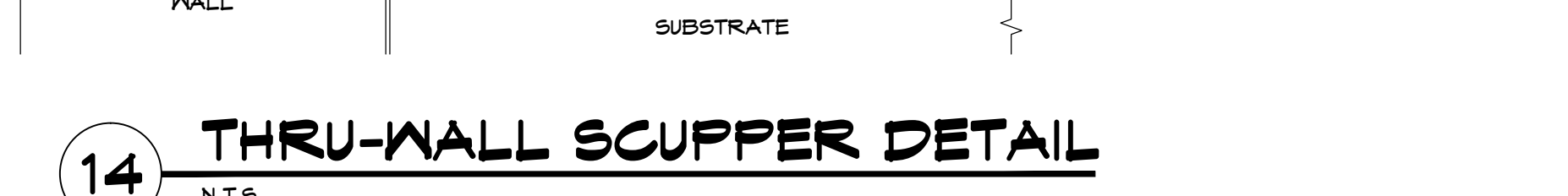
12 TERMINATION AT TOP OF PARAPET WALL
N.T.S.



13 TERMINATION AT R.T.U.
N.T.S.



14 THRU-WALL SCUPPER DETAIL
N.T.S.



15 METAL PENETRATION POCKET
N.T.S.



16 TYPICAL ROOF DETAILS
N.T.S.

STATE OF GEORGIA
REGISTERED ARCHITECT
12/17

Williams Russell and Johnson, Inc.
280 Broad Street NW, 28th Floor
Atlanta, Georgia 30303
Office: (404) 853-8800
Fax: (404) 607-8890

FULTON COUNTY
JUVENILE JUSTICE CENTER ROOF REPLACEMENT
11500 SHILOH ROAD, SUITE 100
ATLANTA, GEORGIA 30328
FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT
FULTON COUNTY AIRPORT, 2301 AVIATION CIRCLE, 250
ATLANTA, GEORGIA 30328

PROJECT NO.	DATE	REVISION	BY	DATE
3978	1/2/2019	1	SC	1/2/2019

TYPICAL ROOF DETAILS
A-503

N.T.S

N.T.S

N.T.S

RELEASED FOR CONSTRUCTION

FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF REPLACEMENT

430 PRYOR STREET, S.W.
ATLANTA, GEORGIA 30312

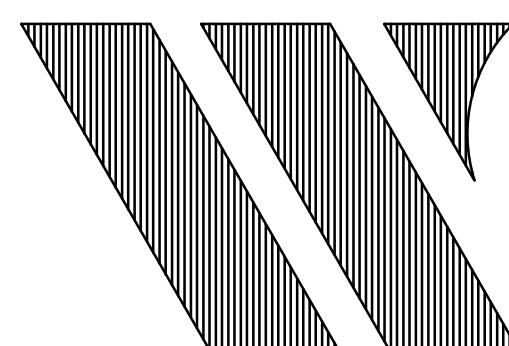
DATE:
1/2/2019



FOR:

FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND ASSET MANAGEMENT

FULTON COUNTY AIRPORT - 3977 AVIATION CIRCLE, 256
ATLANTA, GEORGIA 30316



Williams-Russell and Johnson, Inc.
ENGINEERS - ARCHITECTS - PLANNERS
260 Peachtree Street NW, 26th Floor
Atlanta, Georgia 30303

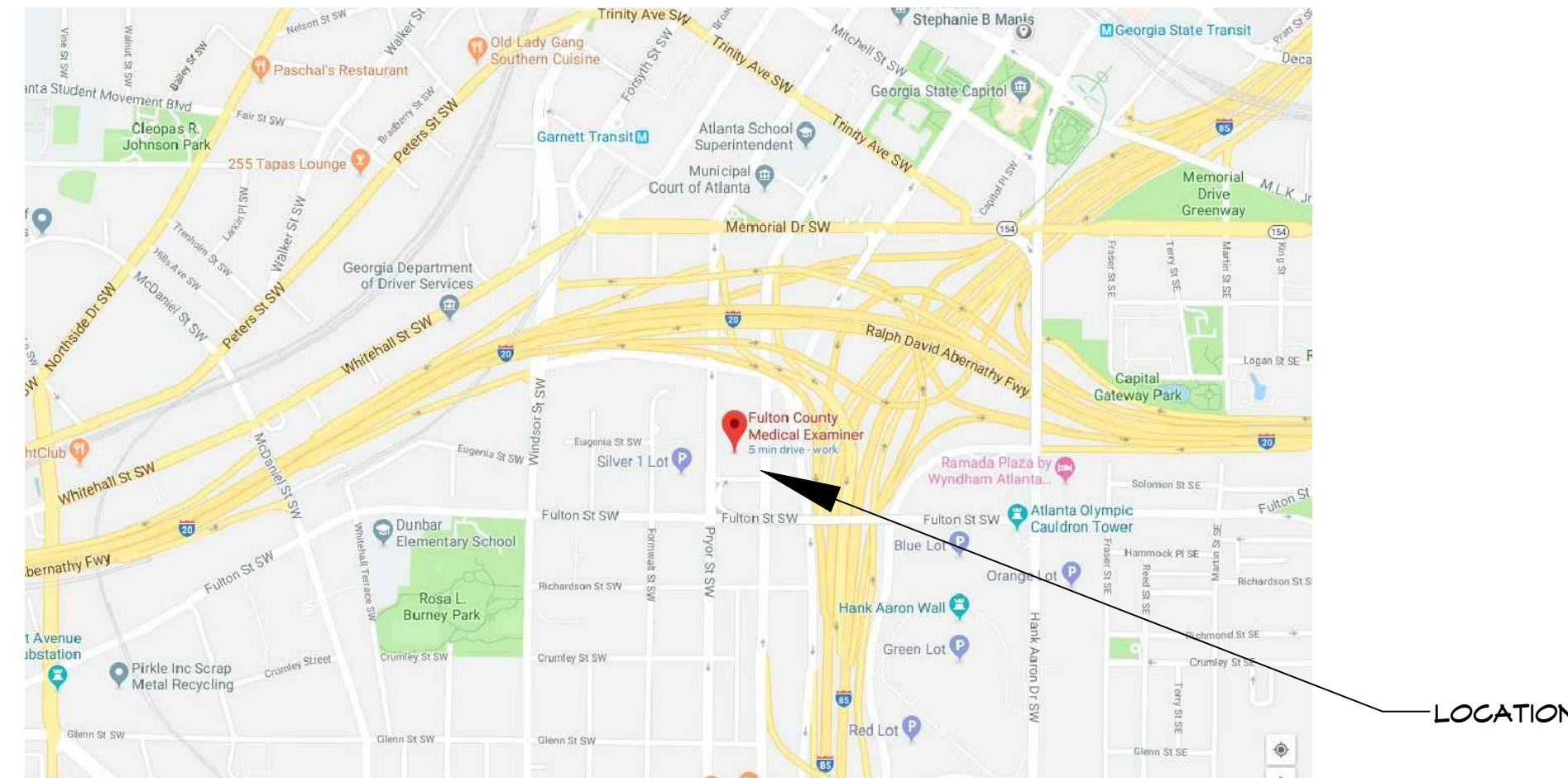
Office: (404) 853-6800
Fax: (404) 607-8890

FD

FINAL SUBMITTAL

0 1/2/2019

INDEX OF DRAWINGS

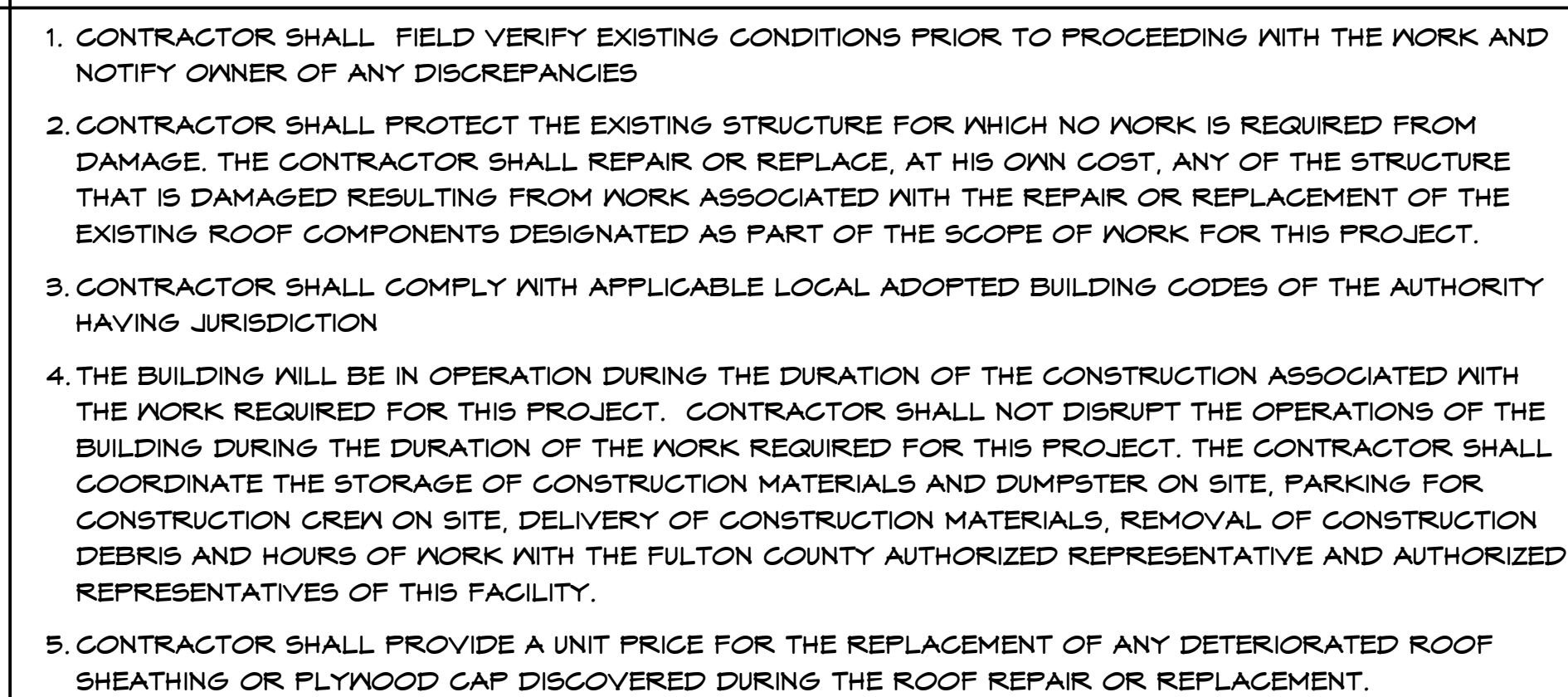


SCOPE OF WORK CONSISTS OF THE FOLLOWING:

1. ROOF REPLACEMENT; DEMO ALL EXISTING ROOFING AND INSULATION AT ROOF. REMOVE EXISTING CURB FLASHING AT CURB MOUNTED MECHANICAL ROOF TOP EQUIPMENT. REMOVE AND REINSTALL EXISTING METAL COPINGS AT PARAPET WALLS, AS INDICATED ON THE DRAWINGS. REMOVE AND INSTALL EXISTING METAL WALL PANELS AT PARAPET WALLS. INSTALL NEW TPO MEMBRANE ROOFING WITH TAPERED INSULATION TO ROOF DRAINS AND EMERGENCY OVERFLOW DRAINS AND ALL ASSOCIATED FLASHINGS AT CURBS, EQUIPMENT, ROOF PENETRATIONS AND PARAPETS. INSTALL WALK PADS ALONG DESIGNATED PATHWAYS TO EQUIPMENT AND ROOF ACCESS POINTS. INSTALL NEW METAL COPING AT PARAPET WALLS. INSTALL NEW SCUPPER BOXES AT EXISTING SCUPPER LOCATIONS. REMOVE AND REINSTALL EXISTING LIGHTING PROTECTION TERMINALS AT THE ROOF AND PARAPETS. REMOVE AND RE-INSTALL EXISTING CONDUCTOR HEADS AT EXISTING THROUGH WALL SCUPPER LOCATIONS. PAINT EXISTING EXPOSED STEEL SUPPORT FRAMING

INTERNATIONAL BUILDING CODE 2012 EDITION, WITH GEORGIA AMENDMENTS (2014, 2015, AND 2017)
INTERNATIONAL ENERGY CODE 2009 EDITION, WITH GEORGIA AMENDMENTS (2011 AND 2012)

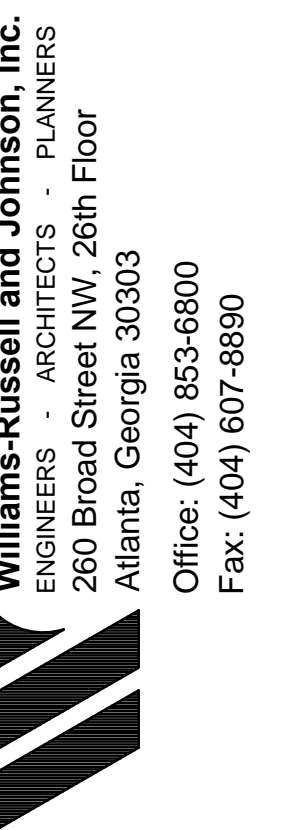
GENERAL NOTES



GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK AND NOTIFY OWNER OF ANY DISCREPANCIES
2. CONTRACTOR SHALL PROTECT THE EXISTING STRUCTURE FOR WHICH NO WORK IS REQUIRED FROM DAMAGE. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT HIS OWN COST, ANY OF THE STRUCTURE THAT IS DAMAGED RESULTING FROM WORK ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF THE EXISTING ROOF COMPONENTS DESIGNATED AS PART OF THE SCOPE OF WORK FOR THIS PROJECT.
3. CONTRACTOR SHALL COMPLY WITH APPLICABLE LOCAL ADOPTED BUILDING CODES OF THE AUTHORITY HAVING JURISDICTION
4. THE BUILDING WILL BE IN OPERATION DURING THE DURATION OF THE CONSTRUCTION ASSOCIATED WITH THE WORK REQUIRED FOR THIS PROJECT. CONTRACTOR SHALL NOT DISRUPT THE OPERATIONS OF THE BUILDING DURING THE DURATION OF THE WORK REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL COORDINATE THE STORAGE OF CONSTRUCTION MATERIALS AND DUMPSTER ON SITE, PARKING FOR CONSTRUCTION CREW ON SITE, DELIVERY OF CONSTRUCTION MATERIALS, REMOVAL OF CONSTRUCTION DEBRIS AND HOURS OF WORK WITH THE FULTON COUNTY AUTHORIZED REPRESENTATIVE AND AUTHORIZED REPRESENTATIVES OF THIS FACILITY.
5. CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR THE REPLACEMENT OF ANY DETERIORATED ROOF SHEATHING OR PLYWOOD CAP DISCOVERED DURING THE ROOF REPAIR OR REPLACEMENT.

Sheet Number	Sheet Title
G-001	COVER SHEET
G-002	INDEX OF DRAWINGS, CODE SUMMARY AND GENERAL INFORMATION
G-003	ABBREVIATIONS
G-004	ABBREVIATIONS
AD-101	ROOF DEMOLITION PLAN
A-101	ROOF MODIFICATION PLAN
A-102	ROOF PLAN WALK PAD LAYOUT
A-501	ROOF DETAILS
A-502	ROOF DETAILS
A-503	TYPICAL ROOF DETAILS



**FULTON COUNTY MEDICAL EXAMINER OFFICE ROOM
REPLACEMENT**
450 PRYOR STREET, S.W.
ATLANTA, GEORGIA 30312

**FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND
ASSET MANAGEMENT**
FULTON COUNTY AIRPORT - 38TH AVIATION CIRCLE, 256

[illegible]

SHEET NUMBER

S-002

	HOLDDOWN
	HECTOMETER
I	HOLLOW METAL
ID	HOLLOW METAL DOOR, HUMIDITY
IDF	HOLLOW METAL DOOR AND FRAME
IF	HOLLOW METAL FRAME
IMA	HOLLOW METAL MANUFACTURERS ASSOCIATION
IR	HAMMER
IDRL	HANDRAIL
O	HOLD OPEN
IA	HAND-OFF-AUTOMATIC
ORIZ	HORIZONTAL
HSP	HOSPITAL
	HEAT PUMP, HIGH PRESSURE, HORSEPOWER
YB	HIGH PRESSURE BOILER
DT	HIGH PRESSURE DRIP TRAP
F	HIGH POWER FACTOR
GR	HIGH PRESSURE GAS
	HIGH PRESSURE RETURN
SB	HIGH PRESSURE SODIUM, HIGH PRESSURE STEAM
HT	HIGH PRESSURE TRAP
	HEADQUARTERS
	HAND SINK, HEAT-STRENGTHENED (SLASS), HIGH STRENGTH
IE	HOUSE
KPG	HOUSEKEEPING
HT	HOIST
STAT	HUMIDISTAT
	HEIGHT
TRD	HEAT TREATED (SLASS)
HYN	HIGH TEMPERATURE HOT WATER
	HEATING WATER RETURN
YBS	HEATING WATER SUPPLY
Y	HIGH VOLTAGE, HOSE VALVE
VAC	HEATING, VENTILATION, AND AIR CONDITIONING
D	HIGH VELOCITY DIFFUSER
'T	HIGH VELOCITY TERMINAL
Y	HEAVY
Y	HOT WATER
YB	HOT WATER BOILER
	HOT WATER COIL
YCP	HOT WATER CIRCULATION PUMP
YL	HOT WATER LINE
YR	HOT WATER PUMP
YR	HOT WATER RETURN
YR	HOT WATER SUPPLY
YT	HOT WATER TANK
Y	HIGHWAY
D	HYDRANT
DHR	HYDRAULIC
	HERTZ
	I
	INTERSTATE (HIGHWAY), MOMENT OF INERTIA
	INPUT/OUTPUT
Q	INDOOR AIR QUALITY
	I BEAM
IG	INTERNATIONAL BUILDING CODE
	INTERRUPTING CAPACITY, IRONING CABINET
	IDENTIFICATION, INSIDE DIAMETER, INSIDE DIMENSION, INTERIOR DESIGN
NO	IDENTIFICATION NUMBER
INA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
	INSIDE FACE, INTAKE FAN
IS	INSIDE FACE OF STUD
N	IGNITION
	IMPACT ISOLATION CLASS
UM	ILLUMINATION
US	ILLUSTRATE
IG	INTERMEDIATE METAL CONDUIT
IED	IMMEDIATE
H	INLET MANHOLE
	INCH
YIC	INCHES, WATER COLUMN
IC	INCREASE
GAND	INCANDESCENT
IGN	INCINERATOR
IL	INCLUDED
GR	INCREMENT
O	INDEPENDENT, INDUSTRIAL
F	INFINITE
O	INFORMATION
LB	INCH-POUND
LBIF	INCH-POUND FORCE
R	IMPACT NOISE RATING
IS	INSURANCE
	INCHES PER SECOND
STL	INSTALL
STR	INSTRUMENT
SUF	INSUFFICIENT
SL	INSULATION
SLIL	INSULATED METAL PANEL
T	INTERIOR
TERCO	INTERCOMMUNICATION
TL	INTERNATIONAL
/	INVERT
EL	INVERT ELEVATION
	IRON PIPE
M	IMPULSES PER MINUTE
S	IMPULSES PER SECOND, INTERNATIONAL PIPE STANDARD, IRON PIPE SIZE
IS	IRON PIPE THREADED
	INFERRED, INSIDE RADIUS
MA	INVERTED ROOF MEMBRANE ASSEMBLY
REG	IRREGULAR
	INSECT SCREEN, ISLAND
O	INTERNATIONAL STANDARDS ORGANIZATION, ISOMETRIC



[illegible]

GENERAL NOTES:

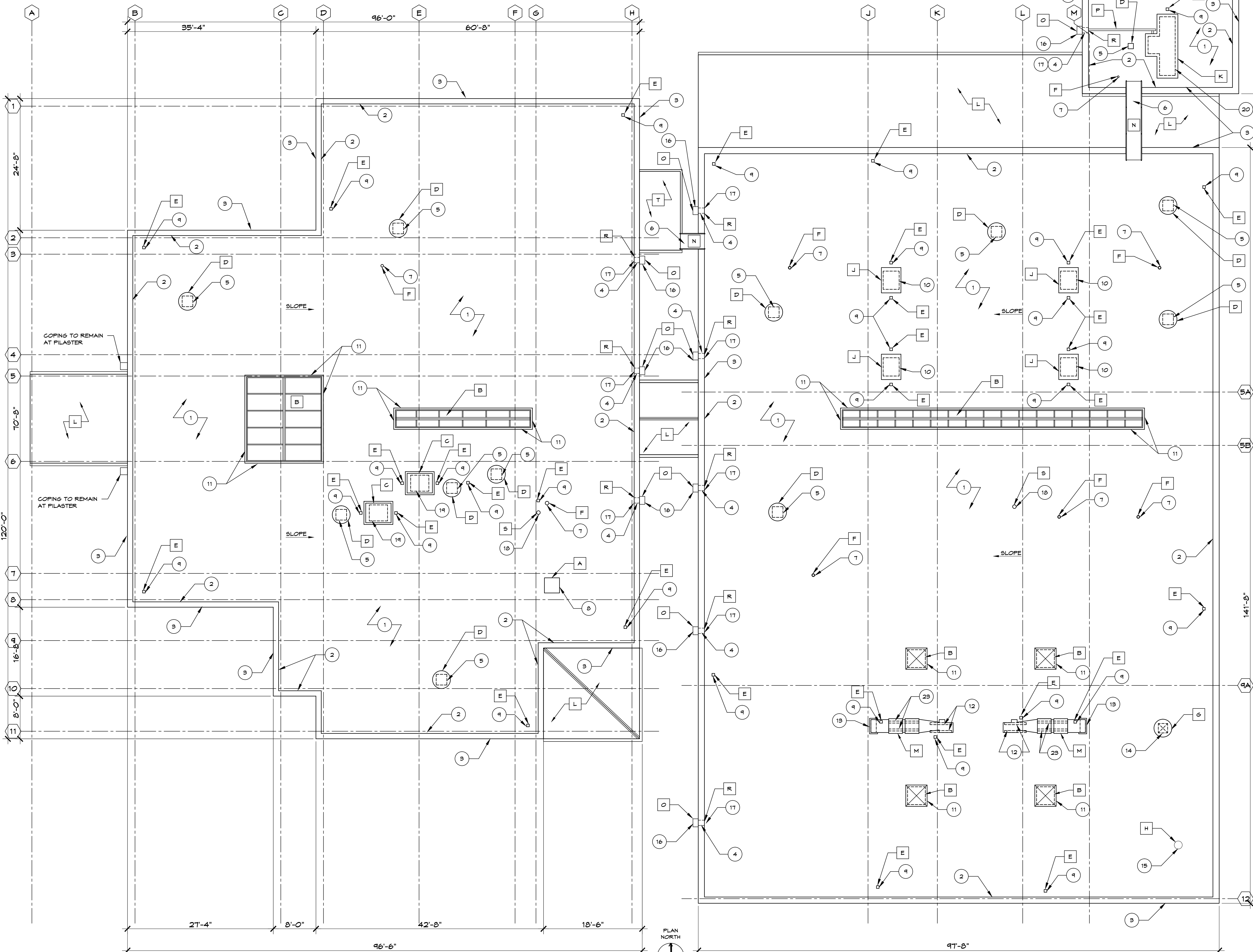
- A1 LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS ATTACHED TO THE TOP OF THE EXISTING ROOF MEMBRANE AND THE TOP AND SIDE OF THE EXISTING METAL COPING, TOP OF PIPE VENTS, AND OTHER EQUIPMENT IMPACTING THE REPLACEMENT OF THE EXISTING ROOF SYSTEM, PARAPET FLASHING AND METAL COPING SHALL BE TEMPORARILY DISCONNECTED AND REMOVED TO ALLOW FOR THE INSTALLATION OF NEW ROOF SYSTEM, PARAPET FLASHING AND COPING. THE LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS SHALL BE REINSTALLED AND RECONNECTED AFTER INSTALLATION OF NEW ROOFING SYSTEM, PARAPET FLASHING AND METAL COPING.

DEMOLITION KEY NOTES:

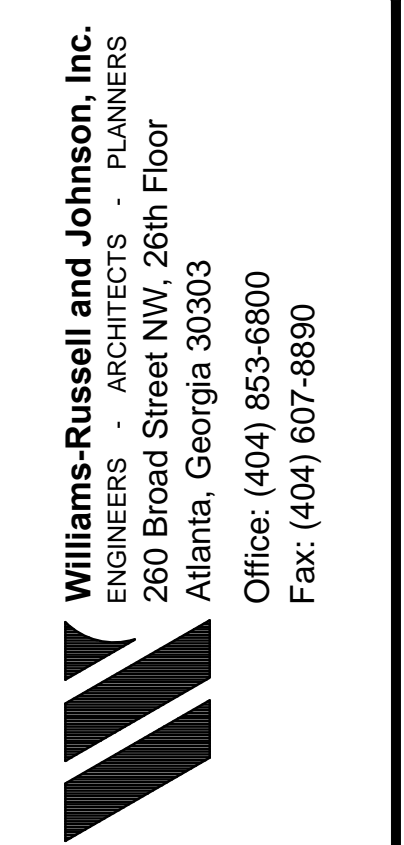
- EXISTING GRANULAR MODIFIED BITUMEN BUILT-UP ROOF SYSTEM, BASE FLASHING, GANT STRIP AND RIGID INSULATION SHALL BE REMOVED IN THEIR ENTIRETY DOWN TO EXISTING METAL ROOF DECK.
- REMOVE IN ITS ENTIRETY THE EXISTING FLASHING FELT ROOF MEMBRANE AT FACE OF PARAPET WALL AND EXISTING PLYWOOD SHEATHING ALONG TOTAL HEIGHT AND TOTAL LENGTH OF PARAPET WALLS. REMOVE AND REPLACE EXISTING PLYWOOD SHEATHING AT FACE OF PARAPET WALL ALONG FULL HEIGHT AND LENGTH OF PARAPET WALL. CLEAN FACE OF CMU AT PARAPET WALLS OF ALL ADHESIVE RESIDUE FROM FLASHING FELT.
- EXISTING METAL COPING SYSTEM AND WATERPROOF MEMBRANE AT TOP OF PARAPET WALL SHALL BE REMOVED IN ITS ENTIRETY ALONG TOTAL LENGTH OF PARAPET WALL. THE EXISTING PLYWOOD CAP UNDER THE METAL COPING SHALL REMAIN IN TACT UNLESS NOTED OTHERWISE. ANY SECTION OF THE EXISTING PLYWOOD CAP THAT IS DISCOVERED TO BE DETERIORATED SHALL BE REMOVED AND REPLACED WITH NEW PRESURE TREATED 3/4" PLYWOOD CAP THAT MATCHES THE EXISTING. PROVIDE UNIT COST FOR REPLACEMENT OF DETERIORATED PLYWOOD CAP.
- EXISTING THROUGH WALL METAL SCUPPER LINER SHALL BE REMOVED AND REPLACED. REMOVE EXISTING FLASHING AND SCUPPER BOX AT EXISTING SCUPPER OPENINGS.
- EXISTING FLASHING AT CURB OF ROOF TOP MECHANICAL EXHAUST AND AIR IN-TAKE FANS SHALL BE REMOVED AND REPLACED.
- EXISTING ALUMINUM WALKWAY/BRIDGE SHALL BE REMOVED TO ALLOW FOR REMOVAL OF EXISTING METAL COPING AND PARAPET FLASHING AND REINSTALLED AFTER NEW METAL COPING AND PARAPET FLASHING HAS BEEN INSTALLED.
- EXISTING FLASHING AT THE PIPE VENT SHALL BE REMOVED AND REPLACED.
- EXISTING FLASHING AT CURB OF ROOF HATCH SHALL BE REMOVED AND REPLACED.
- FLASHING AT EXISTING PITCH POCKETS AND PITCH POCKET RESIDUE SHALL BE REMOVED. CLEAN ALL RESIDUE FROM PITCH POCKETS AND PREP FOR INSTALLATION OF NEW ROOF FLASHING SYSTEM.
- EXISTING FLASHING AT CURB OF ROOF TOP CONDENSING UNITS SHALL BE REMOVED AND REPLACED.
- EXISTING FLASHING MEMBRANE AT CURB OF SKYLIGHTS SHALL BE REMOVED AND REPLACED. TEMPORARILY FOLD UP METAL FLASHING MEMBER TO ALLOW FOR REMOVAL AND REPLACEMENT OF FLASHING.
- EXISTING FLASHING AT DOUBLE CURB OF HEPA FILTER UNIT SHALL BE REMOVED AND REPLACED.
- EXISTING FLASHING AT BACK CURB OF HEPA FILTER UNIT SHALL BE REMOVED AND REPLACED.
- EXISTING FLASHING AT 16" DIAMETER HOT STACK FLUE SHALL BE REMOVED AND REPLACED.
- EXISTING FLASHING AT 10" DIAMETER HOT STACK FLUE SHALL BE REMOVED AND REPLACED.
- EXISTING ALUMINUM CONDUCTOR HEADS AT SCUPPER LOCATIONS SHALL BE REMOVED TO ALLOW FOR INSTALLATION OF NEW SCUPPER FLASHING AND REINSTALLED AFTER NEW FLASHING IS INSTALLED. EXISTING CONDUCTOR HEADS SHALL BE STORED AND PROTECTED FROM DAMAGES.
- EXISTING FLASHING AT SCUPPER LOCATION SHALL BE REMOVED AND REPLACED. EXISTING CONDUCTOR HEADS SHALL BE STORED AND PROTECTED FROM DAMAGE FOR RE-INSTALLATION.
- EXISTING FLASHING AT 8" DIAMETER FLUE SHALL BE REMOVED AND REPLACED. CLEAN ALL RESIDUE FROM FLUE.
- EXISTING FLASHING AT CURB OF RH SHALL BE REMOVED AND REPLACED.
- FLASHING AT CURB OF EXISTING ROOF TOP AIR HANDLER SHALL BE REMOVED AND REPLACED.
- EXISTING ELECTRICAL POWER BOX MOUNTED AT FACE OF EXISTING PARAPET WALL SHALL BE DISCONNECTED AND REMOVED TO ACCOMMODATE INSTALLATION OF NEW PARAPET FLASHING AND REINSTALLED AND RECONNECTED AFTER NEW PARAPET FLASHING IS INSTALLED.
- EXISTING PVC PIPE STORED ON ROOF SHALL BE REMOVED.
- EXISTING DOUBLE METAL CURB SUPPORTS FOR THE HEPA FILTER UNIT SHALL BE RAISED TO ALLOW FOR REMOVAL AND REPLACEMENT OF EXISTING ROOF SYSTEM.

EXISTING ROOF EQUIPMENT KEY NOTES:

- A. EXISTING ROOF ACCESS HATCH
B. EXISTING SKYLIGHT
C. EXISTING RH
D. EXISTING EXHAUST FAN
E. EXISTING PITCH POCKET
F. EXISTING PIPE VENT
G. EXISTING 16" DIAMETER HOT STACK FLUE WITH METAL HOOD ON SQUARE CURB
H. EXISTING 10" DIAMETER HOT STACK FLUE
J. EXISTING CONDENSING UNIT
K. EXISTING ROOF TOP AIR HANDLER UNIT
L. EXISTING STANDING SEAM METAL ROOF (NOT IN CONTRACT)
M. EXISTING HEPA FILTER UNIT
N. EXISTING ALUMINUM WALKWAY/BRIDGE
O. EXISTING ALUMINUM CONDUCTOR HEAD WITH DOWNSPOUT
P. EXISTING PVC PIPE
Q. EXISTING ELECTRICAL POWER BOX
R. SCUPPER
S. EXISTING 8" DIAMETER HOT STACK FLUE
T. EXISTING METAL CANOPY (NOT IN CONTRACT)



1 DEMOLITION ROOF PLAN
1/8" = 1'-0"

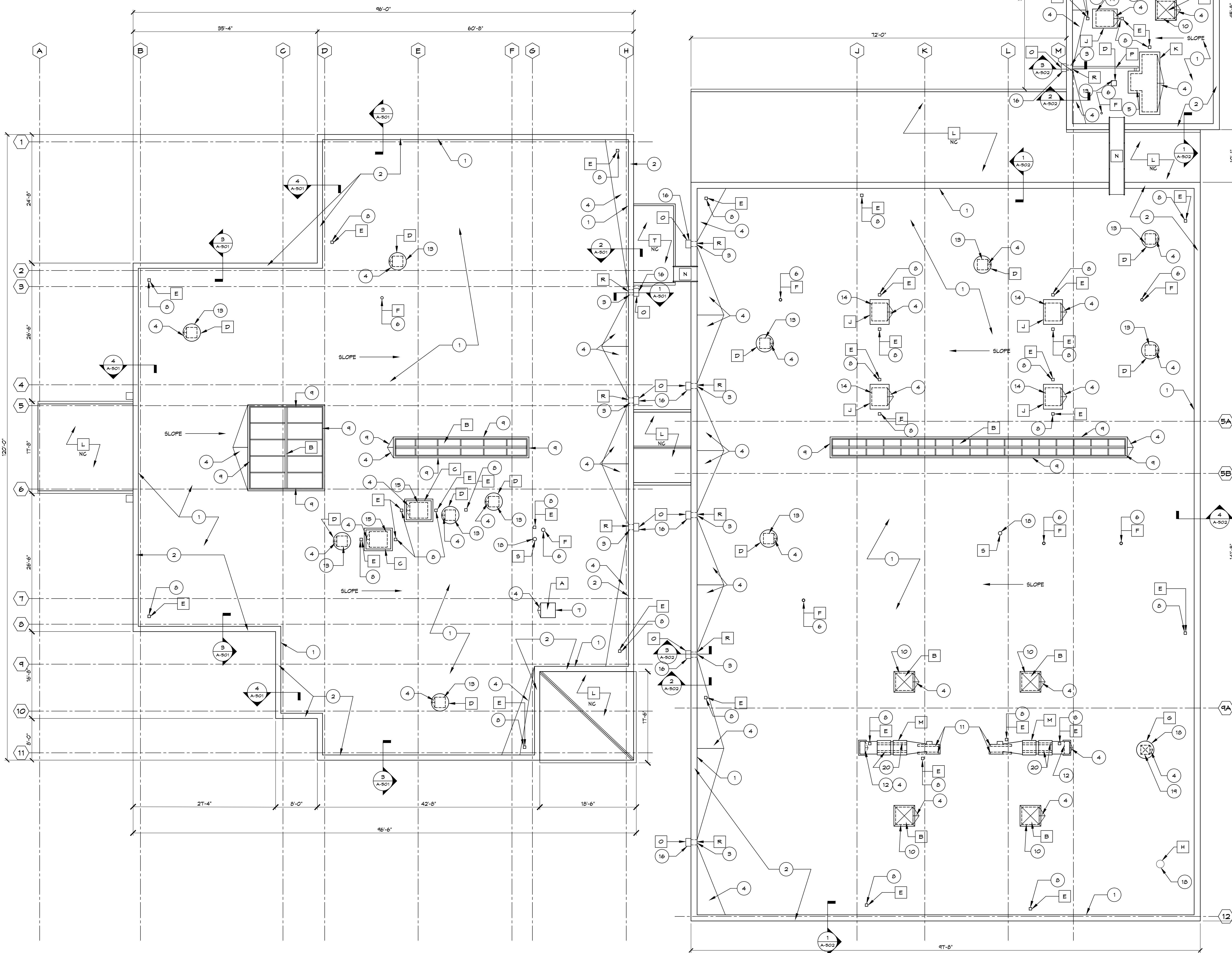


FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF REPLACEMENT
450 PICO STREET, S.W.
ATLANTA, GEORGIA 30312
FULTON COUNTY DEPARTMENT OF REAL ESTATE AND ASSET MANAGEMENT
FULTON COUNTY, GEORGIA
ATLANTA, GEORGIA 30303

NO.	DATE	REVISION
1	1/2/2014	FINAL SUBMITTAL

PROJECT NO.	3978
DATE	1/2/2014
DESIGNED BY	FD
CHECKED BY	FD
DRAWN BY	SC, HB
APPROVED BY	FD

ROOF DEMOLITION PLAN



1 ROOF MODIFICATION PLAN
1/8" = 1'-0"

- ROOFING REPLACEMENT KEY NOTES:**
1. NEW SELF-ADHERED TPO SINGLE-PLY MEMBRANE ON 1/2" COVER BOARD ON 1" POLYISO RIGID INSULATION ON 2 1/2" POLYISO RIGID INSULATION ON METAL DECK. INSTALL NEW EXTERIOR GRADE P.T. PLYWOOD SHEATHING AT FACE OF EXISTING STUD FRAMING AT APPLICABLE PARAPET WALL. EXTEND TPO MEMBRANE UP AND OVER THE TOP OF THE PARAPET WALL AND TURN DOWN EDGE OF TPO MEMBRANE VERTICALLY OVER FACE OF PLYWOOD CAP. MINIMUM SLOPE OF NEW ROOF SYSTEM SHALL MATCH EXISTING ROOF SLOPE OF 3/8" PER FOOT MINIMUM.
 2. NEW PREFINISHED 24 GAUGE METAL COPING WITH PREFABRICATED EXTRUDED ALUMINUM BAR OVER EXISTING 1/4" PLYWOOD CAP. EXISTING PLYWOOD CAP THAT IS DISCOVERED TO BE DETERIORATED SHALL BE REMOVED AND BE REPLACED WITH A NEW 3/4" PRESSURE TREATED PLYWOOD CAP TO MATCH EXISTING.
 3. NEW TPO COATED METAL SCUPPER SLEEVE WITH PRE-MOLDED TPO INSIDE / OUTSIDE CORNERS AND TPO FLASHING AT EXISTING SCUPPER LOCATION.
 4. PROVIDE TAPERED INSULATION TO FORM CRICKET.
 5. EXISTING CURB OF EXISTING MECHANICAL ROOF TOP UNIT SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE.
 6. INSTALL NEW PRE-FABRICATED ROOF PIPE VENT FLASHING COLLAR AT EXISTING PIPE VENT. REFERENCE DETAIL 4/A-503.
 7. EXISTING CURB AT ROOF HATCH SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE.
 8. INSTALL NEW PITCH POCKET. REFERENCE DETAIL 15/A-503.
 9. EXISTING CURB AT SKYLIGHT SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. FOLD UP METAL COUNTER FLASHING AT TOP OF CURB TO ALLOW FOR NEW TPO FLASHING MEMBRANE INSTALLATION AT THIS SKYLIGHT LOCATION. AFTER FLASHING MEMBRANE INSTALLATION FOLD DOWN METAL COUNTER TO ORIGINAL POSITION. SEE DETAILS 5 AND 6 ON SHEET A-501.
 10. EXISTING CURB AT SMALL SQUARE SKYLIGHTS SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. FOLD UP METAL COUNTER FLASHING AT TOP OF CURB TO ALLOW FOR NEW TPO FLASHING MEMBRANE INSTALLATION AT THIS SKYLIGHT LOCATION. AFTER FLASHING MEMBRANE INSTALLATION FOLD DOWN METAL COUNTER TO ORIGINAL POSITION. SEE DETAIL 1/A-501.
 11. EXISTING DOUBLE CURB AT HEPA FILTER UNIT SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. SEE DETAIL 9/A-501.
 12. EXISTING CURB AT BACK OF HEPA FILTER UNIT SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. SEE DETAIL 8/A-501.
 13. EXISTING CURB AT EXHAUST FAN SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. SEE DETAIL 5/A-502.
 14. EXISTING CURB AT CONDENSING UNIT SHALL REMAIN AND SHALL BE FLASHED WITH TPO MEMBRANE. SEE DETAIL 8/A-501.
 15. EXISTING CURB AT RH SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. SEE DETAIL 8/A-501.
 16. EXISTING ALUM. CONDUCTOR HEADS SHALL BE REINSTALLED AT SCUPPER LOCATIONS AFTER NEW SCUPPER FLASHING ASSEMBLY INSTALLATION HAS BEEN COMPLETED.
 17. RECONNECT AND REMOUNT ELEC. POWER BOX TO FACE OF PARAPET AFTER PARAPET FLASHING AND METAL COPING INSTALLATION HAS BEEN COMPLETED.
 18. EXISTING HOT STACK FLUE SHALL BE FLASHED WITH HOT STACK FLASHING AND FIELD FABRICATED METAL HOOD. DETAIL SHALL BE SIMILAR TO 8/A-503.
 19. EXISTING CURB AT HOT STACK FLUE SHALL REMAIN AND SHALL BE FLASHED WITH NEW TPO MEMBRANE. SEE DETAIL 6/A-503.
 20. EXISTING DOUBLE METAL CURB SHALL BE TEMPORARILY RAISED TO ALLOW FOR TPO ROOF SYSTEM INSTALLATION. SEE DETAIL 3/A-503.
- EXISTING ROOF EQUIPMENT KEY NOTES:**
- A. EXISTING ROOF ACCESS HATCH
 - B. EXISTING SKYLIGHT
 - C. EXISTING RH
 - D. EXISTING EXHAUST FAN
 - E. EXISTING PITCH POCKET
 - F. EXISTING PIPE VENT
 - G. EXISTING 16" DIAMETER HOT STACK FLUE WITH HOOD AND CURB
 - H. EXISTING 10" DIAMETER HOT STACK FLUE
 - J. EXISTING CONDENSING UNIT
 - K. EXISTING ROOF TOP AIR HANDLER UNIT
 - L. EXISTING STANDING SEAM METAL ROOF (NOT IN CONTRACT)
 - M. EXISTING HEPA FILTER UNIT
 - N. EXISTING ALUMINUM WALKWAY/BRIDGE
 - O. EXISTING ALUMINUM CONDUCTOR HEAD WITH DOWNSPOUT
 - P. EXISTING PVC PIPE
 - Q. EXISTING ELECTRICAL POWER BOX
 - R. SCUPPER
 - S. EXISTING 8" DIAMETER HOT STACK FLUE WITH FLASHING COLLAR
 - T. EXISTING METAL CANOPY (NOT IN CONTRACT)
- GENERAL NOTES:**
- A1 LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS ATTACHED TO THE TOP OF THE EXISTING ROOF MEMBRANE AND THE TOP AND SIDE OF THE EXISTING METAL COPING, TOP OF PIPE VENTS, AND OTHER EQUIPMENT IMPACTING THE REPLACEMENT OF THE EXISTING ROOF SYSTEM, PARAPET FLASHING AND METAL COPING SHALL BE TEMPORARILY DISCONNECTED, AND MOVED TO ALLOW FOR THE INSTALLATION OF NEW ROOF SYSTEM, PARAPET FLASHING AND COPING. THE LIGHTNING PROTECTION AIR TERMINALS AND CONDUCTORS SHALL BE REINSTALLED AND RECONNECTED AFTER INSTALLATION OF NEW ROOFING SYSTEM, PARAPET FLASHING AND METAL COPING. SIMILAR TO DETAIL 9/A-503.
 - A2 AT ALL PARAPET DETAILS WHERE THE ROOF IS NOT SUPPORTED BY THE EXTERIOR WALL, PROVIDE FLEXIBLE FOAM FLASHING MEMBRANE PER NRCA DETAIL TF-6.

STATE OF GEORGIA
FRANKLIN CARLIN
REGISTERED ARCHITECT
12/1/17

Williams Russell and Johnson, Inc.
280 Broad Street NW, 28th Floor
Atlanta, Georgia 30303
Office: (404) 853-8800
Fax: (404) 607-8890

FULTON COUNTY
FULTON COUNTY

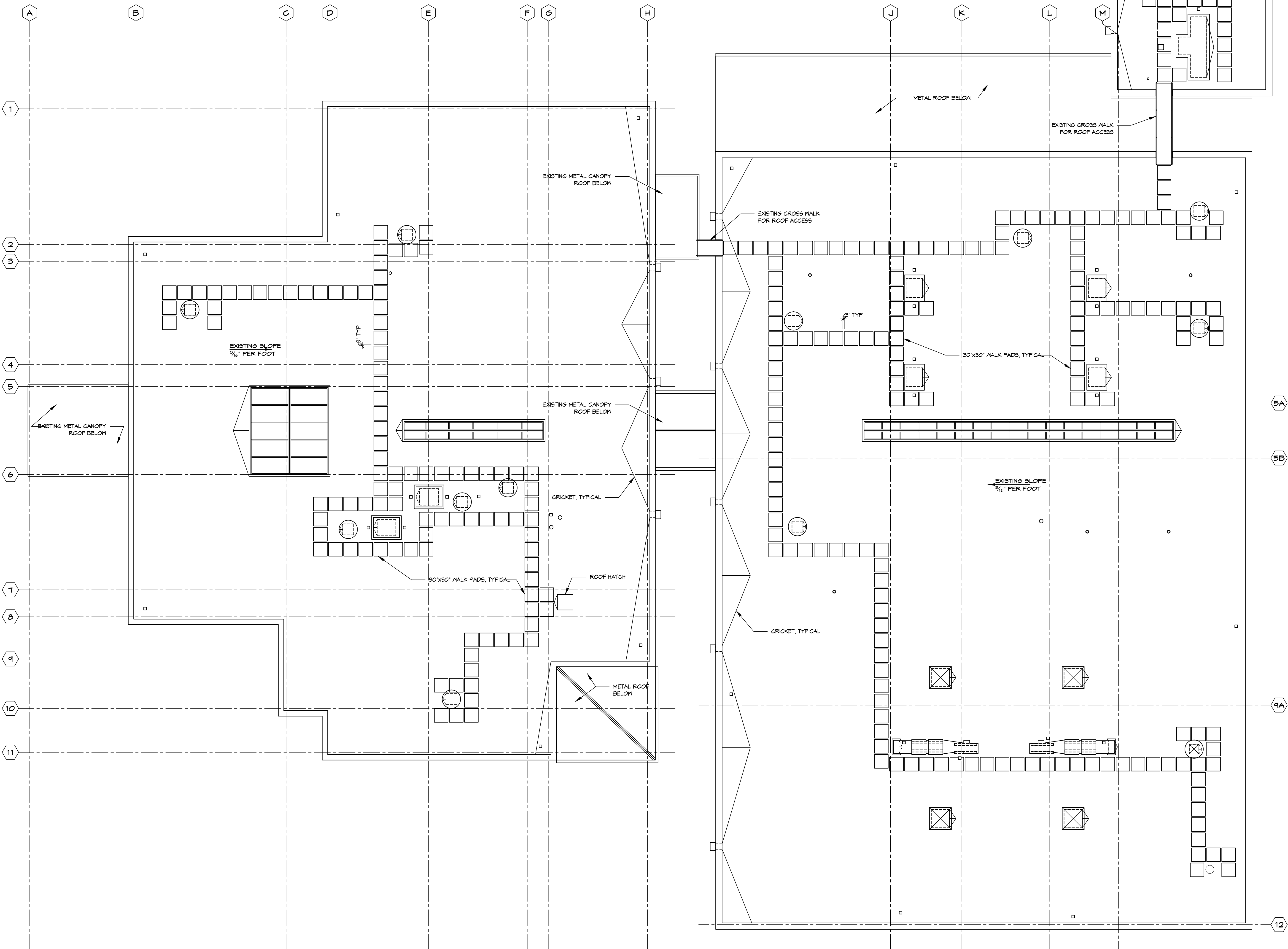
FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF
REPLACEMENT
150 PICO STREET, S.W.
ATLANTA, GEORGIA 30312
FULTON COUNTY DEPARTMENT OF REAL ESTATE AND
ASSET MANAGEMENT
FULTON COUNTY, GEORGIA
ATLANTA, GEORGIA 30303

PROJECT NO.	3978	DATE	1/2/2014	CHECKED	FD
DESIGNED	FD	DATE	1/2/2014	APPROVED	FD
DRAWN	SC, MD	DATE	1/2/2014	DESCRIPTION	FD

ROOF MODIFICATION PLAN

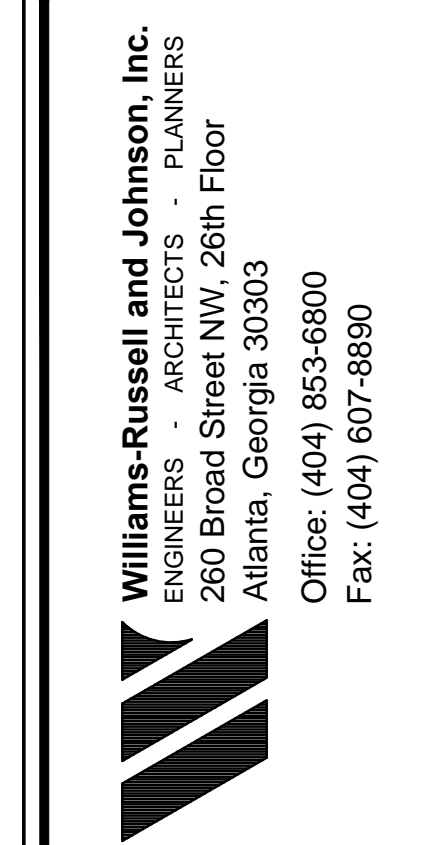
1/8" = 1'-0"

A-101



ROOFING WALKMAT PAD NOTES:

1. WALKWAY SECTION SHOULD BE SPACED PROPERLY TO ALLOW FOR DRAINAGE. SPACE BETWEEN WALKWAY SECTIONS SHALL BE 1" MIN. TO 3" MAX.
2. HEAT WELD ALL EDGES OF THE WALKWAY PAD TO THE TPO MEMBRANE.

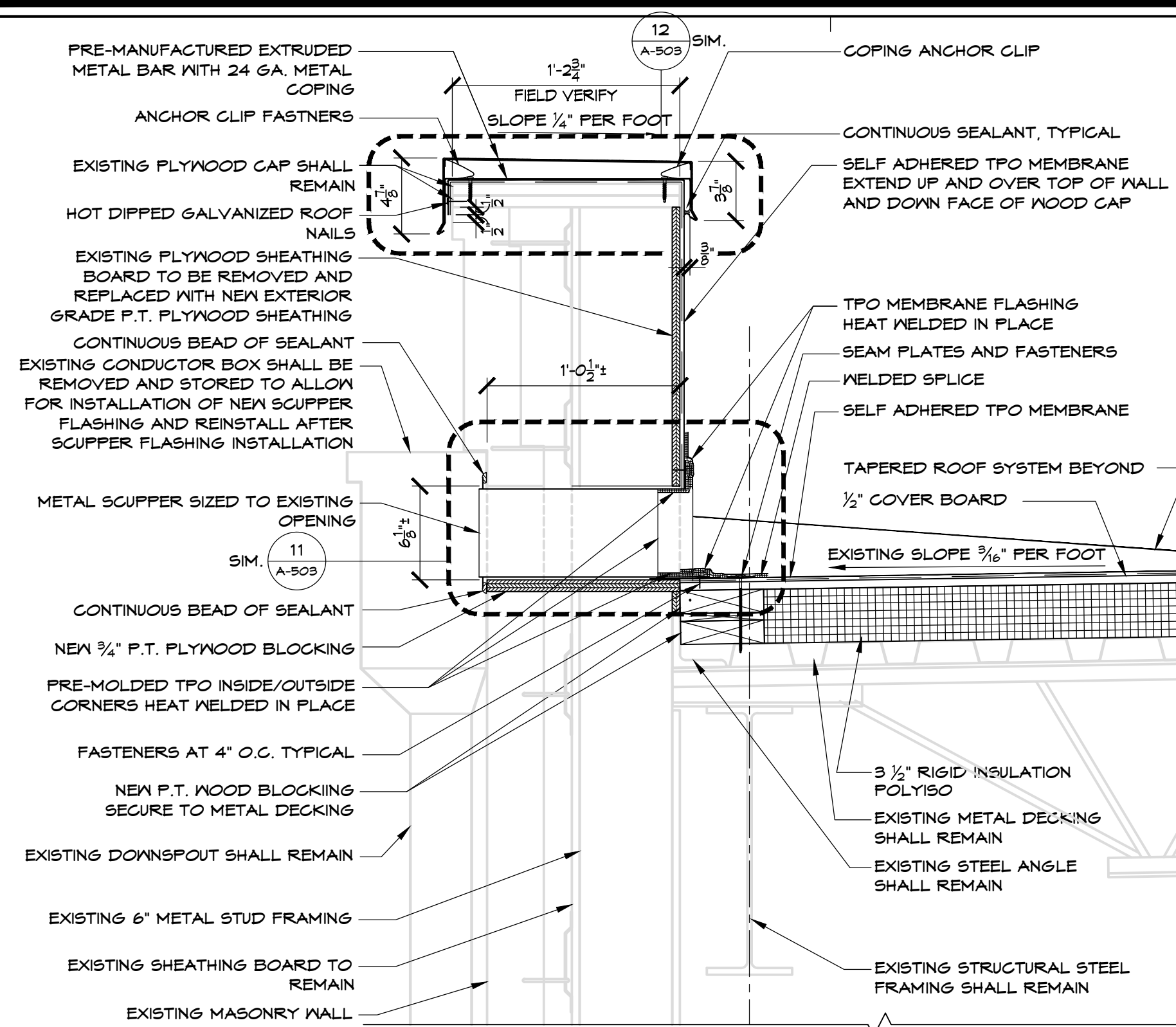


FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF REPLACEMENT
450 PLYWOOD STREET, 8th FL.
ATLANTA, GEORGIA 30312
FULTON COUNTY DEPARTMENT OF REAL ESTATE AND ASSET MANAGEMENT
FULTON COUNTY, GEORGIA 30331

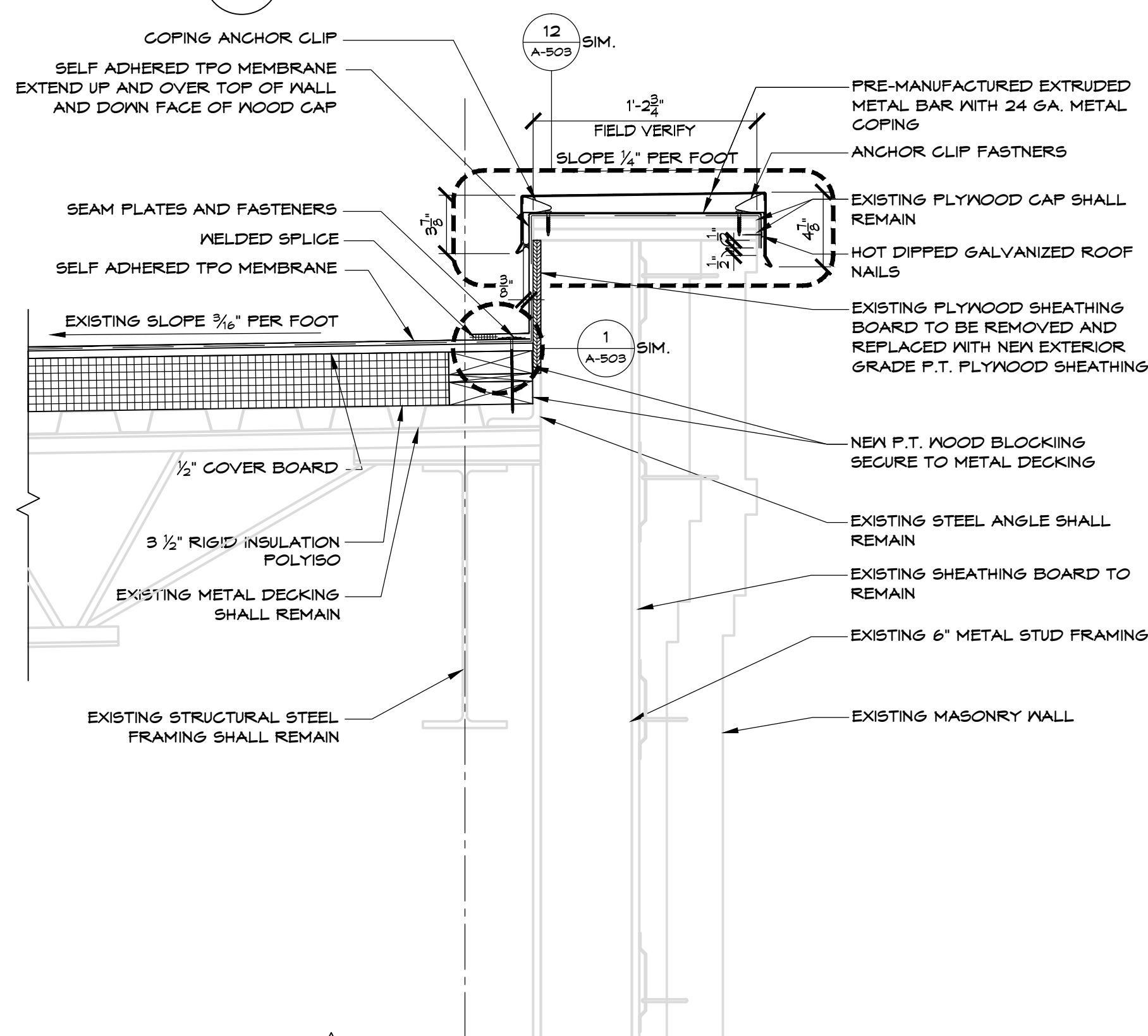
PROJECT NO.	3978
DATE	1/2/2019
DESIGNED	FD
CHECKED	-
DRAWN	SC
APPROVED	FD
DATE	1/2/2019
DESCRIPTION	FINAL SUBMITTAL

ROOF PLAN WALK PAD LAYOUT

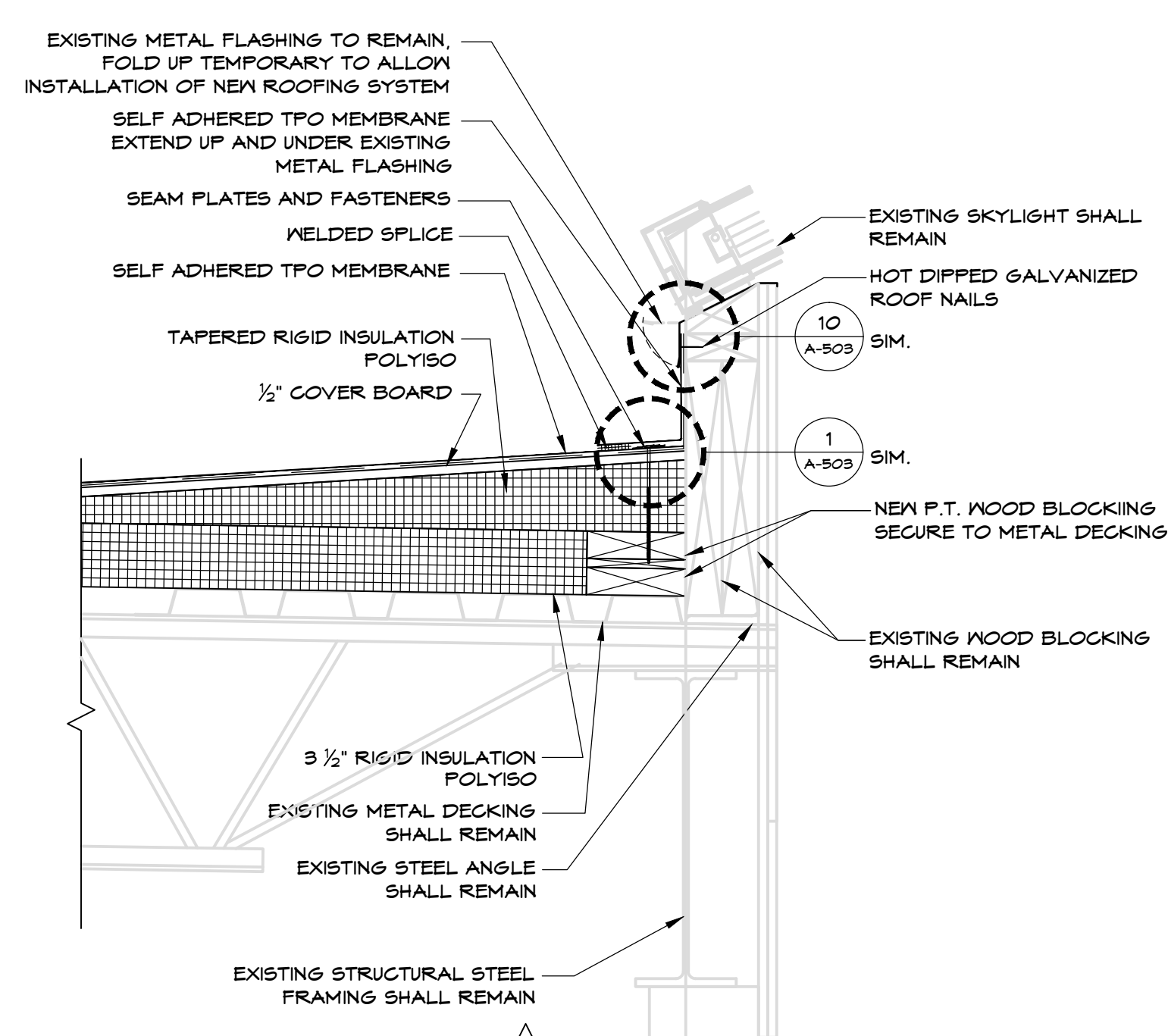
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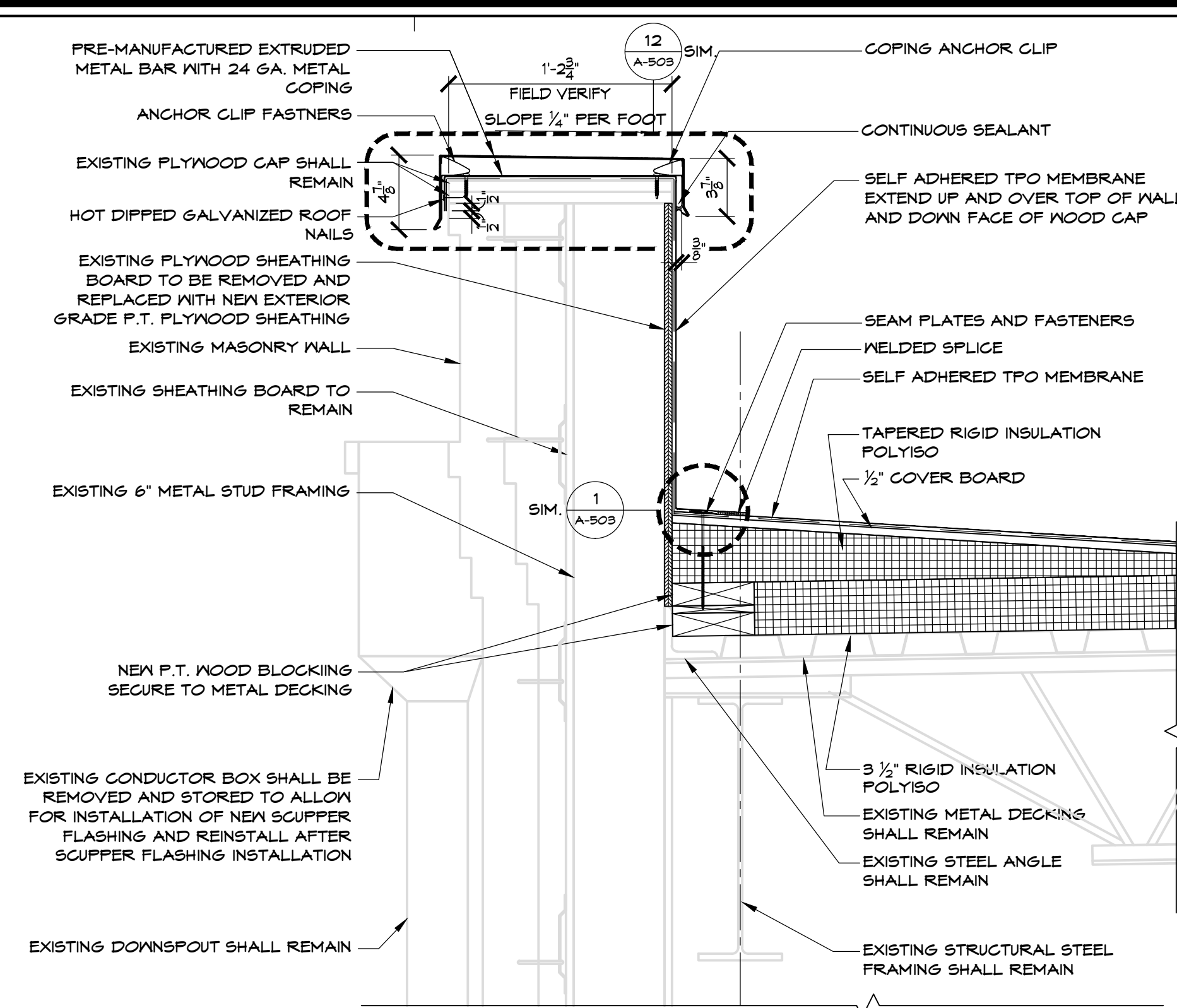
1 ROOF DETAIL @ SCUPPER
1 1/2" = 1'-0"



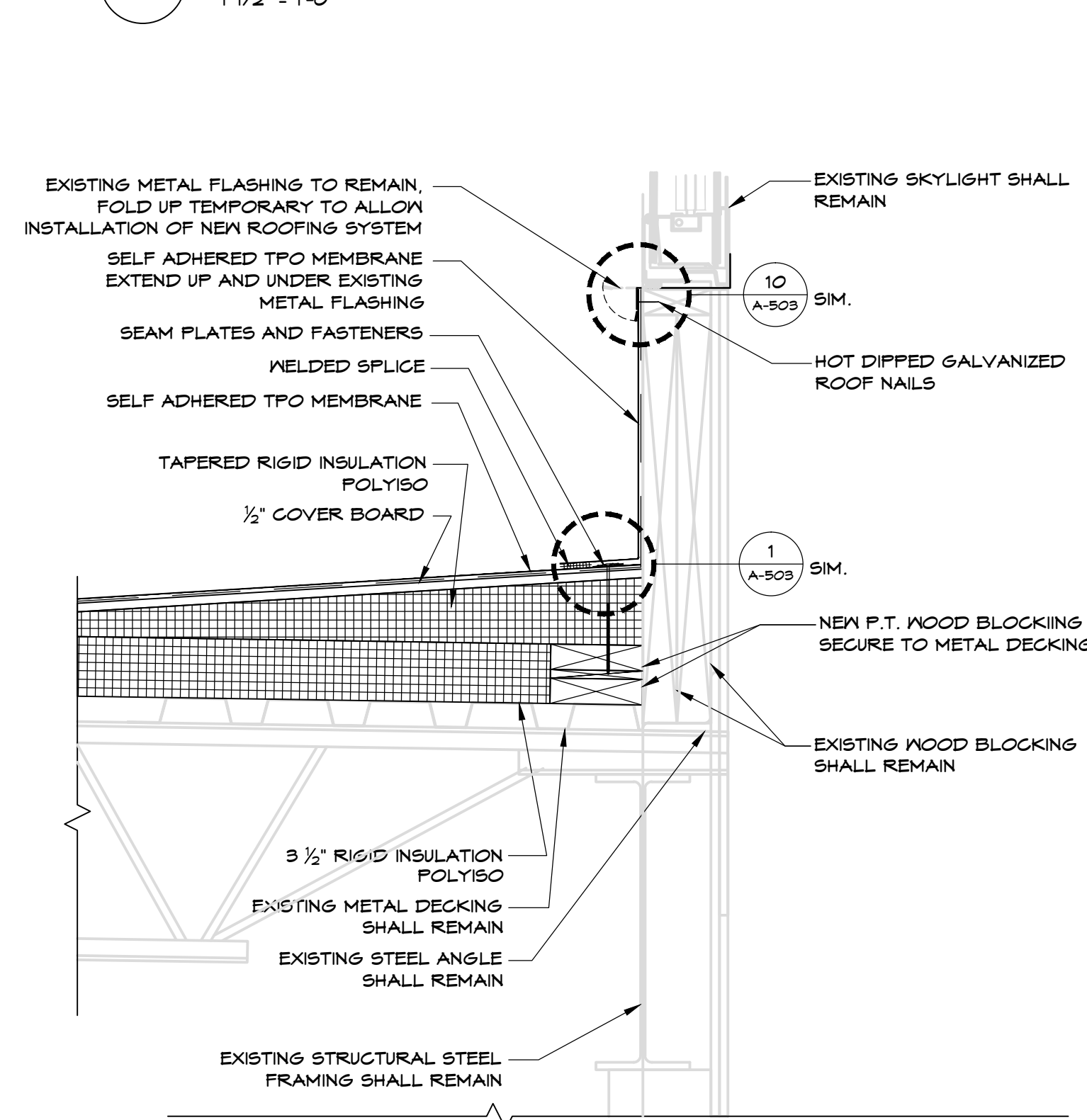
4 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



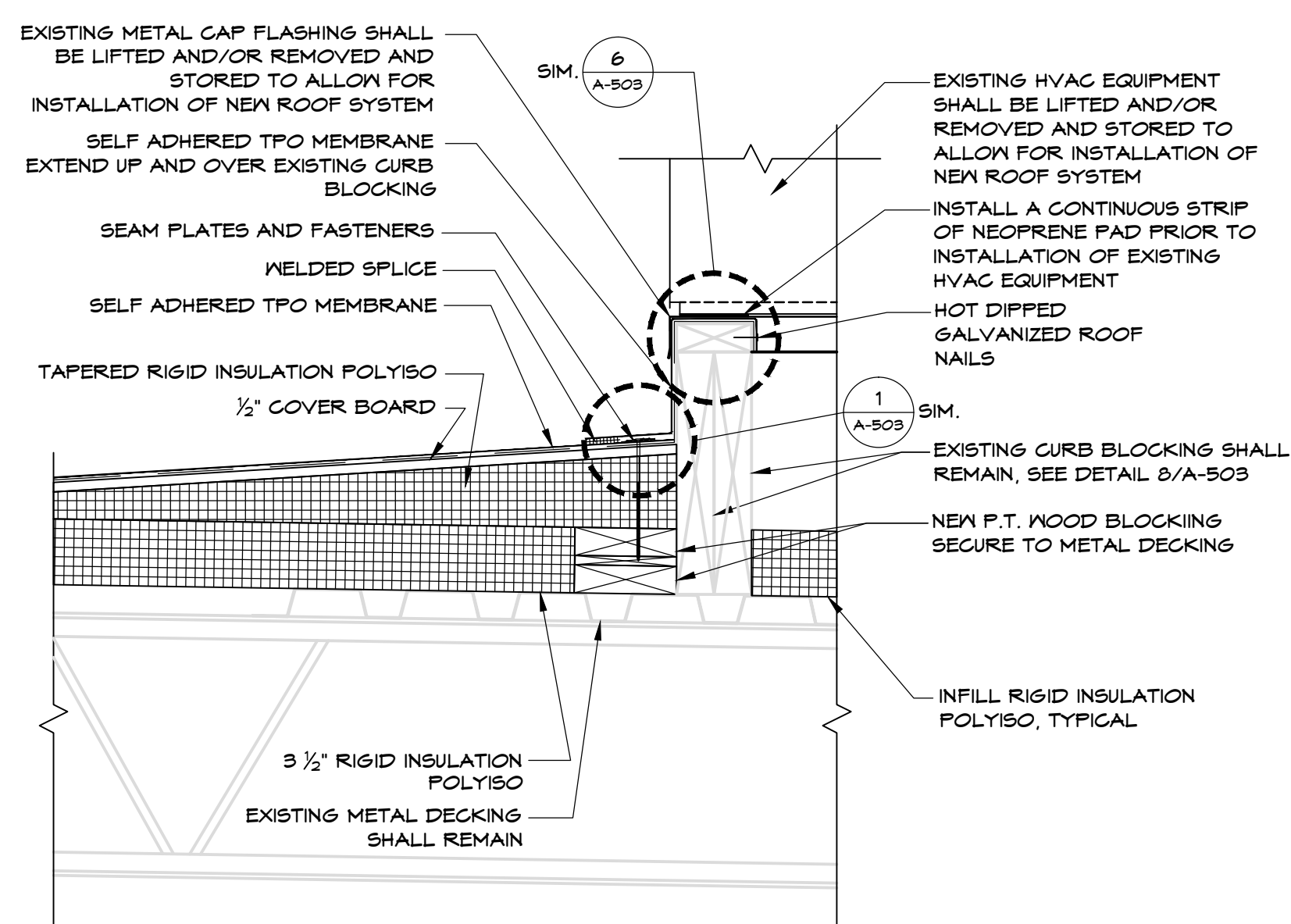
7 ROOF DETAIL @ SKYLIGHT



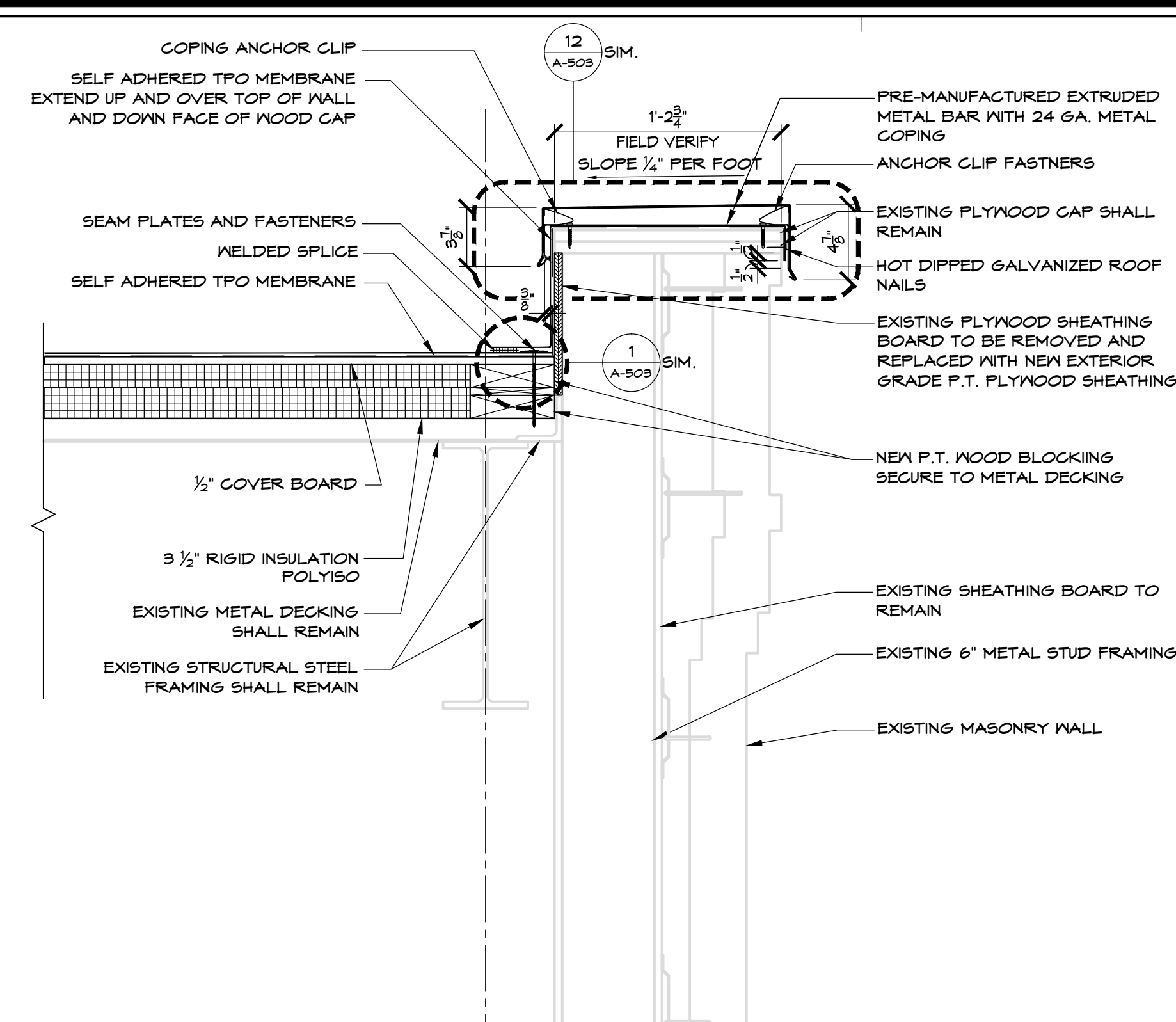
2 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



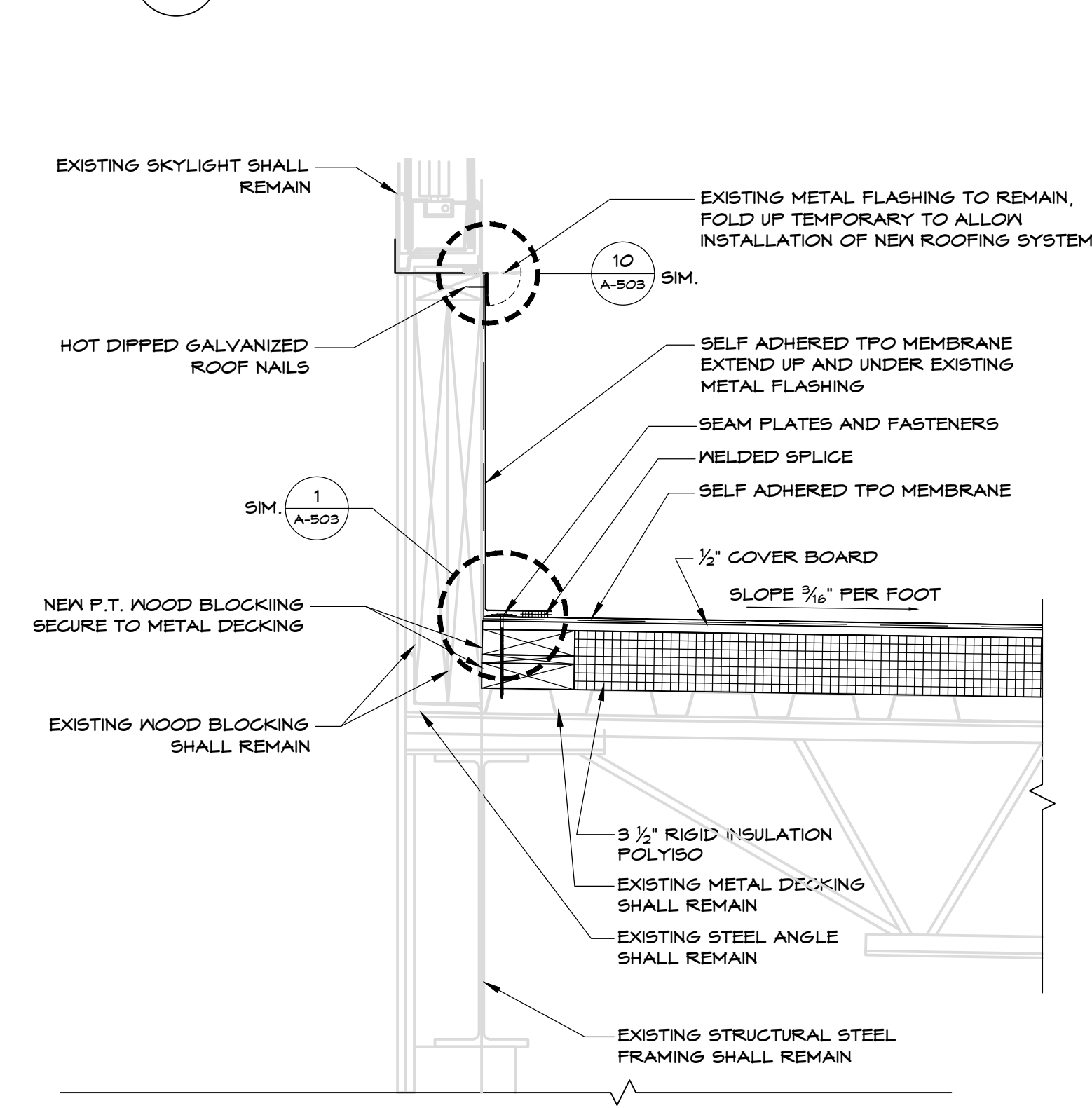
5 ROOF DETAIL @ SKYLIGHT
1 1/2" = 1'-0"



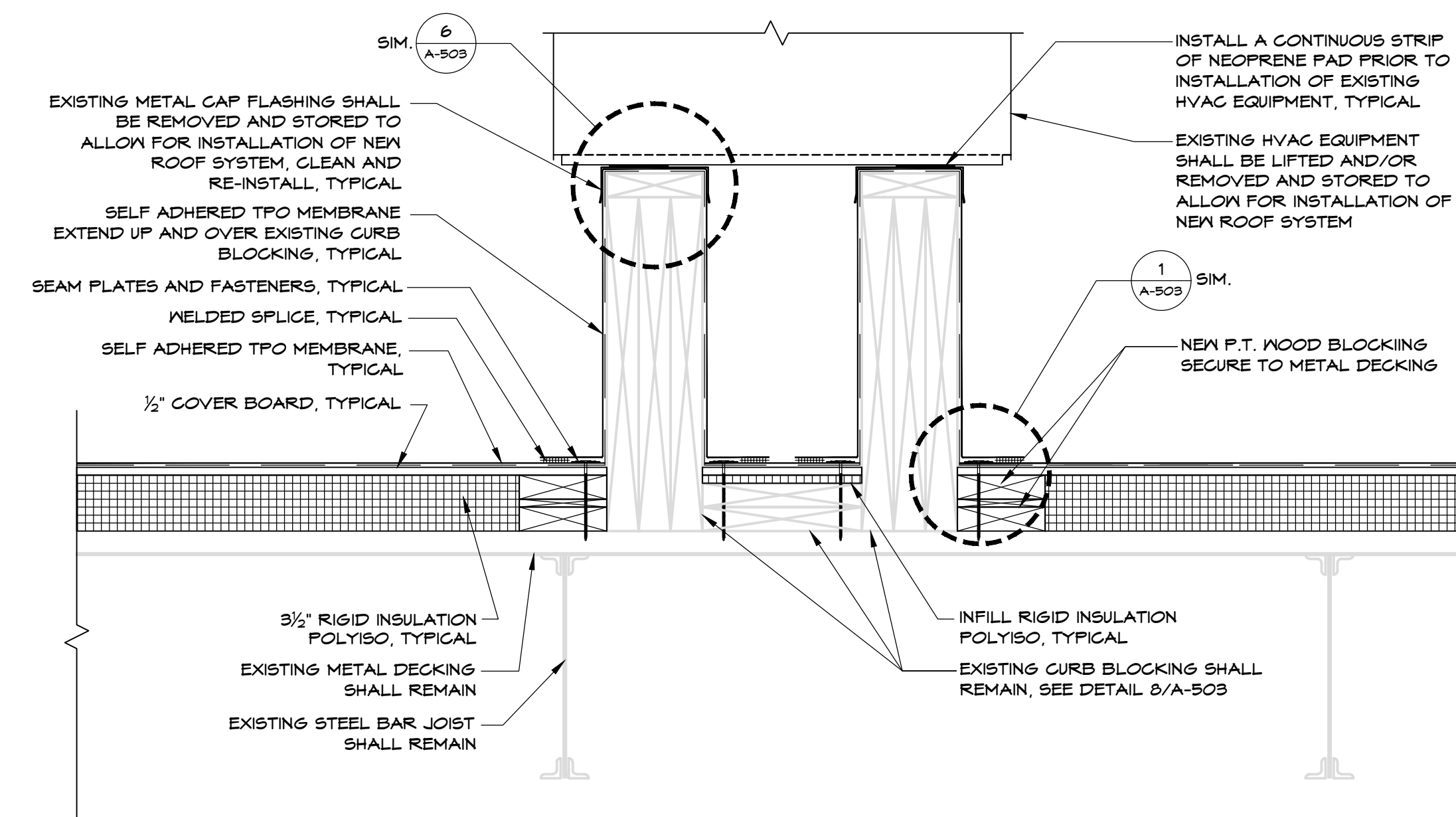
8 ROOF DETAIL @ HVAC UNIT
1 1/2" = 1'-0"



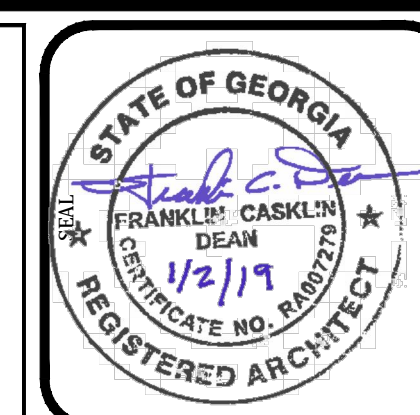
3 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



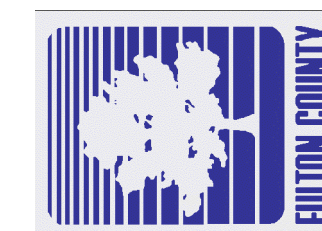
6 ROOF DETAIL @ SKYLIGHT
1 1/2" = 1'-0"



9 ROOF DETAIL @ HVAC UNIT
1 1/2" = 1'-0"



Williams-Russell and Johnson, Inc.
ENGINEERS - ARCHITECTS - PLANNERS
260 Broad Street NW, 26th Floor
Atlanta, Georgia 30303
Office: (404) 853-6800



FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF

EDUCATIONAL OFFICER REPLACEMENT

FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND
450 FULTON STREET, S.W.
ATLANTA, GEORGIA 30312

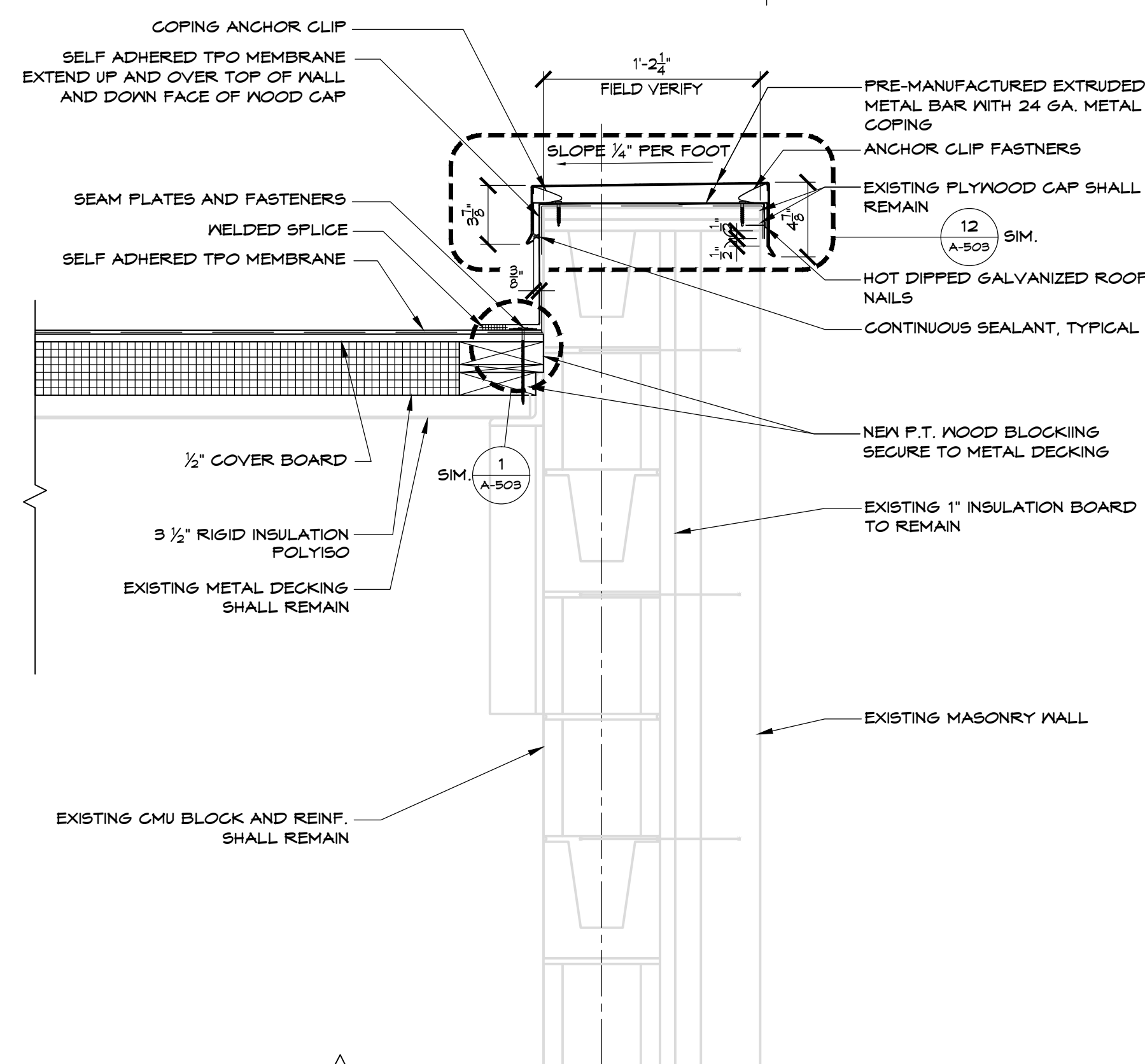
ASSET MANAGEMENT
FULTON COUNTY AIRPORT - 3977 AVIATION CIRCLE, 256

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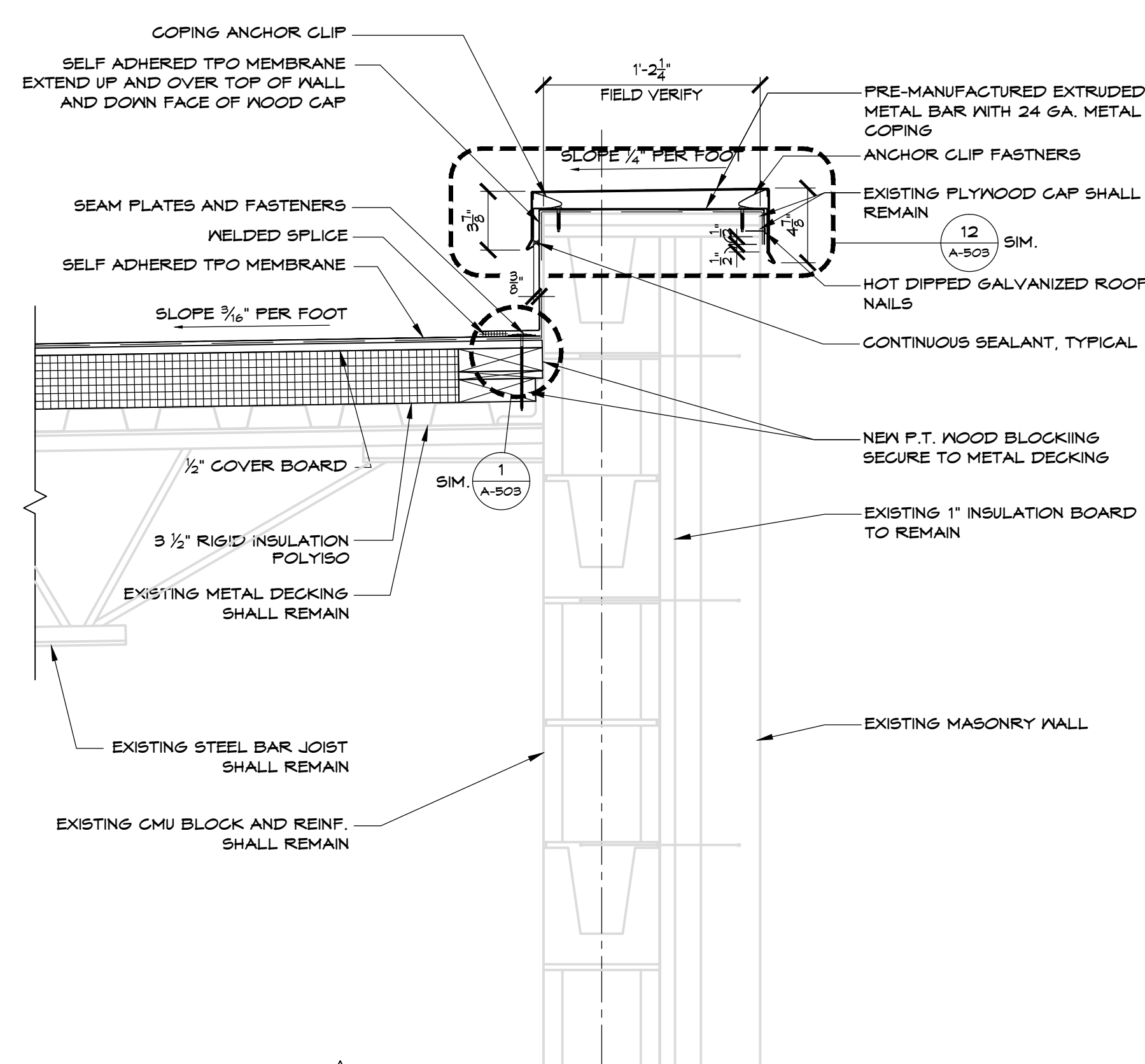
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DATE:	1/2/2019
DESIGNED:	CHECKED:
FD	-
DRAWN:	APPROVED:
SC	FD

ROOF DETAILS

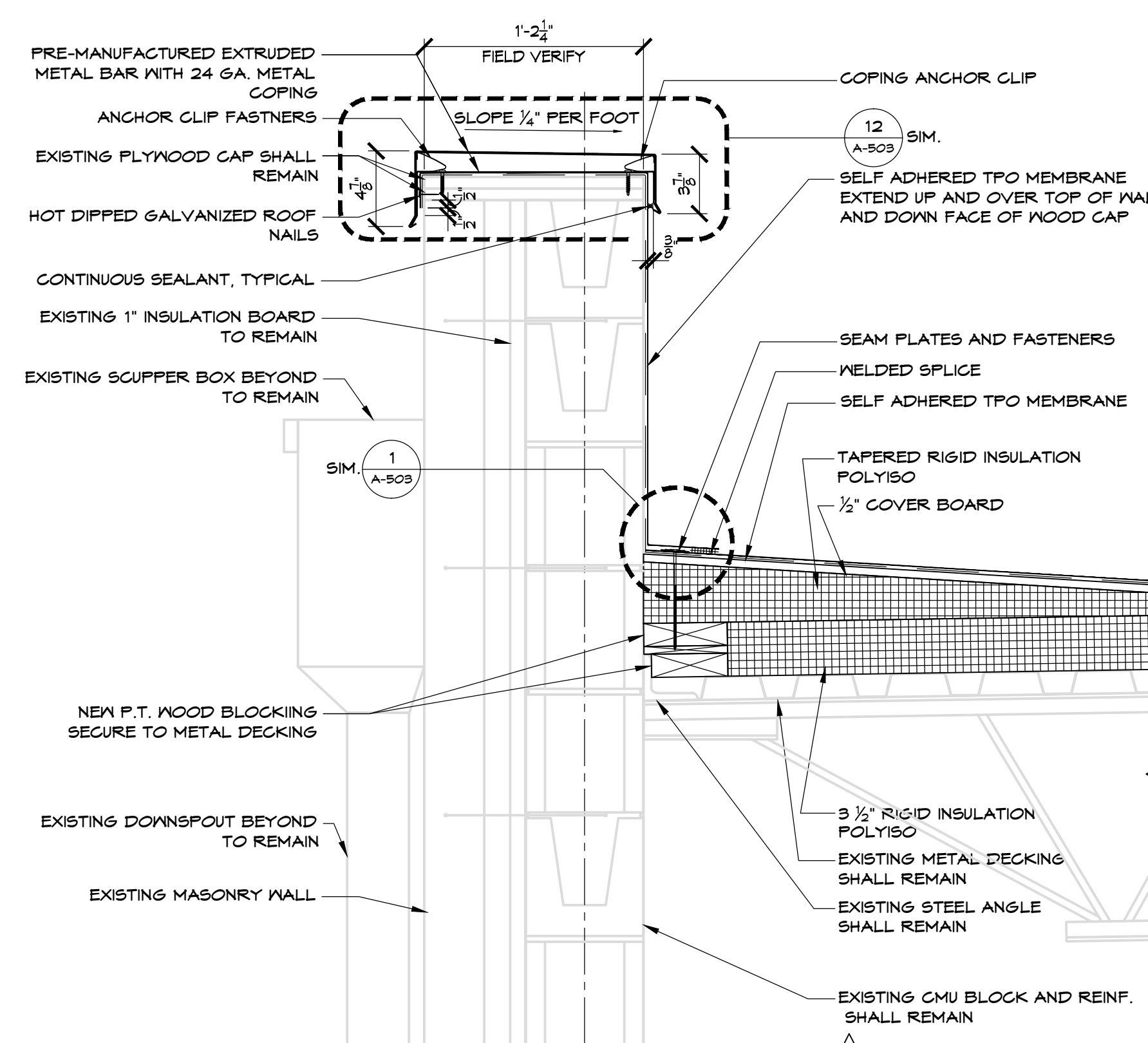
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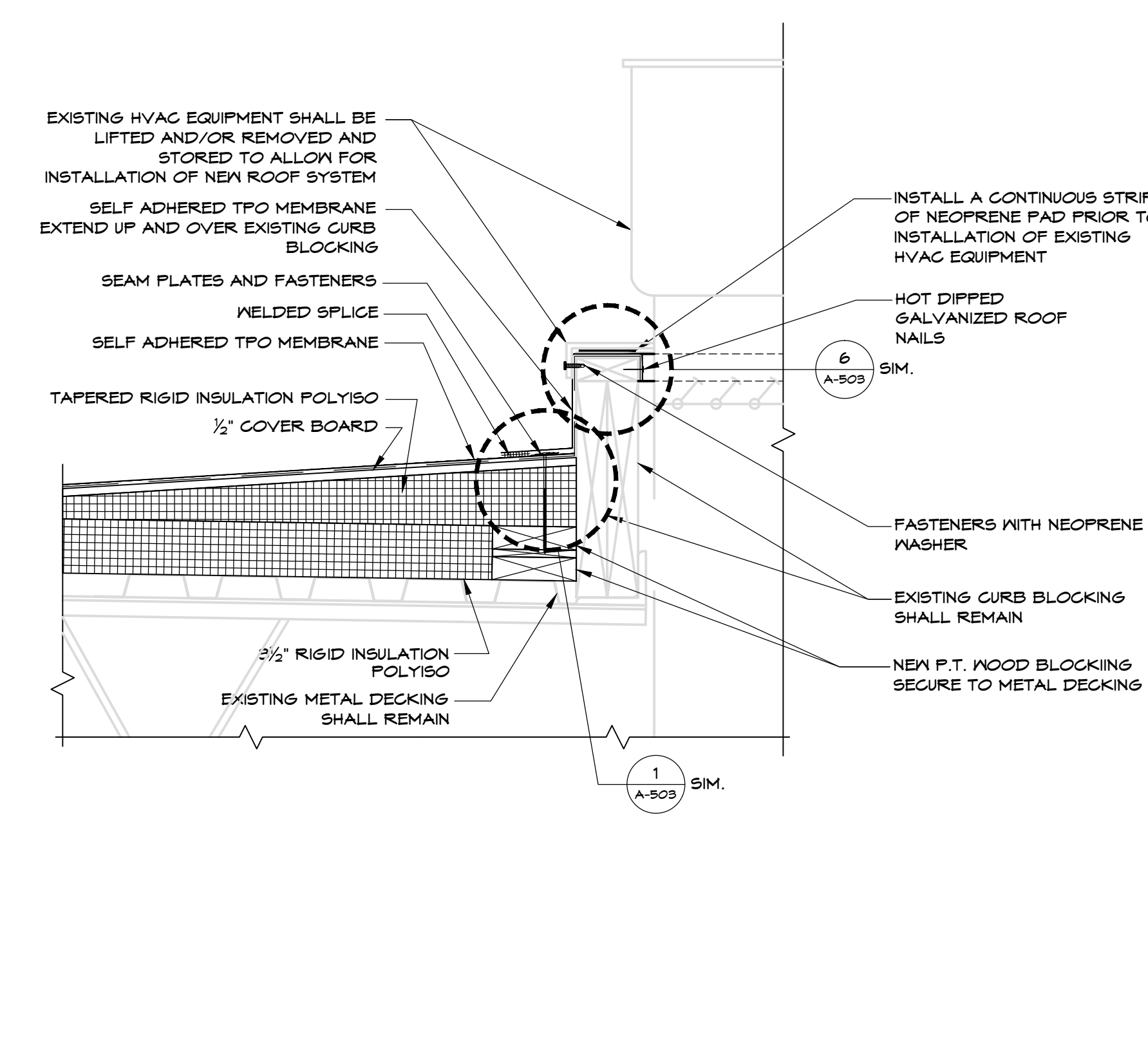
1 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



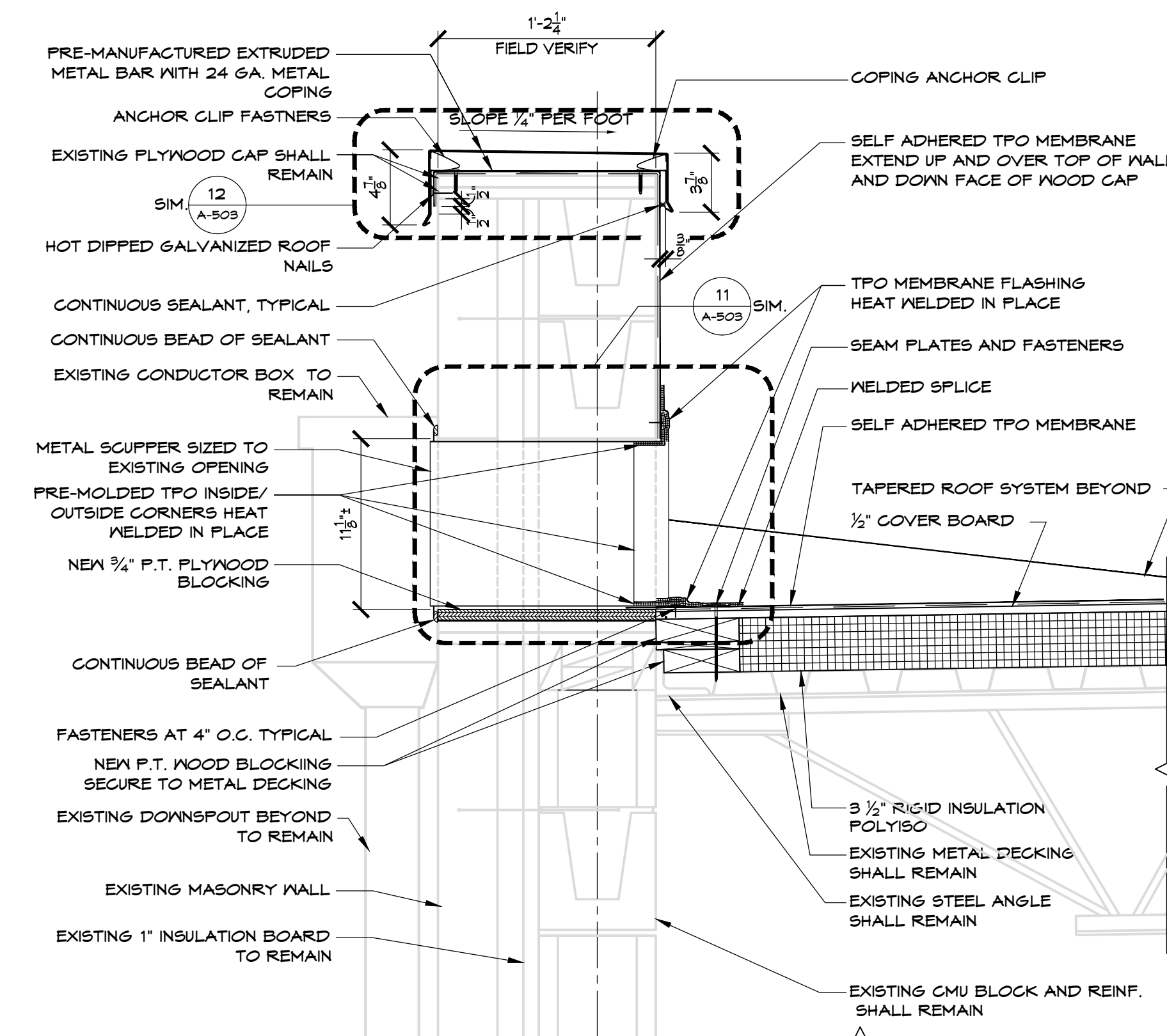
4 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



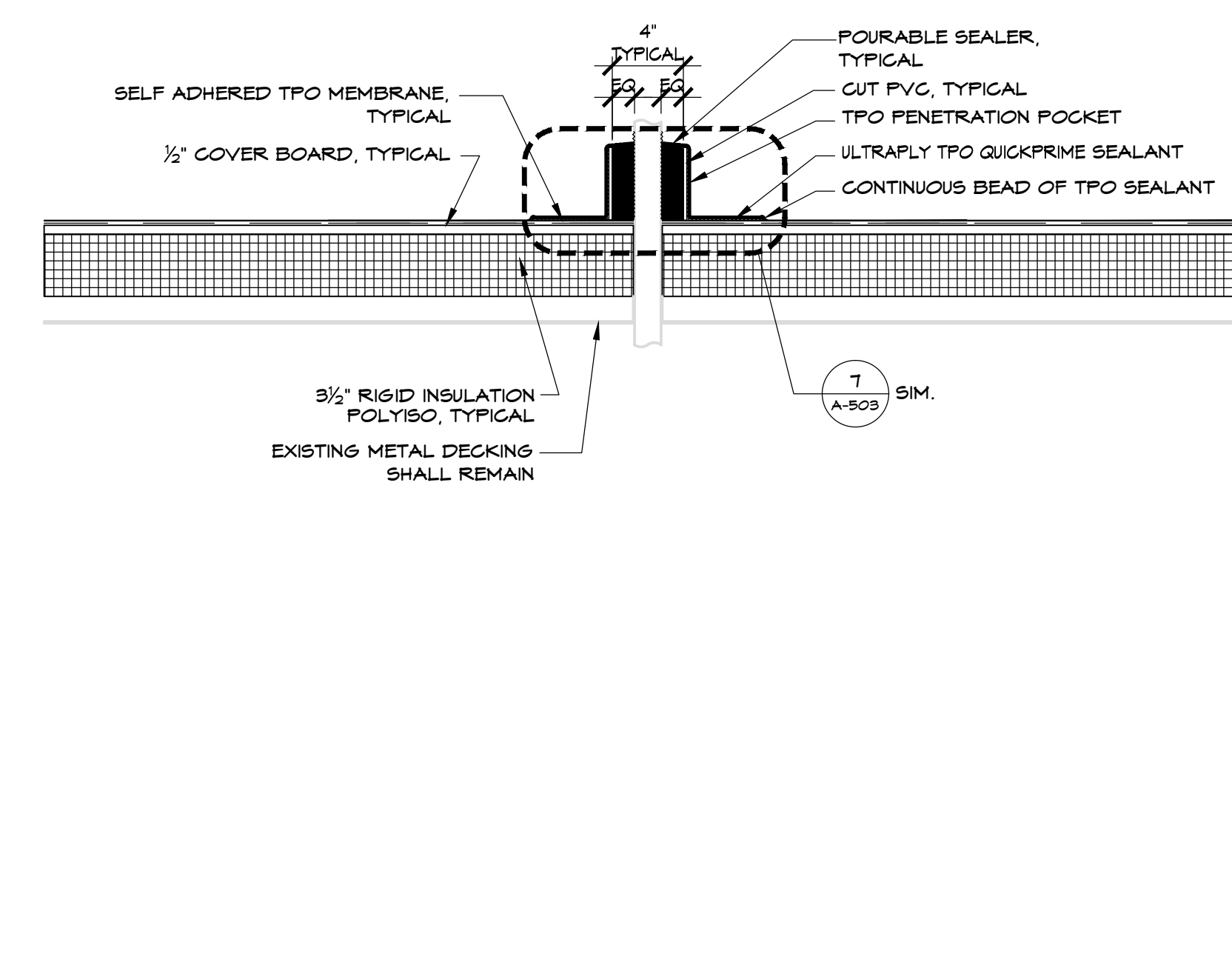
2 ROOF DETAIL @ PARAPET
1 1/2" = 1'-0"



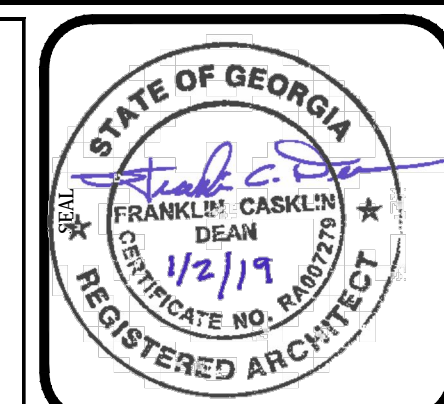
5 ROOF DETAIL @ FAN UNIT
1 1/2" = 1'-0"



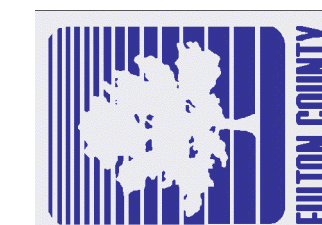
3 ROOF DETAIL @ SCUPPER
1 1/2" = 1'-0"



6 PITCH POCKET DETAIL



Williams-Russell and Johnson, Inc.
ENGINEERS - ARCHITECTS - PLANNERS
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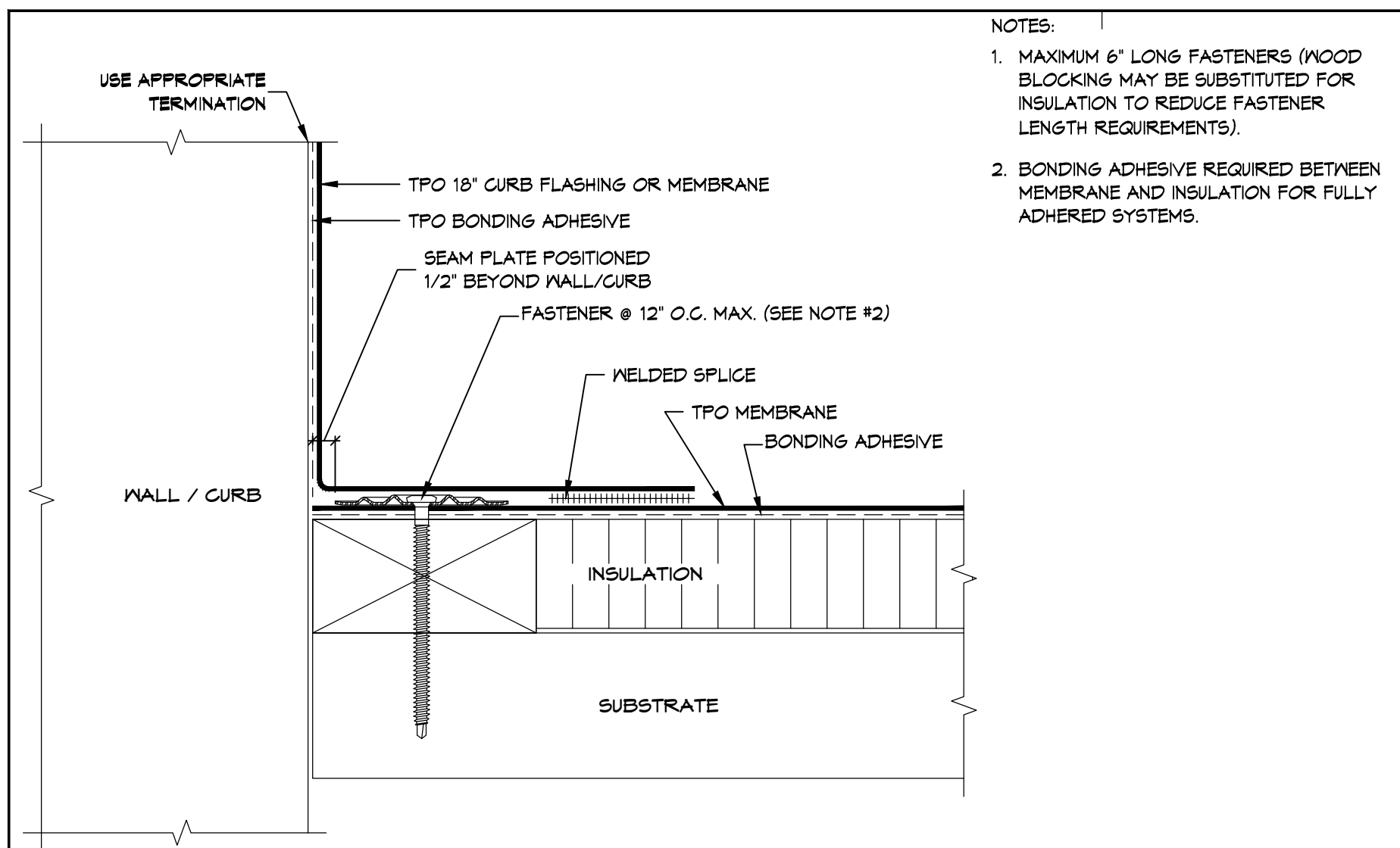
**FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF
REPLACEMENT**
150 PULFORD STREET, S.E.
ATLANTA, GEORGIA 30312

**FULTON COUNTY DEPARTMENT OF REAL-ESTATE AND
ASSET MANAGEMENT**
1000 W. PULFORD STREET, CIRCLE 256
ATLANTA, GEORGIA 30316

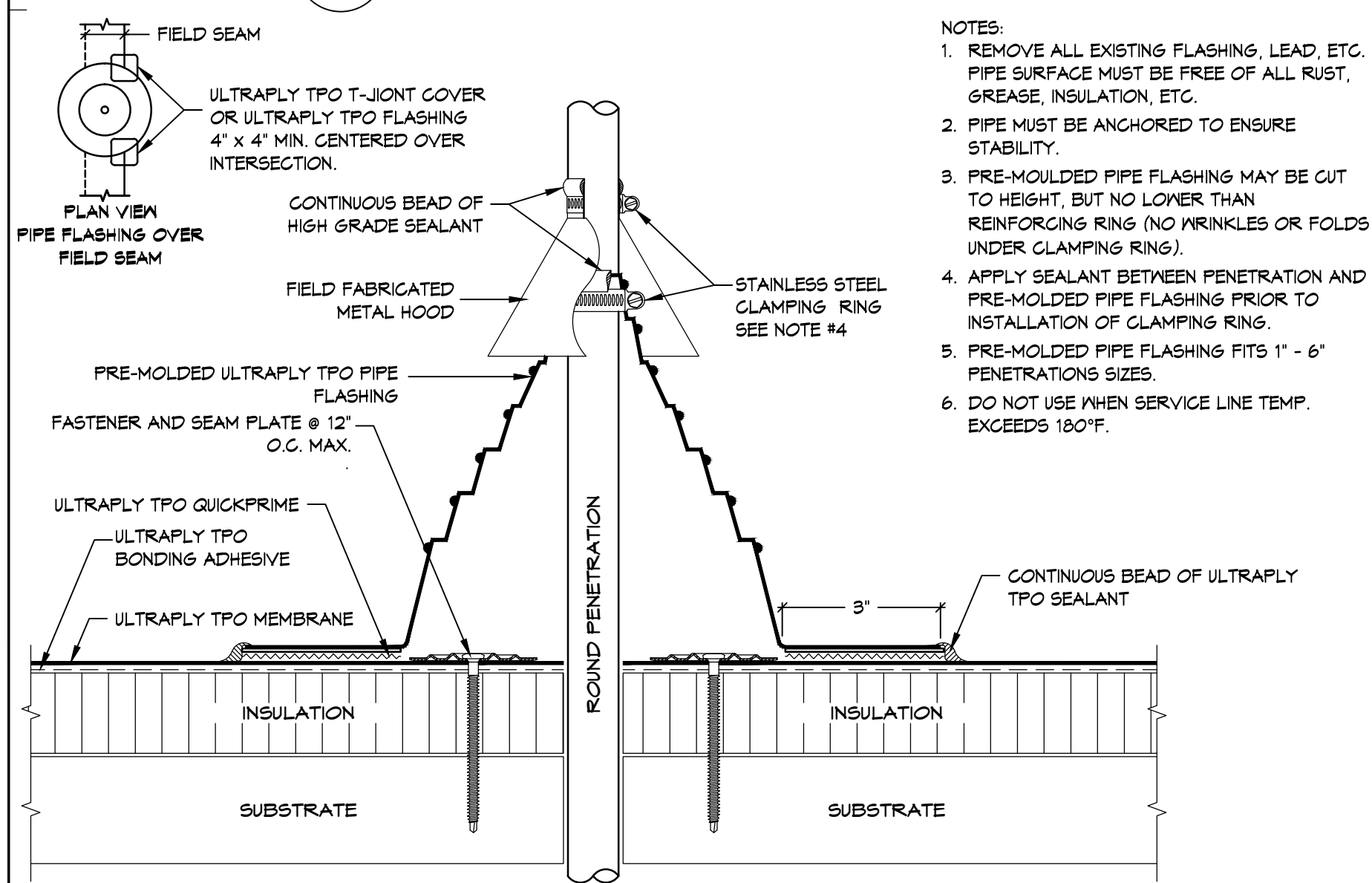
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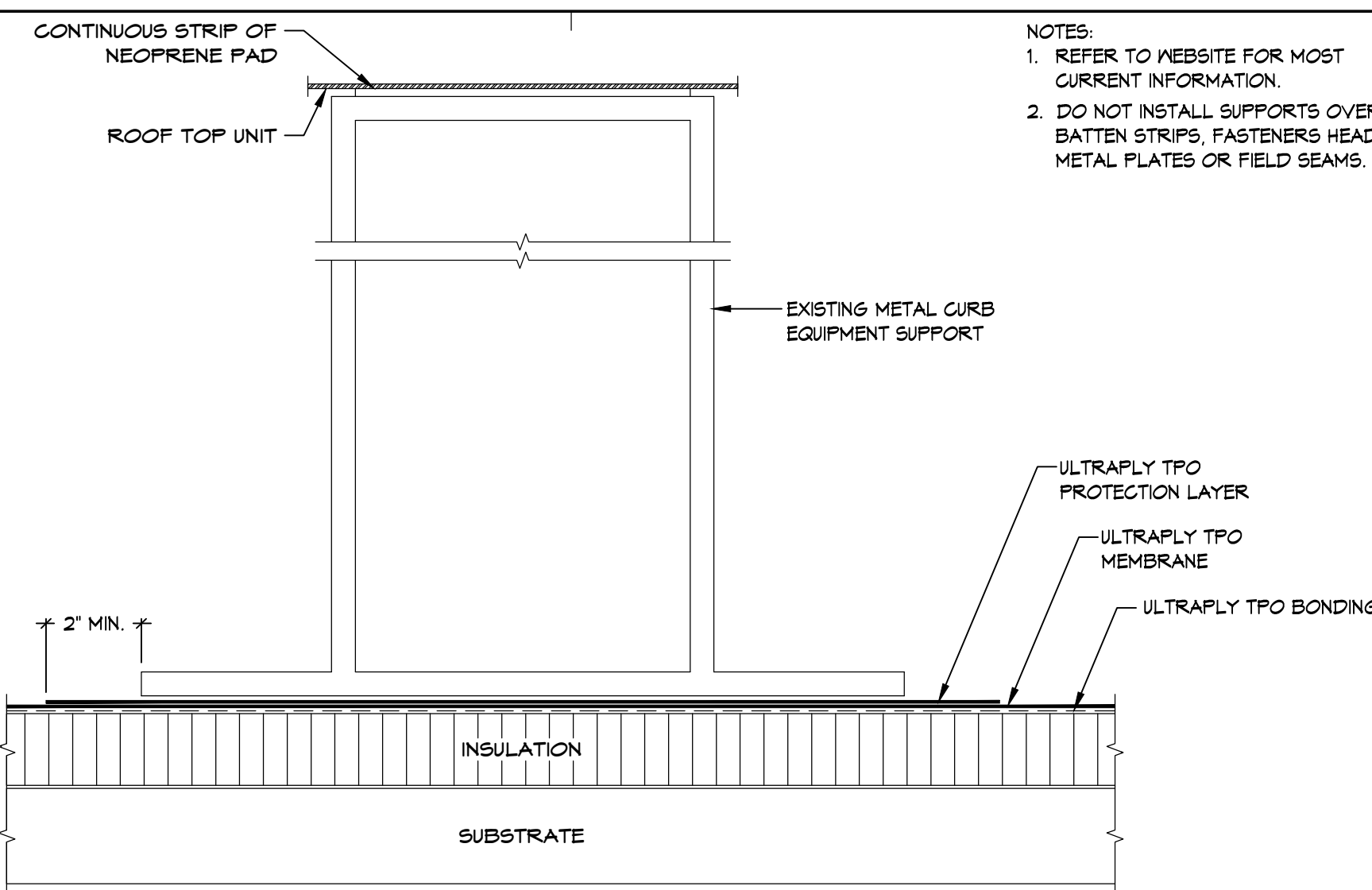
A-502



1 BASE TIE-IN DETAIL WITH SEAM PLATE TO DECK
N.T.S.



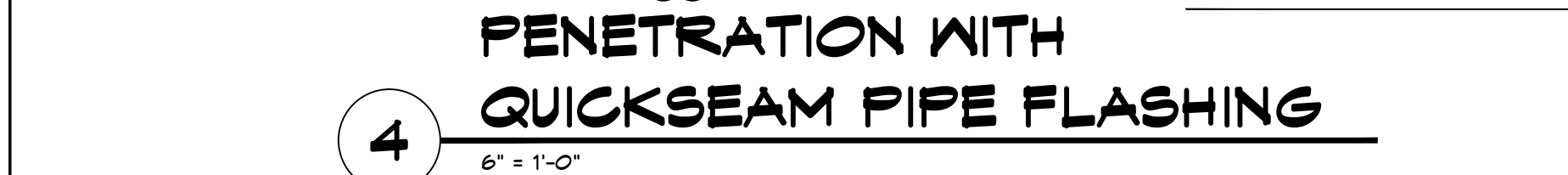
2 INTERMEDIATE WALL FLASHING ATTACHMENT DETAIL
6\"/>



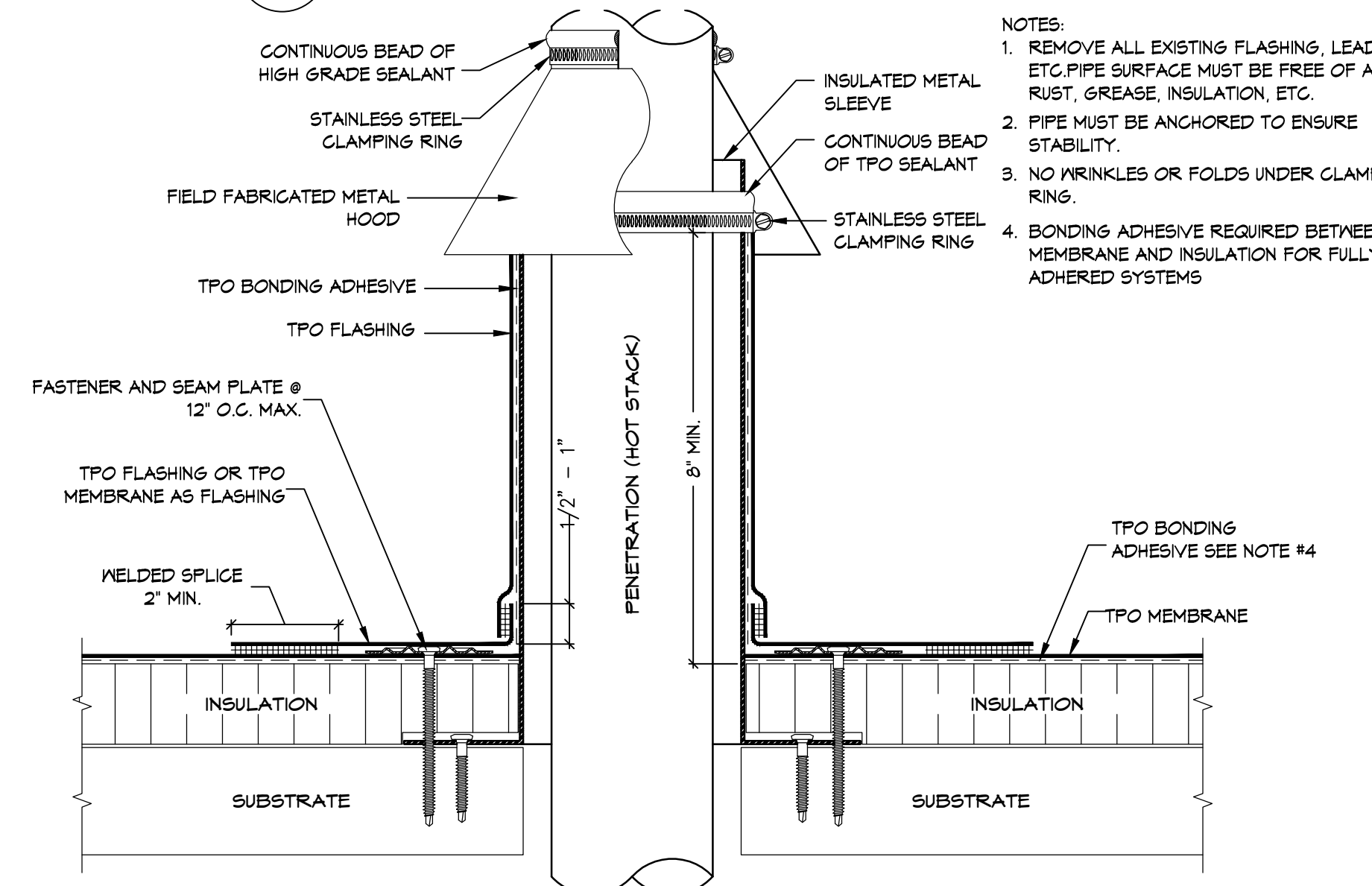
3 EQUIPMENT SUPPORT DETAIL
N.T.S.

NOTE:

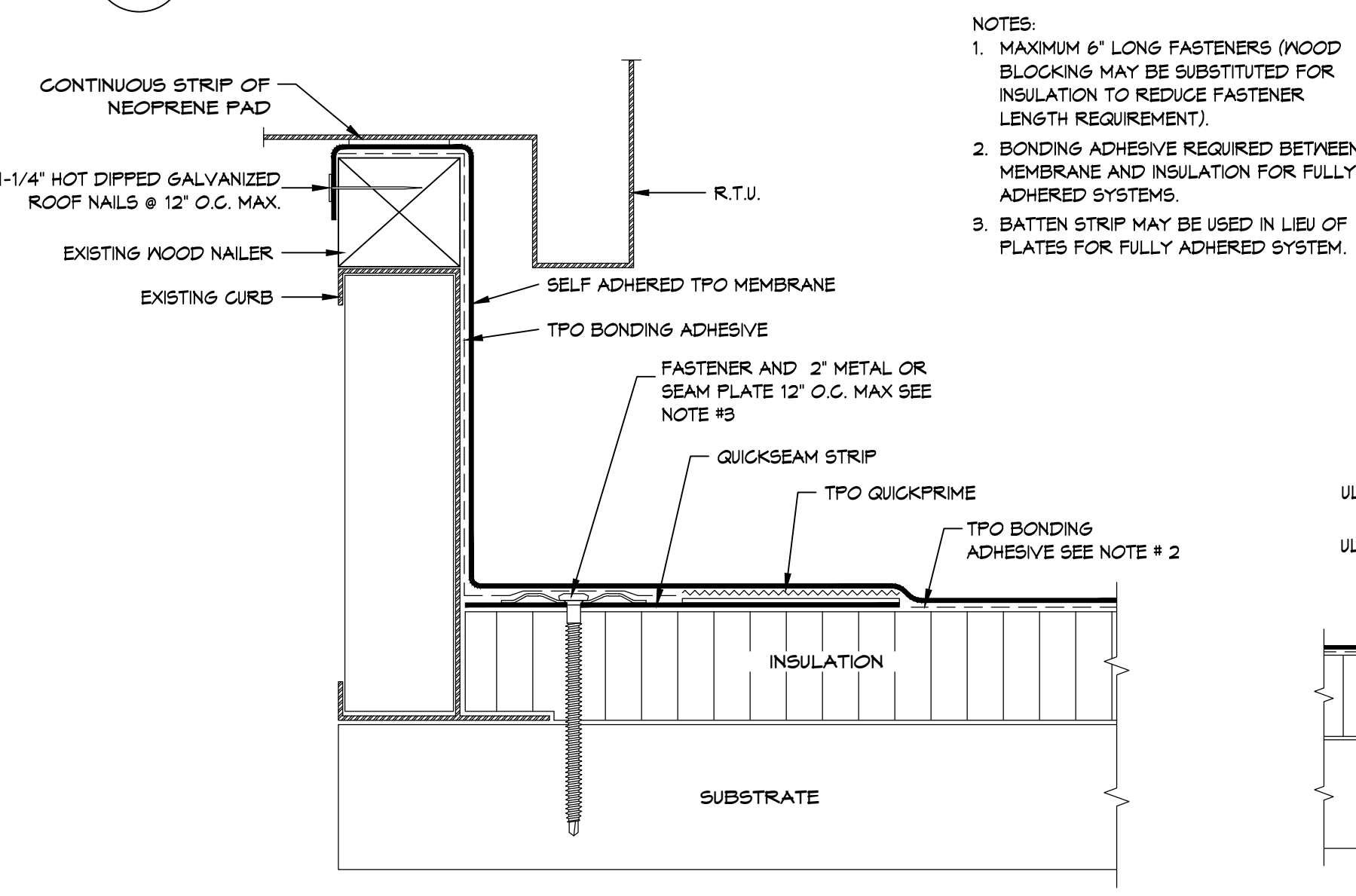
1. BASIS OF DESIGN IS FIRESTONE ROOFING.



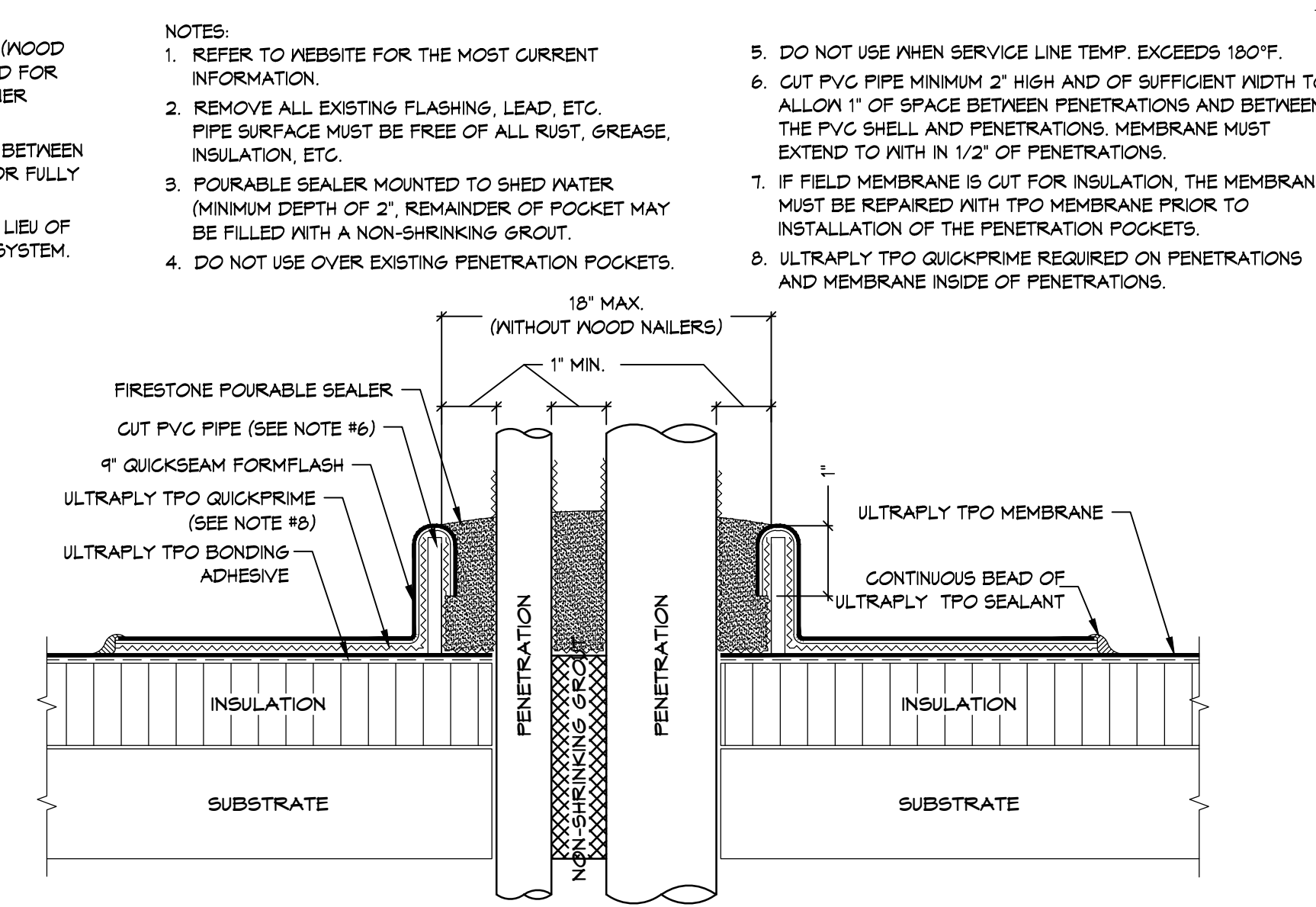
4 PENETRATION WITH QUICKSEAM PIPE FLASHING
6\"/>



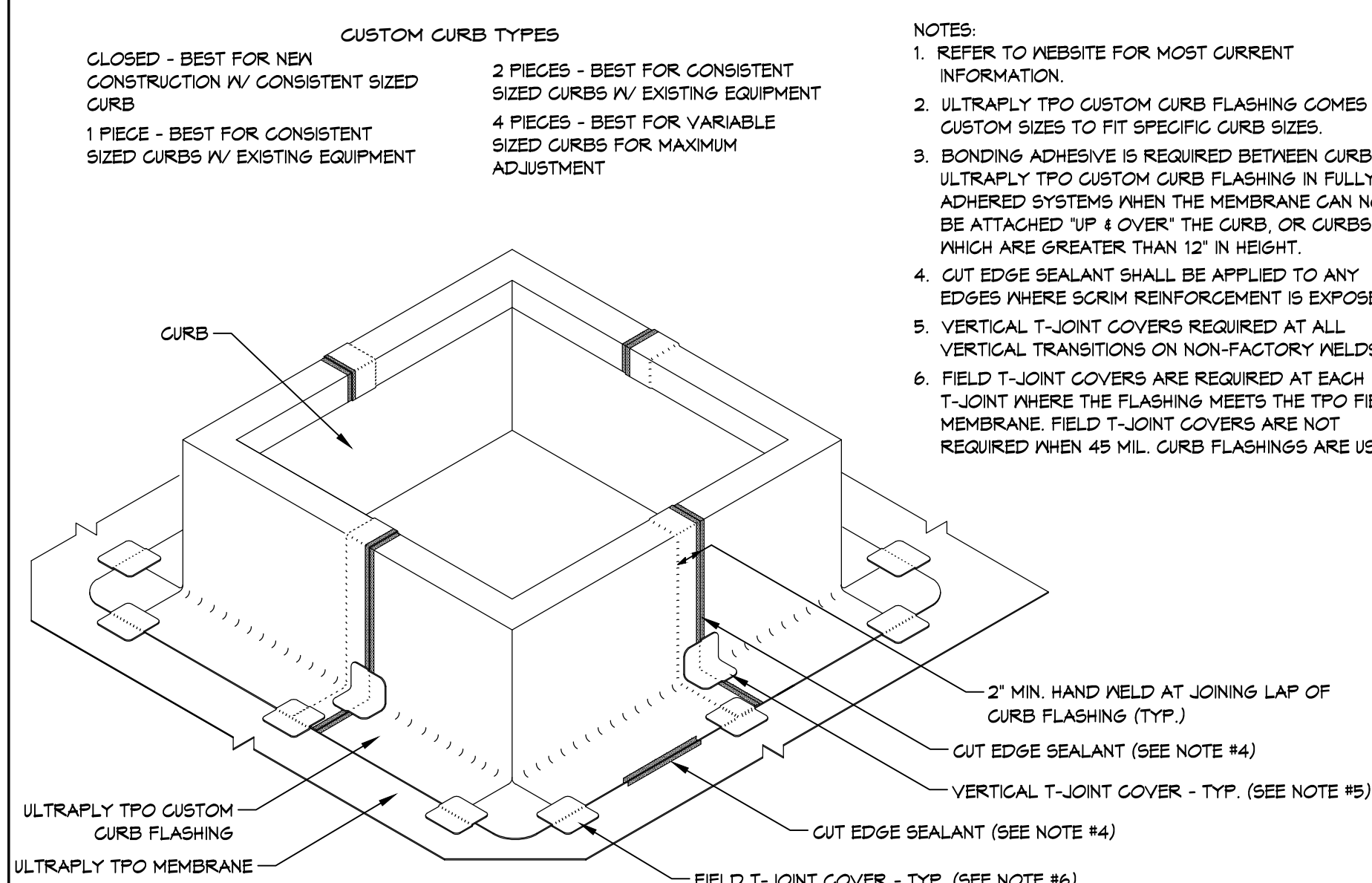
5 HOT STACK PIPE PENETRATION WITH TPO MEMBRANE
6\"/>



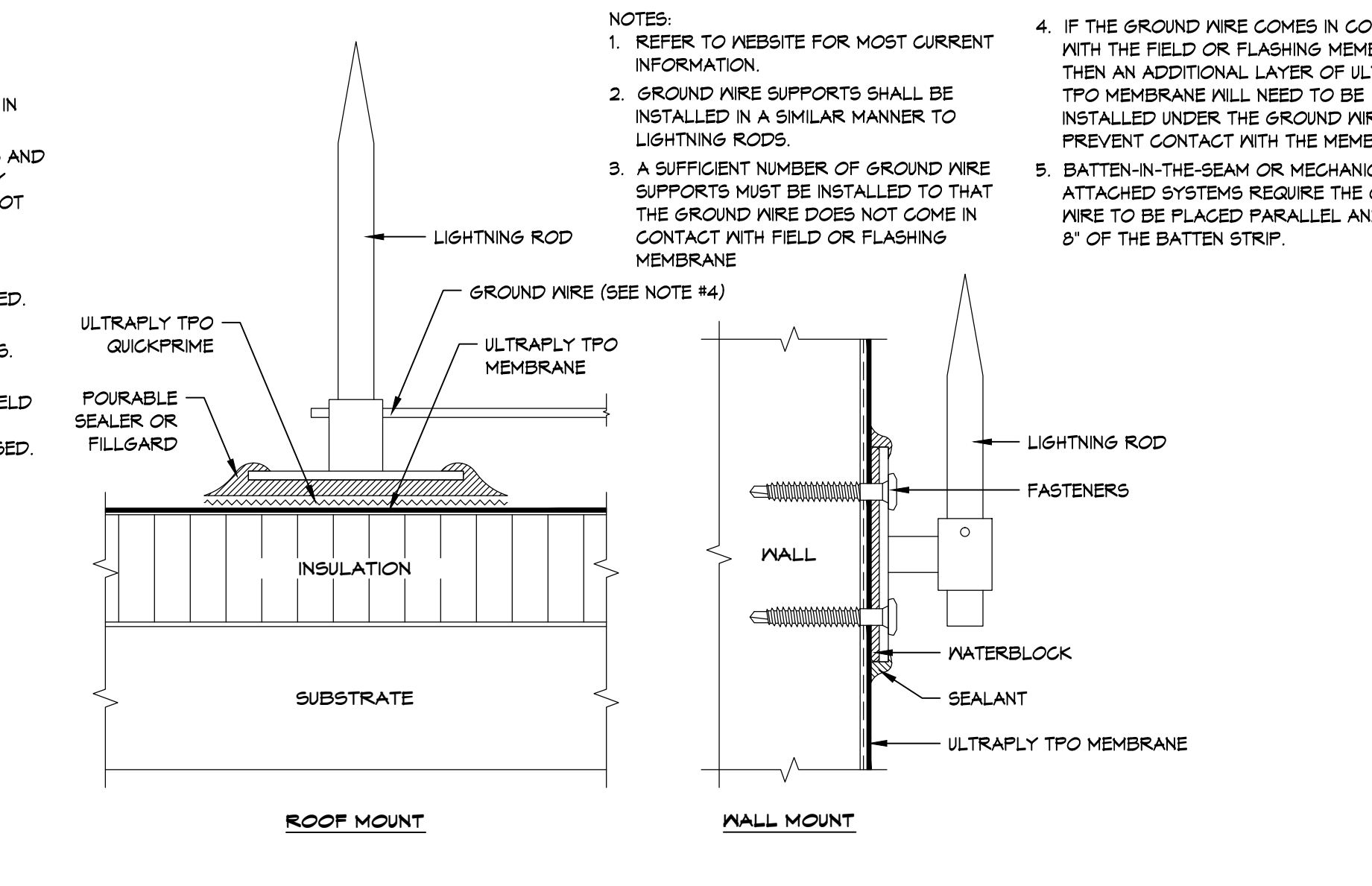
6 TERMINATION AT R.T.U.
N.T.S.



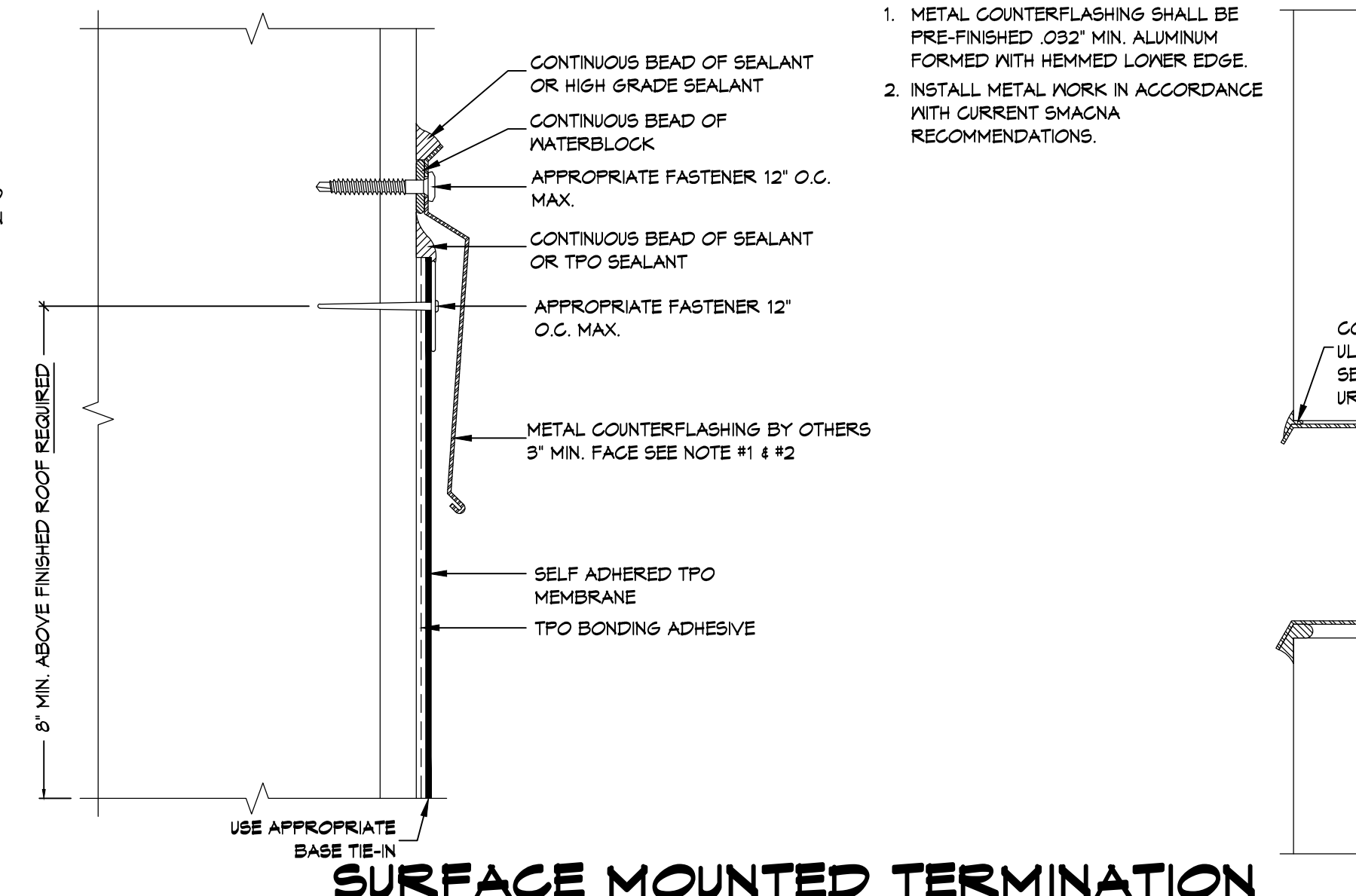
7 METAL PENETRATION POCKET
N.T.S.



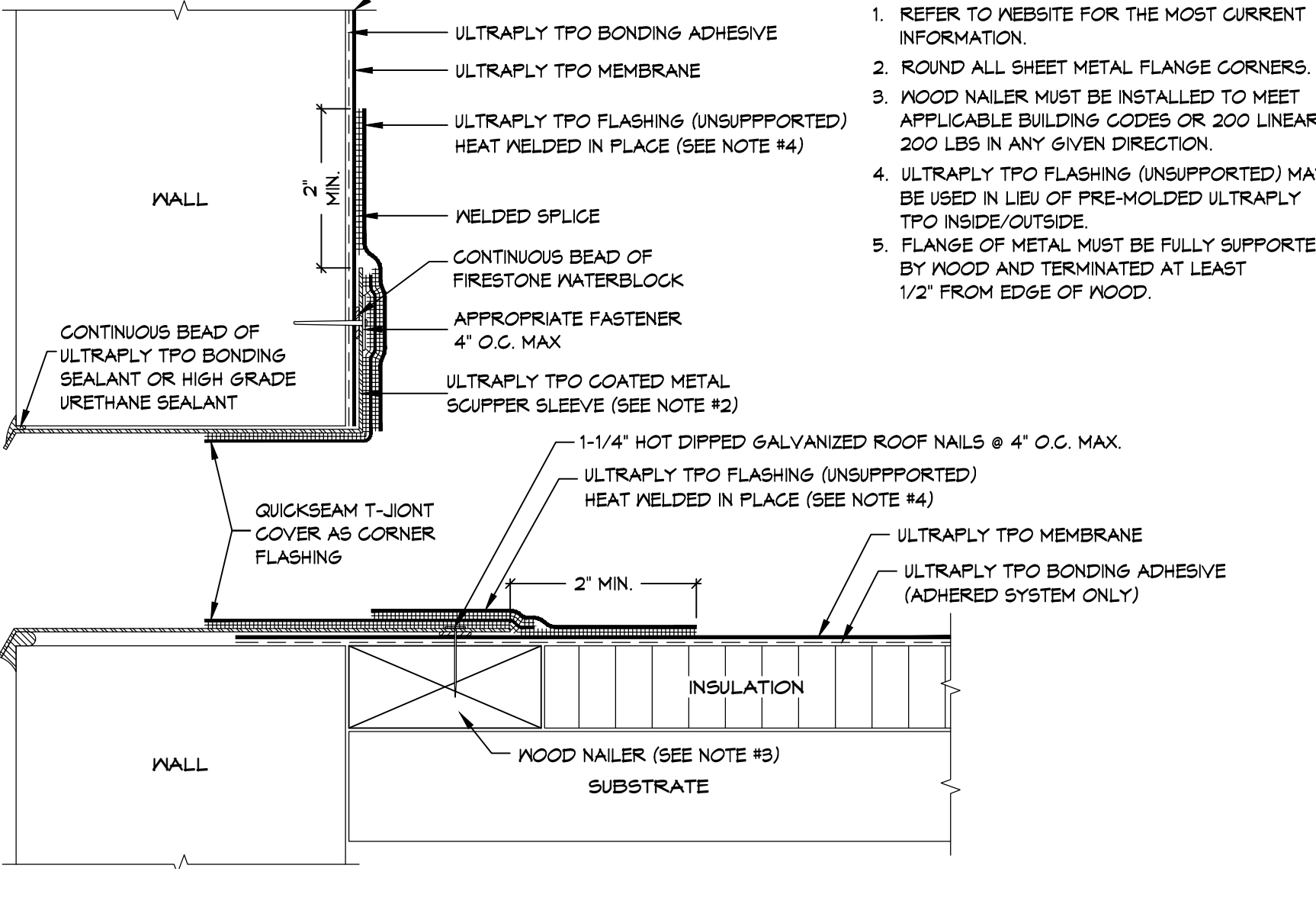
8 CUSTOM CURB FLASHING
N.T.S.



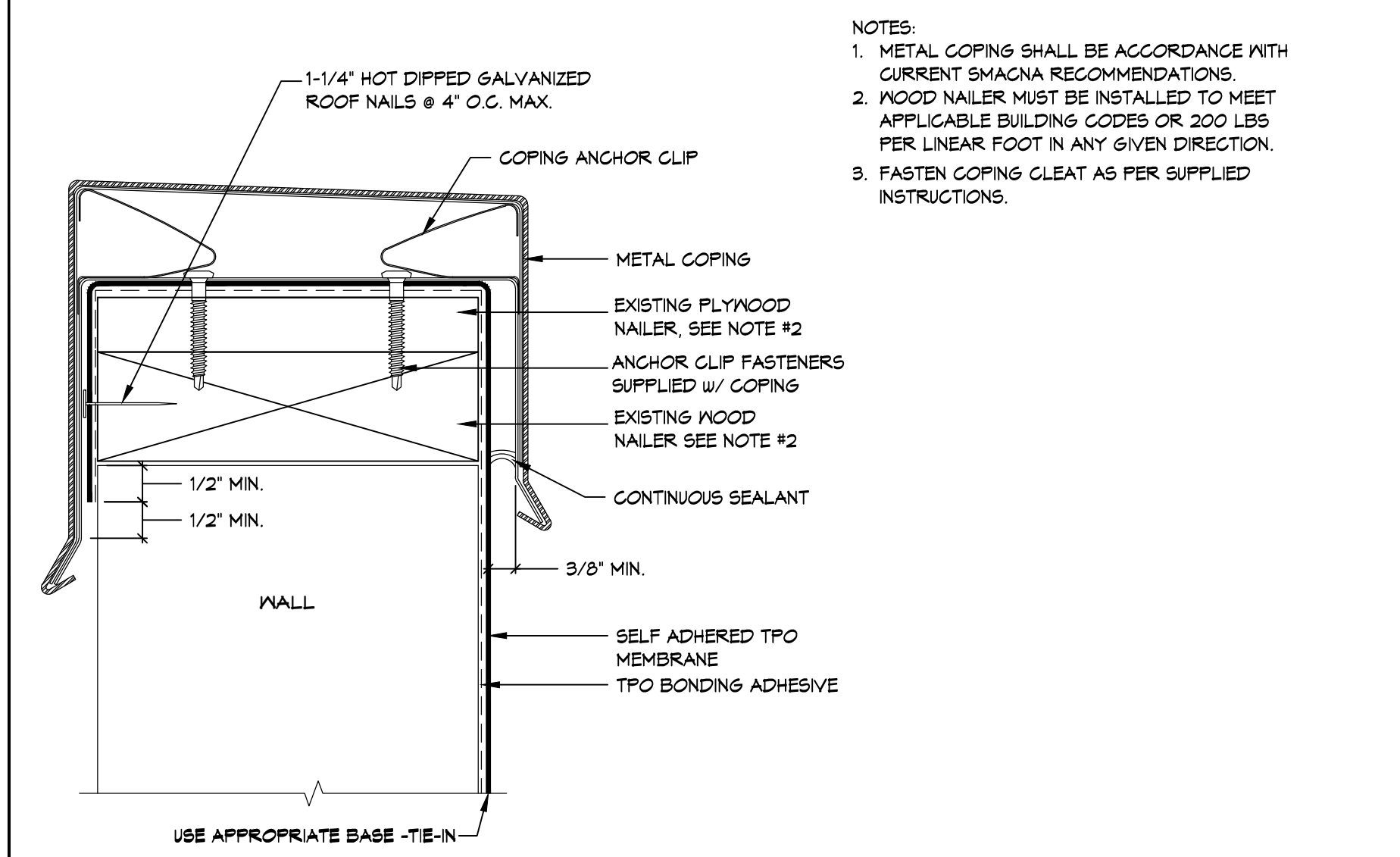
9 LIGHTNING ROD DETAIL
N.T.S.



10 SURFACE MOUNTED TERMINATION WITH COUNTERFLASHING DETAIL
N.T.S.



11 THRU-WALL SCUPPER DETAIL
N.T.S.



12 TERMINATION AT TOP OF PARAPET WALL
N.T.S.

STATE OF GEORGIA

FRANKLIN CASKIN

DEAN

12/1/17

REGISTERED ARCHITECT

Williams-Russell and Johnson, Inc.

280 Broad Street NW, 26th Floor

Atlanta, Georgia 30303

Office: (404) 853-8800

Fax: (404) 607-8890

FULTON COUNTY

FULTON COUNTY MEDICAL EXAMINER OFFICE ROOF REPLACEMENT

450 PICO STREET, S.W.

ATLANTA, GEORGIA 30312

FULTON COUNTY DEPARTMENT OF REAL ESTATE AND ASSET MANAGEMENT

ATLANTA, GEORGIA 30331

PROJECT NO. 3978

DATE 1/2/2019

DESIGNED BY FD

CHECKED BY FD

APPROVED BY SC

DATE 1/2/2019

FINAL SUBMITTAL

DATE 1/2/2019

DESCRIPTION

TYPICAL ROOF DETAILS

3978

A-503

EXHIBIT H

PURCHASING FORMS

STATE OF GEORGIA

COUNTY OF FULTON

FORM A: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT
AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services¹ under a contract with **[insert name of prime contractor]** SRS, Inc on behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program*,² in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

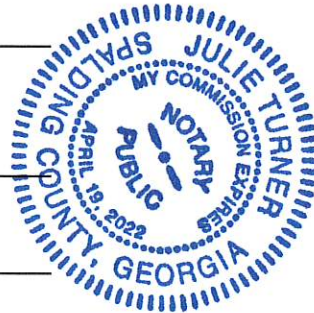
The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services to this contract with **Fulton County Government**, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the **Fulton County Government** at the time the subcontractor(s) is retained to perform such service.

507299
EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer of Agent
(Insert Contractor Name)

President
Title of Authorized Officer or Agent of Contractor

Jeffery Pilkenton
Printed Name of Authorized Officer or Agent



Sworn to and subscribed before me this 1 day of October, 2019

Notary Public: Julie Turner

County: Spalding

Commission Expires: 4.19.22

¹O.C.G.A. § 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed \$2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

²[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

19ITB300390K-JAJ
Roof Replacement @ JCC & ME

Section 6
Purchasing Forms & Instructions

STATE OF GEORGIA

COUNTY OF FULTON

FORM B: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR
AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services³ under a contract with [Insert name of prime contractor] SRS Construction behalf of Fulton County Government has registered with and is participating in a federal work authorization program*,⁴ in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

1100456

EEV/Basic Pilot Program* User Identification Number

BASE LIGHTNING PROTECTION

BY: Authorized Officer of Agent
(Insert Subcontractor Name)

ADAM SMITH - VP

Title of Authorized Officer or Agent of Subcontractor

ADAM SMITH

Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this 3RD day of OCTOBER, 2019

Notary Public:

Kristin Russell

County:

Cherokee

Commission Expires:

2/22/22



³O.C.G.A. § 13-10-90(4), as amended by Senate Bill 160, provides that "physical performance of services" means any performance of labor or services for a public employer (e.g., Fulton County) using a bidding process (e.g., ITB, RFQ, RFP, etc.) or contract wherein the labor or services exceed \$2,499.99, except for those individuals licensed pursuant to title 26 or Title 43 or by the State Bar of Georgia and is in good standing when such contract is for service to be rendered by such individual.

⁴[Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603].

19ITB300390K-JAJ
Roof Replacement @ JCC & ME

Section 6
Purchasing Forms & Instructions

**FORM C2: CONTRACTOR'S GEORGIA GENERAL CONTRACTOR'S LICENSE
CERTIFICATION**

Contractor's Name: SRS Inc

General Contractor's License Number: GCC0004845

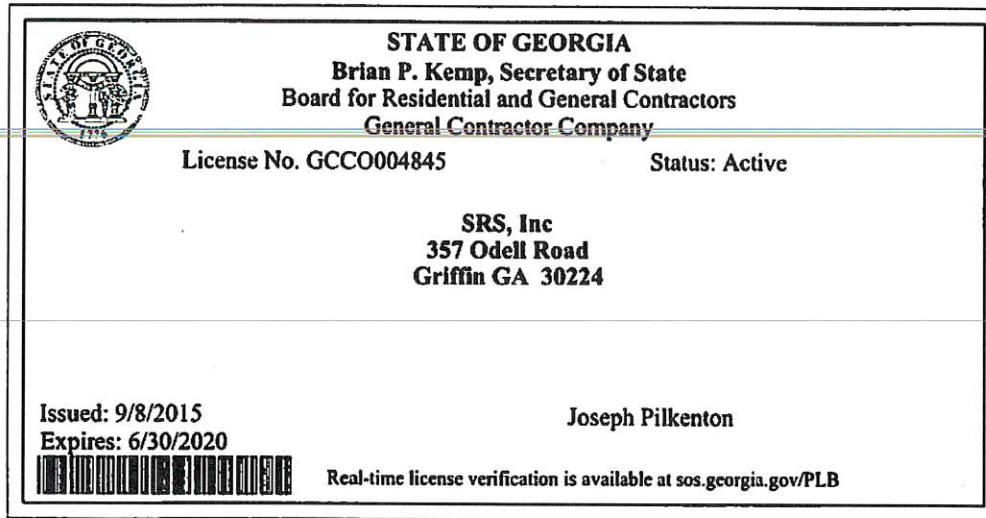
Expiration Date of License: 6-30-20

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: Jeff Peltz

Date: 10-1-19

(ATTACH COPY OF LICENSE)



Above is your license issued by the Georgia State Board of Residential and General Contractors. A pocket-sized license card is below. Please make note of the expiration date on your license. It is your responsibility to renew your license before it expires. License renewals may be completed prior to the expiration date via the Board's website or by obtaining a paper renewal from the Board office.

Reminder: It is your responsibility to keep your insurance current. Please provide the Board with a copy of your Certificate of Insurance each time your insurance is renewed. The Board does receive copies of cancellation notices which will affect the status of your license.

It is the licensee's responsibility to notify the board office immediately of any change of name or address. You may update your address online at the board's website at www.sos.ga.gov/plb/contractors/.

You may contact the Board at:

GEORGIA STATE BOARD FOR RESIDENTIAL & GENERAL CONTRACTORS
237 COLISEUM DRIVE, MACON, GEORGIA 31217-3858
478-207-2440 (phone) website: www.sos.ga.gov/plb/contractors/



FORM D: DISCLOSURE FORM AND QUESTIONNAIRE

1. Please provide the names and business addresses of each of the Offeror's firm's officers and directors.

For the purposes of this form, the term "Offeror" means an entity that responds to a solicitation for a County contract by either submitting a proposal in response to a Request for Proposal or a Request for Qualification or a Bid in response to an Invitation to Bid. Describe accurately, fully and completely, their respective relationships with said Offeror, including their ownership interests and their anticipated role in the management and operations of said Offeror.

President > Jeffery Pilkenton 357 Odell Rd, Griffin GA 30224 50% owner
Treasurer

U. President - Joseph Pilkenton 357 Odell Rd Griffin GA 30224 50% owner
Secretary

2. Please describe the general development of said Offeror's business during the past five (5) years, or such shorter period of time that said Offeror has been in business.

Multiple construction and roofing work in Georgia and surrounding states for Government Entities.

3. Please state whether any employee, agent or representative of said Offeror who is or will be directly involved in the subject project has or has ever: (i) directly or indirectly had a business relationship with Fulton County; (ii) directly or indirectly received revenues from Fulton County; or (iii) directly or indirectly receives revenues from the result of conducting business on Fulton County property or pursuant to any contract with Fulton County. Please describe in detail any such relationship.

N/A

LITIGATION DISCLOSURE:

Failure to fully and truthfully disclose the information required, may result in the disqualification of your bid or proposal from consideration or termination of the Contract, once awarded.

1. Please state whether any of the following events have occurred in the last five (5) years with respect to said Offeror. If any answer is yes, explain fully the following:

- (a) whether a petition under the federal bankruptcy laws or state insolvency laws was filed by or against said Offeror, or a receiver fiscal agent or similar officer was appointed by a court for the business or property of said Offeror;

Circle One: YES

NO

- (b) whether Offeror was subject of any order, judgment, or decree not subsequently reversed, suspended or vacated by any court of competent jurisdiction, permanently enjoining said Offeror from engaging in any type of business practice, or otherwise eliminating any type of business practice; and

Circle One: YES

NO

- (c) whether said Offeror's business was the subject of any civil or criminal proceeding in which there was a final adjudication adverse to said or Offeror, which directly arose from activities conducted by the business unit or corporate division of said Offeror which submitted a bid or proposal for the subject project. If so please explain.

Circle One: YES

NO

2. Have you or any member of your firm or team to be assigned to this engagement ever been indicted or convicted of a criminal offense within the last five (5) years?

Circle One: YES

NO

3. Have you or any member of your firm or team been terminated (for cause or otherwise) from any work being performed for Fulton County or any other Federal, State or Local Government?

Circle One: YES

NO

4. Have you or any member of your firm or team been involved in any claim or litigation adverse to Fulton County or any other federal, state or local government, or private entity during the last three (3) years?

Circle One: YES

NO

5. Has any offeror, member of offeror's team, or officer of any of them (with respect to any matter involving the business practices or activities of his or her employer), been notified within the five (5) years preceding the date of this offer that any of them are the target of a criminal investigation, grand jury investigation, or civil enforcement proceeding?

Circle One:

YES

NO

If you have answered "YES" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, the name of the court and the file or reference number of the case, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your proposal.

NOTE: If any response to any question set forth in this questionnaire has been disclosed in any other document, a response may be made by attaching a copy of such disclosure. (For example, said Offeror's most recent filings with the Securities and Exchange Commission ("SEC") may be provided if they are responsive to certain items within the questionnaire.) However, for purposes of clarity, Offeror should correlate its responses with the exhibits by identifying the exhibit and its relevant text.

Disclosures must specifically address, completely respond and comply with all information requested and fully answer all questions requested by Fulton County. Such disclosure must be submitted at the time of the bid or proposal submission and included as a part of the bid/proposal submitted for this project. Disclosure is required for Offerors, joint venture partners and first-tier subcontractors.

Failure to provide required disclosure, submit officially signed and notarized documents or respond to any and all information requested/required by Fulton County can result in the bid/proposal declared as non-responsive. This document must be completed and included as a part of the bid/proposal package along with other required documents.

[SIGNATURES ON NEXT PAGE]

19ITB300390K-JAJ
Roof Replacement @ JCC & ME

Section 6
Purchasing Forms & Instructions

Under penalty of perjury, I declare that I have examined this questionnaire and all attachments hereto, if applicable, to the best of my knowledge and belief, and all statements contained hereto are true, correct, and complete.

On this 1 day of October, 2019

Jeffery Pilkenton 10-1-19
(Legal Name of Proponent) (Date)

Jeff Pilkenton
(Signature of Authorized Representative) (Date)

President
(Title)

Sworn to and subscribed before me,

This 1 day of October, 2019

Julie Turner
(Notary Public)

Commission Expires 4-19-22
(Date)

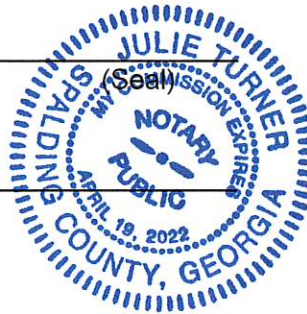


EXHIBIT I

OFFICE OF CONTRACT COMPLIANCE

FORMS

EXHIBIT A – PROMISE OF NON-DISCRIMINATION

"Know all persons by these presents, that I/We (Jeffery Pilkenton),
Name

President

Title

SRS, Inc

Firm Name

Hereinafter "Company", in consideration of the privilege to bid on or obtain contracts funded, in whole or in part, by Fulton County, hereby consent, covenant and agree as follows:

- 1) No person shall be excluded from participation in, denied the benefit of, or otherwise discriminated against on the basis of race, color, national origin or gender in connection with any bid submitted to Fulton County for the performance of any resulting there from,
- 2) That it is and shall be the policy of this Company to provide equal opportunity to all businesses seeking to contract or otherwise interested in contracting with this Company without regard to the race, color, gender or national origin of the ownership of this business,
- 3) That the promises of non-discrimination as made and set forth herein shall be continuing in nature and shall remain in full force and effect without interruption,
- 4) That the promise of non-discrimination as made and set forth herein shall be made a part of, and incorporated by reference into, any contract or portion thereof which this Company may hereafter obtain,
- 5) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth herein shall constitute a material breach of contract entitling the Board to declare the contract in default and to exercise any and all applicable rights and remedies, including but not limited to cancellation of the contract, termination of the contract, suspension and debarment from future contracting opportunities, and withholding and/or forfeiture of compensation due and owing on a contract; and
- 6) That the bidder shall provide such information as may be required by the Director of Purchasing & Contract Compliance pursuant to Section 102.436 of the Fulton County Non-Discrimination in Purchasing and Contracting Policy.

NAME: Jeffery Pilkenton TITLE: President

SIGNATURE: Jeffery Pilkenton

ADDRESS: 357 Odell Rd.

Griffin GA 30224

PHONE NUMBER: 770 228 2658 EMAIL: Jeffery @ SRS. Construction

EXHIBIT C - SCHEDULE OF INTENDED SUBCONTRACTOR UTILIZATION

If the bidder/proposer intends to subcontract any portion of this scope of work/service(s), this form **must** be completed and **submitted with the bid/proposal**. All prime bidders/proposers **must** submit Letter(s) of Intent (Exhibit D) for all subcontractors who will be utilized under the scope of work/services prior to contract execution.

Prime Bidder/Proposer Company Name SRS, Inc

ITB/RFP Name & Number: 18ITB114375K-JAT Roof Replacement @ JJC & AE Building

1. My firm, as Prime Bidder/Proposer on this scope of work/service(s) is **NOT** ☒ a minority ☐ African American (AABE) ☐ Asian American (ABE); ☐ Hispanic American (HBE); ☐ Native American (NABE); ☐ White Female American (WFBE); ****If yes, please attach copy of recent certification.** (Check the appropriate box(es)

Indicate below the portion of work, including, percentage of bid/proposal amount that your firm will carry out directly:
\$ _____ or 98 %

2. This information below must be completed and submitted with the bid/proposal if a **joint** **venture (JV)** approach is to be undertaken. Please provide JV breakdown information below and attach a copy of the executed Joint Venture Agreement.

JV Partner(s) information:

Business Name		Business Name		Business Name	
(a.)	(b.)	(c.)			
% of JV	% of JV	% of JV			
Ethnicity	Ethnicity	Ethnicity			
Gender	Gender	Gender			
Phone#	Phone#	Phone#			

3. Sub-Contractors (including suppliers) to be utilized in the performance of this scope of work/service(s), if awarded, are:

SUBCONTRACTOR NAME: Base Lightning Protection
 ADDRESS: 2361 Teanah Rd, GA 30115
Holly Springs, NC
 EMAIL ADDRESS: Adam@base.lps.com PHONE: 404-895-6543
 CONTACT PERSON: Adam Smith
 ETHNIC GROUP*: _____ COUNTY CERTIFIED** _____
 WORK TO BE PERFORMED: Lightning Protection
 DOLLAR VALUE OF WORK: \$ 17,200 PERCENTAGE VALUE: 2 %

SUBCONTRACTOR NAME: _____
ADDRESS: _____

EMAIL ADDRESS: _____ PHONE: _____
CONTACT PERSON: _____
ETHNIC GROUP*: _____ COUNTY CERTIFIED** _____
WORK TO BE PERFORMED: _____
DOLLAR VALUE OF WORK: \$ _____ PERCENTAGE VALUE: _____ %

SUBCONTRACTOR NAME: _____
ADDRESS: _____

EMAIL ADDRESS: _____ PHONE: _____
CONTACT PERSON: _____
ETHNIC GROUP*: _____ COUNTY CERTIFIED** _____
WORK TO BE PERFORMED: _____
DOLLAR VALUE OF WORK: \$ _____ PERCENTAGE VALUE: _____ %

SUBCONTRACTOR NAME: _____
ADDRESS: _____

EMAIL ADDRESS: _____ PHONE: _____
CONTACT PERSON: _____
ETHNIC GROUP*: _____ COUNTY CERTIFIED** _____
WORK TO BE PERFORMED: _____
DOLLAR VALUE OF WORK: \$ _____ PERCENTAGE VALUE: _____ %

SUBCONTRACTOR NAME: _____
ADDRESS: _____

EMAIL ADDRESS: _____ PHONE: _____
CONTACT PERSON: _____
ETHNIC GROUP*: _____ COUNTY CERTIFIED** _____
WORK TO BE PERFORMED: _____
DOLLAR VALUE OF WORK: \$ _____ PERCENTAGE VALUE: _____ %


*Ethnic Groups: African American (AABE); Asian American (ABE); Hispanic American (HBE); Native American (NABE); White Female

American (WFBE); **If yes, please attach copy of recent certification.

Total Dollar Value of Subcontractor Agreements: (\$)	17,200.00
--	-----------

Total Percentage of Subcontractor Value: (%)	2
--	---

CERTIFICATION: The undersigned certifies that he/she has read, understands and agrees to be bound by the Bid/Proposer provisions, including the accompanying Exhibits and other terms and conditions regarding sub-contractor utilization. The undersigned further certifies that he/she is legally authorized by the Bidder/Proposer to make the statement and representation in this Exhibit and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned understands and agrees that if any of the statements and representations are made by the Bidder/Proposer knowing them to be false, or if there is a failure of the intentions, objectives and commitments set forth herein without prior approval of the County, then in any such event the Contractor's acts or failure to act, as the case may be, shall constitute a material breach of the contract, entitling the County to terminate the Contract for default. The right to so terminate shall be in addition to, and in lieu of, any other rights and remedies the County may have for other defaults under the contract.

Signature:  Title: President

Business or Corporate Name: SRS, Inc

Address: 357 Odell Rd
Griffin GA 30204

Telephone: (770) 228 2658

Fax Number: (678) 688-3839

Email Address: jeffery@SRS.Construction

SRS, Inc.
357 Odell Road
Griffin, GA 30224
(770) 228-2658

EBO Plan
19ITB30039OK-JAJ Roof Replacement @ Juvenile Justice
Center & Medical Examiner's Building

SRS, Inc. has reviewed the solicitation carefully and knows that diversity and equal business opportunity are important to Fulton County. The plan of SRS, Inc. would be to increase opportunities of diversity by hiring minority and female own business as sub-contractors with our company when opportunities are available. For this project we have no opportunities within the scope of work that need to be sub-contracted out. SRS, Inc. will handle 98% of all responsibilities required for this project but if the opportunity comes about we will solicit qualified minority and female businesses.

Signature & Title of Officer

Jeff Pellet

Date

10-4-19



EXHIBIT J

**RISK MANAGEMENT INSURANCE
PROVISIONS FORMS AND CERTIFICATE**

JAJ Roof Replacement Project

Insurance and Risk Management Provisions JAJ Roof Replacement Project

The following is the minimum insurance and limits that the Contractor/Vendor must maintain. If the Contractor/Vendor maintains broader coverages and/or higher limits than the minimum shown below, Fulton County Government requires and shall be entitled to coverage for the higher limits maintained by the Contractor/Vendor.

It is Fulton County Government's practice to obtain Certificates of Insurance from our Contractors and Vendors. Insurance must be written by a licensed agent in a company licensed to write insurance in the State of Georgia. Respondents shall submit with the bid/proposal evidence of insurability satisfactory to Fulton County Government as to form and content. Either of the following forms of evidence is acceptable:

- A letter from an insurance carrier stating that upon your firm/company being the successful Bidder/Respondent that a Certificate of Insurance shall be issued in compliance with the Insurance and Risk Management Provisions outlined below.
- A Certificate of Insurance complying with the Insurance and Risk Management Provisions outlined below (Request for Bid/Proposal number and Project Description must appear on the Certificate of Insurance).
- A combination of specific policies written with an umbrella policy covering liabilities in excess of the required limits is acceptable to achieve the applicable insurance coverage levels.

Any and all Insurance Coverage(s) and Bonds required under the terms and conditions of the contract shall be maintained during the entire length of the contract, including any extensions or renewals thereto, and until all work has been completed to the satisfaction of Fulton County Government. Evidence of said insurance coverages shall be provided on or before the initiation of the Contract.

Accordingly the Respondent shall provide a certificate evidencing the following:

1. WORKERS COMPENSATION/EMPLOYER'S LIABILITY INSURANCE – STATUTORY (In compliance with the Georgia Workers Compensation Acts, including but not limited to U.S. Longshoremen and Harbor Workers Act and any other State or Federal Acts or Provisions in which jurisdiction may be granted)

2.	Employer's Liability Insurance	BY ACCIDENT	EACH ACCIDENT	\$1,000,000
	Employer's Liability Insurance	BY DISEASE	POLICY LIMIT	\$1,000,000
	Employer's Liability Insurance	BY DISEASE	EACH EMPLOYEE	\$1,000,000

2. COMMERCIAL GENERAL LIABILITY INSURANCE (Including contractual Liability Insurance)

Bodily Injury and Property Damage Liability	Each Occurrence	\$1,000,000
(Other than Products/Completed Operations) General Aggregate		\$2,000,000
Products\Completed Operation	Aggregate Limit	\$2,000,000
Personal and Advertising Injury	Limits	\$1,000,000

JAJ Roof Replacement Project

Damage to Rented Premises	Limits	\$100,000
---------------------------	--------	-----------

*General Liability Policy to include the following:

- Per Project/Location Aggregate and Completed Operations for 3 Years after final payment.
- Policy to provide evidence of X, C, U coverage.
- Policy to have no exclusion for demolition work.

3. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Bodily Injury & Property Damage	Each Occurrence	\$1,000,000
--	-----------------	-------------

(Including operation of non-owned, owned, and hired automobiles).

*Broadened Pollution Endorsement CA9948 and MCS 90**

4. UMBRELLA LIABILITY

Per Occurrence/Aggregate	\$1,000,000/\$1,000,000
--------------------------	-------------------------

5. CONTRACTORS POLLUTION LIABILITY

Each Occurrence	\$1,000,000
-----------------	-------------

Or by endorsement to General Liability Policy for sudden and accidental**

If Pollution provided by General Liability Endorsement and sudden and accidental, Contractor Pollution Liability policy would not be a requirement.

Certificates of Insurance

Contractor/Vendor shall provide written notice to Fulton County Government immediately if it becomes aware of or receives notice from any insurance company that coverage afforded under such policy or policies shall expire, be cancelled or altered. Certificates of Insurance are to list Fulton County Government, its' Officials, Officers and Employees as an Additional Insured (except for Workers Compensation and Professional Liability) using ISO Additional Insured Endorsement form CG 20 10 (11/85) version, its equivalent or on a blanket basis.

This contractor/vendor insurance shall apply as Primary Insurance before any other insurance or self-insurance, including any deductible, non-contributory, and Waiver of Subrogation provided in favor of Fulton County Government. .

If Fulton County Government shall so request, the Respondent, Contractor or Vendor will furnish the County for its inspection and approval such policies of insurance with all endorsements, or confirmed specimens thereof certified by the insurance company to be true and correct copies.

Additional Insured under the General Liability, Auto Liability, Umbrella Policies (with exception of Workers Compensation and Professional Liability), with no Cross Suits exclusion.

Important:

The obligations for the Contractor/Vendor to procure and maintain insurance shall not be constructed to waive or restrict other obligations. It is understood that neither failure to comply nor full compliance with the foregoing insurance requirements shall limit or relieve the Contractor/Vendor from any liability incurred as a result of their activities/operations in conjunction with the Contract and/or Scope of Work.

JAJ Roof Replacement Project

USE OF PREMISES

Contractor/Vendor shall confine its apparatus, the storage of materials and the operations of its workers to limits/requirements indicated by law, ordinance, permits and any restrictions of Fulton County Government and shall not unreasonably encumber the premises with its materials (Where applicable).

PROTECTION OF PROPERTY

Contractor/Vendor will adequately protect its own work from damage, will protect Fulton County Government's property from damage or loss and will take all necessary precautions during the progress of the work to protect all persons and the property of others from damage or loss.

Contractor/Vendor shall take all necessary precautions for the safety of employees of the work and shall comply with all applicable provisions of the Federal, State and local safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where work is being performed.

Contractor/Vendor shall erect and properly maintain at all times as required by the conditions and progress of the work, all necessary safeguards for the protection of its employees, Fulton County Government employees and the public and shall post all applicable signage and other warning devices to protect against potential hazards for the work being performed (Where applicable).

CONTRACTOR/VENDOR ACKNOWLEDGES HAVING READ, UNDERSTANDING, AND AGREEING TO COMPLY WITH THE AFOREMENTIONED INSURANCE AND RISK MANAGEMENT PROVISIONS, AND THE REPRESENTATIVE OF THE CONTRACTOR/VENDOR IDENTIFIED BELOW IS AUTHORIZED TO SIGN CONTRACTS ON BEHALF OF THE RESPONDING CONTRACTOR/VENDOR.

COMPANY: SRS Inc. SIGNATURE: Jeff Pilkenton
NAME: Jeffery Pilkenton TITLE: President
DATE: 10-4-19

ACORDTM**CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)

9/24/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER McGriff Insurance Services 517 North Church Street Thomaston, GA 30286 706 647-8121	CONTACT NAME: PHONE (A/C, No, Ext): 706 647-8121 FAX (A/C, No): 888-831-8407 E-MAIL ADDRESS: <table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A : FCCI Insurance Company</td> <td>10178</td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : FCCI Insurance Company	10178						
INSURER(S) AFFORDING COVERAGE	NAIC #										
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INSURED SRS Inc. 357 O'Dell Road Griffin, GA 30224	<table border="1"> <tr> <td>INSURER B : FCCI Commercial Insurance Company</td> <td>33472</td> </tr> <tr> <td>INSURER C :</td> <td></td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </table>	INSURER B : FCCI Commercial Insurance Company	33472	INSURER C :		INSURER D :		INSURER E :		INSURER F :	
INSURER B : FCCI Commercial Insurance Company	33472										
INSURER C :											
INSURER D :											
INSURER E :											
INSURER F :											

COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT 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. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> PD Ded:250 <input checked="" type="checkbox"/> X,C,U Included GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	X	X	CPP002418203	05/18/2019	05/18/2020	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$5,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY	X	X	CA10001378003	05/18/2019	05/18/2020	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000			UMB10002544202	05/18/2019	05/18/2020	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE/OFFICER/MEMBER EXCLUDED? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		X	001WC18A76211	05/18/2019	05/18/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
A	Builders Risk			CPP002418203	05/18/2019	05/18/2020	\$5Million w/ \$2500 ded
A	Leased/Rent Equip			CPP002148203	05/18/2019	05/18/2020	\$200,000 limit

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**** Workers Comp Information ****Other States Coverage Proprietors/Partners/Executive Officers/Members

Excluded: Jeffrey Pilkenton, CEO/CFO; Joseph Lee Pilkenton, Secretary

**** Supplemental Name ****

First Supplemental Name applies to all policies - SRS, INC

(See Attached Descriptions)

CERTIFICATE HOLDER**CANCELLATION**

Fulton County
 130 Peachtree St. S. W., Suite
 1168
 Atlanta, GA 30303

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

B. Scott Burt

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DESCRIPTIONS (Continued from Page 1)

Project: Roof Replacement @ Romae T. Pwoell-Juvenile Justice Center (JJC) & Medical Examiner's Building (ME)
Fulton County Governmnet, It's officials, officers and Employees are listed as Additonal Insured as respects General & Auto Liability. Coverage is Primary-Non Contributory, and includes Products and Completed Operations. Waiver of Subrogation is issued as respects General, Auto and Workers Compensation. Notice of cancellation will be provided.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS –
AUTOMATIC STATUS WHEN REQUIRED IN CONSTRUCTION
AGREEMENT WITH YOU – ONGOING OPERATIONS AND
PRODUCTS-COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE (OPTIONAL)

Name of Additional Insured Persons or Organizations
(As required by written contract or agreement per Paragraph A. below.)

Locations of Covered Operations
(As per the written contract or agreement, provided the location is within the "coverage territory".)

(Information required to complete this Schedule, if not shown above, will be shown in the Declarations.)

A. **Section II – Who Is An Insured** is amended to include as an additional insured:

1. Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement in effect during the term of this policy that such person or organization be added as an additional insured on your policy; and
2. Any other person or organization you are required to add as an additional insured under the contract or agreement described in Paragraph 1. above; and
3. The particular person or organization, if any, scheduled above.

Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" occurring after the execution of the contract or agreement described in Paragraph 1. above and caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf in the performance of your ongoing operations for the additional insured; or
3. Your work" performed for the additional insured and included in the "products-completed operations hazard" if such coverage is specifically required in the written contract or agreement.

However, the insurance afforded to such additional insured(s) described above:

1. Only applies to the extent permitted by law;
 2. Will not be broader than that which you are required by the contract or agreement to provide for such additional insured;
 3. Will not be broader than that which is afforded to you under this policy; and
 4. Nothing herein shall extend the term of this policy.
- B. The insurance provided to the additional insured does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:
1. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 2. Supervisory, inspection, architectural or engineering activities.
- C. This insurance is excess over any other valid and collectible insurance available to the additional insured whether on a primary, excess, contingent or any other basis; unless the written contract or agreement requires that this insurance be primary and non-contributory, in which case this insurance will be primary and non-contributory relative to insurance on which the additional insured is a Named Insured.
- D. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement described in Paragraph A.1.; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

- E. **Section IV – Commercial General Liability Conditions** is amended as follows:

The Duties In The Event of Occurrence, Offense, Claim or Suit condition is amended to add the following additional conditions applicable to the additional insured:

An additional insured under this endorsement must as soon as practicable:

1. Give us written notice of an "occurrence" or an offense which may result in a claim or "suit" under this insurance, and of any claim or "suit" that does result;
2. Send us copies of all legal papers received in connection with the claim or "suit", cooperate with us in the investigation or settlement of the claim or defense against the "suit", and otherwise comply with all policy conditions; and
3. Tender the defense and indemnity of any claim or "suit" to any provider of other insurance which would cover the additional insured for a loss we cover under this endorsement and agree to make available all such other insurance. However, this condition does not affect Paragraph C. above.

We have no duty to defend or indemnify an additional insured under this endorsement until we receive from the additional insured written notice of a claim or "suit".

- F. This endorsement does not apply to any additional insured or project that is specifically identified in any other additional insured endorsement attached to the Commercial General Liability Coverage Form.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – PRIMARY/NON-CONTRIBUTORY
COVERAGE WHEN REQUIRED BY CONTRACT**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

The following is added to SECTION IV – Commercial General Liability Conditions, Paragraph 4, entitled “Other Insurance”, subsection b. entitled “Excess Insurance”, paragraph (1):

This insurance is excess over:

- (v) Any other insurance naming an additional insured as an insured on a primary basis, excess, contingent or on any other basis unless a written contract specifically requires that this insurance be primary and noncontributing. The written contract must be currently in effect or become effective during the term of this policy and must be executed prior to the “bodily injury”, “property damage” or “personal and advertising injury.”

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FIRST CHOICE CONTRACTORS LIABILITY ENDORSEMENT

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

FIRST CHOICE CONTRACTORS LIABILITY ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

NOTE: The following are additions, replacements and amendments to the Commercial General Liability Coverage Form, and will apply unless excluded by separate endorsement(s) to the Commercial General Liability Coverage Form.

The **COMMERCIAL GENERAL LIABILITY COVERAGE FORM** is amended as follows:

SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE is amended as follows:

1. Extended "Property Damage"

Exclusion 2.a., Expected or Intended Injury, is replaced with the following:

- a. "Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

2. Non-owned Watercraft

Exclusion 2.g. (2) (a) is replaced with the following:

- (a) Less than 51 feet long; and

3. Property Damage Liability – Borrowed Equipment

The following is added to Exclusion 2.j. (4):

Paragraph (4) of this exclusion does not apply to "property damage" to borrowed equipment while at a jobsite and not being used to perform operations. The most we will pay for "property damage" to any one borrowed equipment item under this coverage is \$25,000 per "occurrence". The insurance afforded under this provision is excess over any other valid and collectible property insurance (including deductible) available to the insured, whether primary, excess, contingent or on any other basis.

4. Limited Electronic Data Liability

Exclusion 2.p. is replaced with the following:

- p. Electronic Data

Damages arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data" that does not result from physical injury to tangible property.

The most we will pay under Coverage A for "property damage" because of all loss of "electronic data" arising out of any one "occurrence" is \$10,000.

We have no duty to investigate or defend claims or "suits" covered by this Limited Electronic Data Liability coverage.

The following definition is added to **SECTION V – DEFINITIONS** of the Coverage Form:

"Electronic data" means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software (including systems and applications software), hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

For purposes of this **Limited Electronic Data Liability** coverage, the definition of "Property Damage" in **SECTION V – DEFINITIONS** of the Coverage Form is replaced by the following:

17. "Property damage" means:

- a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it;
- b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it;
- c. Loss of, loss of use of, damage to, corruption of, inability to access, or inability to properly manipulate "electronic data", resulting from physical injury to tangible property. All such loss of "electronic data" shall be deemed to occur at the time of the "occurrence" that caused it.

For purposes of this insurance, "electronic data" is not tangible property.

SECTION I – COVERAGES, COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY is amended as follows:

Paragraph 2.e. Exclusions – the Contractual Liability Exclusion is deleted.

SECTION I – COVERAGES, the following coverages are added:

COVERAGE D. VOLUNTARY PROPERTY DAMAGE

1. Insuring Agreement

We will pay, at your request, for "property damage" caused by an "occurrence", to property of others caused by you, or while in your possession, arising out of your business operations. The amount we will pay for damages is described in SECTION III LIMITS OF INSURANCE.

2. Exclusions

This insurance does not apply to:

"Property Damage" to:

- a. Property at premises owned, rented, leased or occupied by you;
- b. Property while in transit;
- c. Property owned by, rented to, leased to, loaned to, borrowed by, or used by you;

- d. Premises you sell, give away, or abandon, if the "property damage" arises out of any part of those premises;
- e. Property caused by or arising out of the "products-completed operations hazard";
- f. Motor vehicles;
- g. "Your product" arising out of it or any part of it; or
- h. "Your work" arising out of it or any part of it.

3. Deductible

We will not pay for loss in any one "occurrence" until the amount of loss exceeds \$250. We will then pay the amount of loss in excess of \$250 up to the applicable limit of insurance.

4. Cost Factor

In the event of a covered loss, you shall, if requested by us, replace the damaged property or furnish the labor and materials necessary for repairs thereto at your actual cost, excluding profit or overhead charges.

The insurance afforded under COVERAGE D is excess over any other valid and collectible property or inland marine insurance (including the deductible applicable to the property or inland marine coverage) available to you whether primary, excess, contingent or any other basis.

Coverage D covers unintentional damage or destruction, but does not cover disappearance, theft, or loss of use.

The insurance under COVERAGE D does not apply if a loss is paid under COVERAGE E.

COVERAGE E. CARE, CUSTODY OR CONTROL

1. Insuring Agreement

We will pay those sums that the insured becomes legally obligated to pay as damages because of "property damage" caused by an "occurrence", to property of others while in your care, custody, or control or property of others as to which you are exercising physical control if the "property damage" arises out of your business operations. The amount we will pay for damages is described in SECTION III LIMITS OF INSURANCE.

2. Exclusions

This insurance does not apply to:

"Property Damage" to:

- a. Property at premises owned, rented, leased or occupied by you;
- b. Property while in transit;
- c. Premises you sell, give away, or abandon, if the "property damage" arises out of any part of those premises;
- d. Property caused by or arising out of the "products-completed operations hazard";

- e. Motor vehicles;
- f. "Your product" arising out of it or any part of it; or
- g. "Your work" arising out of it or any part of it.

3. Deductible

We will not pay for loss in any one "occurrence" until the amount of loss exceeds \$250. We will then pay the amount of loss in excess of \$250 up to the applicable limit of insurance.

4. Cost Factor

In the event of a covered loss, you shall, if requested by us, replace the damaged property or furnish the labor and materials necessary for repairs thereto at your actual cost, excluding profit or overhead charges.

The insurance afforded under COVERAGE E is excess over any other valid and collectible property or inland marine insurance (including the deductible applicable to the property or inland marine coverage) available to you whether primary, excess, contingent or any other basis.

The insurance under COVERAGE E does not apply if a loss is paid under COVERAGE D.

COVERAGE F. LIMITED PRODUCT WITHDRAWAL EXPENSE

1. Insuring Agreement

- a. If you are a "seller", we will reimburse you for "product withdrawal expenses" associated with "your product" incurred because of a "product withdrawal" to which this insurance applies.

The amount of such reimbursement is limited as described in SECTION III - LIMITS OF INSURANCE. No other obligation or liability to pay sums or perform acts or services is covered.

- a. This insurance applies to a "product withdrawal" only if the "product withdrawal" is initiated in the "coverage territory" during the policy period because:

(1) You determine that the "product withdrawal" is necessary; or

(2) An authorized government entity has ordered you to conduct a "product withdrawal".

- c. We will reimburse only those "product withdrawal expenses" which are incurred and reported to us within one year of the date the "product withdrawal" was initiated.

- d. The initiation of a "product withdrawal" will be deemed to have been made only at the earliest of the following times:

(1) When you have announced, in any manner, to the general public, your vendors or to your employees (other than those employees directly involved in making the determination) your decision to conduct a "product withdrawal" This applies regardless of whether the determination to conduct a "product withdrawal" is made by you or is requested by a third party;

(2) When you received, either orally or in writing, notification of an order from an authorized government entity to conduct a "product withdrawal; or

(3) When a third party has initiated a "product withdrawal" and you communicate agreement with the "product withdrawal", or you announce to the general public, your vendors or to your employees (other than those employees directly involved in making the determination) your decision to participate in the "product withdrawal", whichever comes first.

e. "Product withdrawal expenses" incurred to withdraw "your products" which contain:

(1) The same "defect" will be deemed to have arisen out of the same "product withdrawal"; or

(2) A different "defect" will be deemed to have arisen out of a separate "product withdrawal" if newly determined or ordered in accordance with paragraph 1.b of this coverage.

2. Exclusions

This insurance does not apply to "product withdrawal" expenses" arising out of:

a. Any "product withdrawal" initiated due to:

(1) The failure of "your products" to accomplish their intended purpose, including any breach of warranty of fitness, whether written or implied. This exclusion does not apply if such failure has caused or is reasonably expected to cause "bodily injury" or physical damage to tangible property.

(2) Copyright, patent, trade secret or trademark infringements;

(3) Transformation of a chemical nature, deterioration or decomposition of "your product", except if it is caused by:

(a) An error in manufacturing, design, processing or transportation of "your product"; or

(b) "Product tampering".

(4) Expiration of the designated shelf life of "your product".

b. A "product withdrawal", initiated because of a "defect" in "your product" known to exist by the Named Insured or the Named Insured's "executive officers", prior to the inception date of this Coverage Part or prior to the time "your product" leaves your control or possession.

c. Recall of any specific products for which "bodily injury" or "property damage" is excluded under Coverage A - Bodily Injury And Property Damage Liability by endorsement.

d. Recall of "your products" which have been banned from the market by an authorized government entity prior to the policy period.

e. The defense of a claim or "suit" against you for "product withdrawal expenses".

3. For the purposes of the insurance afforded under COVERAGE F, the following is added to 2. Duties In The Event Of Occurrence, Offense, Claim Or Suit Condition under SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS:

e. Duties In The Event Of A "Defect" Or A "Product Withdrawal"

(1) You must see to it that we are notified as soon as practicable of any actual, suspected or threatened "defect" in "your products", or any governmental investigation, that may result in a "product withdrawal". To the extent possible, notice should include:

- (a) How, when and where the "defect" was discovered;
 - (b) The names and addresses of any injured persons and witnesses; and
 - (c) The nature, location and circumstances of any injury or damage arising out of use or consumption of "your product".
- (2) If a "product withdrawal" is initiated, you must:
 - (a) Immediately record the specifics of the "product withdrawal" and the date it was initiated;
 - (b) Send us written notice of the "product withdrawal" as soon as practicable; and
 - (c) Not release, consign, ship or distribute by any other method, any product, or like or similar products, with an actual, suspected or threatened defect.
- (3) You and any other involved insured must:
 - (a) Immediately send us copies of pertinent correspondence received in connection with the "product withdrawal";
 - (b) Authorize us to obtain records and other information; and
 - (c) Cooperate with us in our investigation of the "product withdrawal".
- 4. For the purposes of this Coverage F, the following definitions are added to the Definitions Section:
 - a. "Defect" means a defect, deficiency or inadequacy that creates a dangerous condition.
 - b. "Product tampering" is an act of intentional alteration of "your product" which may cause or has caused "bodily injury" or physical injury to tangible property.

When "product tampering" is known, suspected or threatened, a "product withdrawal" will not be limited to those batches of "your product" which are known or suspected to have been tampered with.
 - c. "Product withdrawal" means the recall or withdrawal of "your products", or products which contain "your products", from the market or from use, by any other person or organization, because of a known or suspected "defect" in "your product", or a known or suspected "product tampering", which has caused or is reasonably expected to cause "bodily injury" or physical injury to tangible property.
 - d. "Product withdrawal expenses" means those reasonable and necessary extra expenses, listed below paid and directly related to a "product withdrawal":
 - (1) Costs of notification;
 - (2) Costs of stationery, envelopes, production of announcements and postage or facsimiles;
 - (3) Costs of overtime paid to your regular non-salaried employees and costs incurred by your employees, including costs of transportation and accommodations;
 - (4) Costs of computer time;
 - (5) Costs of hiring independent contractors and other temporary employees;
 - (6) Costs of transportation, shipping or packaging;

- (7) Costs of warehouse or storage space; or
- (8) Costs of proper disposal of "your products", or products that contain "your products", that cannot be reused, not exceeding your purchase price or your cost to produce the products; but "product withdrawal expenses" does not include costs of the replacement, repair or redesign of "your product", or the costs of regaining your market share, goodwill, revenue or profit.
- e. "Seller" means a person or organization that manufactures, sells or distributes goods or products. "Seller" does not include a "contractor" as defined elsewhere in this endorsement.

The insurance under COVERAGE F does not apply if a loss is paid under COVERAGE G.

COVERAGE G. CONTRACTORS ERRORS AND OMISSIONS

1. Insuring Agreement

If you are a "contractor", we will pay those sums that you become legally obligated to pay as damages because of "property damage" to "your product", "your work" or "impaired property", due to faulty workmanship, material or design, or products including consequential loss, to which this insurance applies. The damages must have resulted from your negligent act, error or omission while acting in your business capacity as a contractor or subcontractor or from a defect in material or a product sold or installed by you while acting in this capacity. The amount we will pay for damages is described in SECTION III LIMITS OF INSURANCE.

We have no duty to investigate or defend claims or "suits" covered by this Contractors Errors or Omissions coverage.

This coverage applies only if the "property damage" occurs in the "coverage territory" during the policy period.

This coverage does not apply to additional insureds, if any.

Supplementary Payments – Coverage A and B do not apply to Coverage G. Contractors Errors and Omissions.

2. Exclusions

This insurance does not apply to:

- a. "Bodily injury" or "personal and advertising injury".
- b. Liability or penalties arising from a delay or failure to complete a contract or project, or to complete a contract or project on time.
- c. Liability because of an error or omission:
 - (1) In the preparation of estimates or job costs;
 - (2) Where cost estimates are exceeded;
 - (3) In the preparation of estimates of profit or return on capital;
 - (4) In advising or failure to advise on financing of the work or project; or
 - (5) In advising or failing to advise on any legal work, title checks, form of insurance or suretyship.

- d. Any liability which arises out of any actual or alleged infringement of copyright or trademark or trade dress or patent, unfair competition or piracy, or theft or wrongful taking of concepts or intellectual property.
- e. Any liability for damages:
 - (1) From the intentional dishonest, fraudulent, malicious or criminal acts of the Named Insured, or by any partner, member of a limited liability company, or executive officer, or at the direction of any of them; or
 - (2) Which is in fact expected or intended by the insured, even if the injury or damage is of a different degree or type than actually expected or intended.
- f. Any liability arising out of manufacturer's warranties or guarantees whether express or implied.
- g. Any liability arising from "property damage" to property owned by, rented or leased to the insured.
- h. Any liability incurred or "property damage" which occurs, in whole or in part, before you have completed "your work." "Your work" will be deemed completed at the earliest of the following times:
 - (1) When all of the work called for in your contract or work order has been completed;
 - (2) When all the work to be done at the job site has been completed if your contract calls for work at more than one job site; or
 - (3) When that part of the work done at a job site has been put to its intended use by any person or organization other than another contractor or subcontractor working on the same project.

Work that may need service or maintenance, correction, repair or replacement, but which is otherwise complete, will be treated as complete.
- i. Any liability arising from "property damage" to products that are still in your physical possession.
- j. Any liability arising out of the rendering of or failure to render any professional services by you or on your behalf, but only with respect to either or both of the following operations:
 - (1) Providing engineering, architectural or surveying services to others; and
 - (2) Providing or hiring independent professionals to provide engineering, architectural or surveying services in connection with construction work you perform.

Professional services include the preparing, approving or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications. Professional services also include supervisory or inspection activities performed as part of any related architectural or engineering activities.

But, professional services do not include services within construction means, methods, techniques, sequences and procedures employed by you in connection with construction work you perform.
- k. Your loss of profit or expected profit and any liability arising therefrom.
- l. "Property damage" to property other than "your product," "your work" or "impaired property."
- m. Any liability arising from claims or "suits" where the right of action against the insured has been relinquished or waived.

- n. Any liability for "property damage" to "your work" if the damaged work or the work out of which the damage arises was performed on your behalf by a subcontractor.
- o. Any liability arising from the substitution of a material or product for one specified on blueprints, work orders, contracts or engineering specifications unless there has been written authorization, or unless the blueprints, work orders, contracts or engineering specifications were written by you, and you have authorized the changes.
- p. Liability of others assumed by the insured under any contract or agreement, whether oral or in writing. This exclusion does not apply to liability for damages that the insured would have in the absence of the contract or agreement.

3. For the purposes of Coverage G, the following definition is added to the Definitions section:

- a. "Contractor" means a person or organization engaged in activities of building, clearing, filing, excavating or improvement in the size, use or appearance of any structure or land. "Contractor" does not include a "seller" as defined elsewhere in this endorsement.

4. Deductible

We will not pay for loss in any one "occurrence" until the amount of loss exceeds \$250. The limits of insurance will not be reduced by the application of the deductible amount.

We may pay any part or all of the deductible amount to effect settlement of any claim or "suit", and upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as has been paid by us.

5. Cost Factor

In the event of a covered loss, you shall, if requested by us, replace the damaged property or furnish the labor and materials necessary for repairs thereto at your actual cost, excluding profit or overhead charges.

The insurance under COVERAGE G does not apply if a loss is paid under COVERAGE F.

EXPANDED COVERAGE FOR TENANT'S PROPERTY AND PREMISES RENTED TO YOU

The first paragraph after subparagraph (6) in Exclusion j., Damage to Property is amended to read as follows:

Paragraphs **(1)**, **(3)** and **(4)** of this exclusion do not apply to "property damage" (other than damage by fire) to premises, including the contents of such premises, rented to you. A separate limit of insurance applies to Damage To Premises Rented To You as described in Section III – Limits Of Insurance.

SECTION I - COVERAGES, SUPPLEMENTARY PAYMENTS – COVERAGE A and B is amended as follows:

All references to SUPPLEMENTARY PAYMENTS – COVERAGES A and B are amended to SUPPLEMENTARY PAYMENTS – COVERAGES A, B, D, E, and G.

1. Cost of Bail Bonds

Paragraph 1.b. is replaced with the following:

- b. Up to \$2,500 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

2. Loss of Earnings

Paragraph 1.d. is replaced with the following:

- d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$500 a day because of time off from work.

SECTION II – WHO IS AN INSURED is amended as follows:**1. Incidental Malpractice**

Paragraph 2.a.(1)(d) is replaced with the following:

- (d) Arising out of his or her providing or failing to provide professional health care services. However, this exclusion does not apply to a nurse, emergency medical technician or paramedic employed by you to provide medical services, unless:
 - (i) You are engaged in the occupation or business of providing or offering medical, surgical, dental, x-ray or nursing services, treatment, advice or instruction; or
 - (ii) The "employee" has another insurance that would also cover claims arising under this provision, whether the other insurance is primary, excess, contingent or on any other basis.

2. Broadened Who Is An Insured

The following are added to Paragraph 2.:

Subsidiaries

- e. Your subsidiaries if:
 - (1) They are legally incorporated entities; and
 - (2) You own more than 50% of the voting stock in such subsidiaries as of the effective date of this policy. If such subsidiaries are not shown in the Declarations, you must report them to us within 180 days of the inception of your original policy.

Additional Insureds

- f. Any person or organization described in paragraphs g. through k. below whom you are required to add as an additional insured on this policy under a written contract or agreement in effect during the term of this policy, provided the written contract or agreement was executed prior to the "bodily injury", "property damage" or "personal and advertising injury" for which the additional insured seeks coverage.

However, the insurance afforded to such additional insured(s):

- (1) Only applies to the extent permitted by law;
- (2) Will not be broader than that which you are required by the contract or agreement to provide for such additional insured;
- (3) Will not be broader than that which is afforded to you under this policy;
- (4) Is subject to the conditions described in paragraphs g. through k. below; and

(5) Nothing herein shall extend the term of this policy.

g. Owner, Lessor or Manager of Premises

If the additional insured is an owner, lessor or manager of premises, such person or organization shall be covered only with respect to liability arising out of the ownership, maintenance or use of that part of any premises leased to you and subject to the following additional exclusions:

- (1) Any "occurrence" that takes place after you cease to occupy those premises; or
- (2) Structural alterations, new construction or demolition operations performed by or on behalf of such person or organization.

h. State or Governmental Agency or Subdivision or Political Subdivision – Permits or Authorizations

If the additional insured is the state or any political subdivision, the state or political subdivision shall be covered only with respect to operations performed by you or on your behalf for which the state or political subdivision has issued a permit or authorization. This insurance does not apply to:

- (1) "Bodily injury", "property damage", or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or
- (2) "Bodily injury" or "property damage" included within the "products-completed operations hazard".

i. Lessor of Leased Equipment

If the additional insured is a lessor of leased equipment, such lessor shall be covered only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s). With respect to the insurance afforded to these additional insureds, this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

j. Mortgagee, Assignee, or Receiver

If the additional Insured is a mortgagee, assignee, or receiver of premises, such mortgagee, assignee or receiver of premises is an additional insured only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance, or use of the premises by you. This insurance does not apply to structural alterations, new construction and demolition operations performed by or for that person or organization.

k. Vendor

If the additional insured is a vendor, such vendor is an additional insured only with respect to "bodily injury" or "property damage" caused by "your products" which are distributed or sold in the regular course of the vendor's business, subject to the following additional exclusions:

- (1) The insurance afforded to the vendor does not apply to:
 - (a) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in absence of the contract or agreement.
 - (b) Any express warranty unauthorized by you;

- (c) Any physical or chemical change in “your product” made intentionally by the vendor;
- (d) Repackaging, unless unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
- (e) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;
- (f) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor’s premises in connection with the sale of the product;
- (g) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or
- (h) “Bodily injury” or “property damage” arising out of the sole negligence of the vendor for its own acts or omissions or those of its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:
 - i. The exceptions contained in Subparagraphs d. or f.; or
 - ii. Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

- (2) This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

3. Newly Formed or Acquired Organizations

Paragraph 3. is amended as follows:

- a. Coverage under this provision is afforded until the end of the policy period.
- d. Coverage A does not apply to product recall expense arising out of any withdrawal or recall that occurred before you acquired or formed the organization.

SECTION III – LIMITS OF INSURANCE is amended as follows:

1. Paragraph 2. is replaced with the following:

- 2. The General Aggregate Limit is the most we will pay for the sum of:
 - a. Medical expenses under Coverage C;
 - b. Damages under Coverage A, except damages because of “bodily injury” or “property damage” included in the “products-completed operations hazard”;
 - c. Damages under Coverage B;
 - d. Voluntary “property damage” payments under Coverage D; and
 - e. Care, Custody or Control damages under Coverage E.

2. Paragraph 5. is replaced with the following:

5. Subject to Paragraph 2. or 3. above, whichever applies, the Each Occurrence Limit is the most we will pay for the sum of:
 - a. Damages under Coverage A;
 - b. Medical expenses under Coverage C;
 - c. Voluntary "property damage" payments under Coverage D;
 - d. Care, Custody or Control damages under Coverage E;
 - e. Limited Product Withdrawal Expense under Coverage F; and
 - f. Contractors Errors and Omissions under Coverage G.

because of all "bodily injury" and "property damage" arising out of any one "occurrence".

3. Paragraph 6. is replaced with the following:

6. Subject to Paragraph 5. above the Damage To Premises Rented To You Limit is the most we will pay under Coverage A for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire or explosion, while rented to you or temporarily occupied by you with permission of the owner.

The Damage to Premises Rented to You Limit is the higher of the Each Occurrence Limit shown in the Declarations or the amount shown in the Declarations as Damage To Premises Rented To You Limit.

4. Paragraph 7. is replaced with the following:

7. Subject to Paragraph 5. above, the higher of \$10,000 or the Medical Expense Limit shown in the Declarations is the most we will pay under Coverage C for all medical expenses because of "bodily injury" sustained by any one person.

5. Paragraph 8. is added as follows:

8. Subject to Paragraph 5. above, the most we will pay under Coverage D. Voluntary Property Damage for loss arising out of any one "occurrence" is \$1,500. The most we will pay in any one-policy period, regardless of the number of claims made or suits brought, is \$3,000.

6. Paragraph 9. is added as follows:

9. Subject to Paragraph 5. above, the most we will pay under Coverage E. Care, Custody or Control for "property damage" arising out of any one "occurrence" is \$1,000. The most we will pay in any one-policy period, regardless of the number of claims made or suits brought, is \$5,000.

7. Paragraph 10. is added as follows:

10. Subject to Paragraph 5. above, the most we will pay under Coverage F. Limited Product Withdrawal Expense for "product withdrawal expenses" in any one-policy period, regardless of the number of insureds, "product withdrawals" initiated or number of "your products" withdrawn is \$10,000.

8. Paragraph 11. is added as follows:

11. Subject to Paragraph 5. above, the most we will pay under Coverage G. Contractors Errors and Omissions for damage in any one-policy period, regardless of the number of insureds, claims or "suits" brought, or persons or organizations making claim or bringing "suits" is \$10,000.

For errors in contract or job specifications or in recommendations of products or materials to be used, this policy will not pay for additional costs of products and materials to be used that would not have been incurred had the correct recommendations or specifications been made.

9. Paragraph 12. is added as follows:

12. The General Aggregate Limit applies separately to:

- a. Each of your projects away from premises owned by or rented to you; or
- b. Each "location" owned by or rented to you.

"Location" as used in this paragraph means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

10. Paragraph 13. is added as follows:

13. With respect to the insurance afforded to any additional insured provided coverage under this endorsement:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

- a. Required by the contract or agreement; or
- b. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS is amended as follows:**1. Subparagraph 2.a. of Duties In The Event Of Occurrence, Offense, Claim, or Suit is replaced with the following:**

- a. You must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. This requirement applies only when the "occurrence" or offense is known to the following:
 - (1) An individual who is the sole owner;
 - (2) A partner, if you are a partnership or joint venture;
 - (3) An "executive officer" or insurance manager, if you are a corporation;
 - (4) A manager, if you are a limited liability company;

- (5) A person or organization having proper temporary custody of your property if you die;
- (6) The legal representative of you if you die; or
- (7) A person (other than an "employee") or an organization while acting as your real estate manager.

To the extent possible, notice should include:

- (1) How, when and where the "occurrence" or offense took place;
- (2) The names and addresses of any injured persons and witnesses; and
- (3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

2. The following is added to Subparagraph 2.b. of Duties In The Event Of Occurrence, Offense, Claim, or Suit:

The requirement in 2.b.applies only when the "occurrence" or offense is known to the following:

- (1) An individual who is the sole owner;
- (2) A partner or insurance manager, if you are a partnership or joint venture;
- (3) An "executive officer" or insurance manager, if you are a corporation;
- (4) A manager or insurance manager, if you are a limited liability company;
- (5) Your officials, trustees, board members or insurance manager, if you are a not-for-profit organization;
- (6) A person or organization having proper temporary custody of your property if you die;
- (7) The legal representative of you if you die; or
- (8) A person (other than an "employee") or an organization while acting as your real estate manager.

3. The following is added to paragraph 2. of Duties in the Event of Occurrence, Offense, Claim or Suit:

- e. If you report an "occurrence" to your workers compensation carrier that develops into a liability claim for which coverage is provided by the Coverage Form, failure to report such an "occurrence" to us at the time of the "occurrence" shall not be deemed a violation of paragraphs a., b., and c. above. However, you shall give written notice of this "occurrence" to us as soon as you become aware that this "occurrence" may be a liability claim rather than a workers compensation claim.

4. Paragraph 6. is replaced with the following:

6. Representations

By accepting this policy, you agree:

- a. The statements in the Declarations are accurate and complete;
- b. Those statements are based upon representations you made to us; and
- c. We have issued this policy in reliance upon your representations.

Any error or omission in the description of, or failure to completely describe or disclose any premises, operations or products intended to be covered by the Coverage Form will not invalidate or affect coverage for those premises, operations or products, provided such error or omission or failure to completely describe or disclose premises, operations or products was not intentional.

You must report such error or omission to us as soon as practicable after its discovery. However, this provision does not affect our right to collect additional premium charges or exercise our right of cancellation or nonrenewal.

5. The following is added to paragraph 8. Transfer Of Rights Of Recovery Against Others To Us:

However, we waive any right of recovery we may have because of payments we make for injury or damage arising out of your ongoing operations or "your work" included in the "products-completed operations hazard" under the following conditions:

- a) Only when you have agreed in writing to waive such rights of recovery in a contract or agreement;
- b) Only as to the person/entity as to whom you are required by the contract to waive rights of recovery; and
- c) Only if the contract or agreement is in effect during the term of this policy, and was executed by you prior to the loss.

6. Paragraph 10. is added as follows:

10. Liberalization

If we revise this Coverage Form to provide more coverage without additional premium charge, your policy will automatically provide the additional coverage as of the day the revision is effective in the applicable state(s).

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SRS Inc. DBA Superior Roofing Systems

POLICY NUMBER: CA10001378003

COMMERCIAL AUTOMOBILE
CAU 042 (01 15)

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED
DESIGNATED PERSON OR ORGANIZATION
PRIMARY/NON-CONTRIBUTORY COVERAGE**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

This endorsement is subject to the terms, conditions, exclusions and any other provisions of the BUSINESS AUTO COVERAGE FORM or any endorsement attached thereto unless changes or additions are indicated below.

For the purpose of this endorsement, Section II. A. 1. Who Is An Insured is amended by adding the following:

1. Any person or organization designated in the schedule below is an "insured" for Liability Coverage but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.
2. This insurance is primary and non-contributory to other coverages of the person or organization shown in the Schedule when so required in a written contract or agreement that is executed prior to the loss for which coverage is sought.

SCHEDULE

Name of Person or Organization:

Any person or organization, except a person or organization that leases or rents "auto(s)" to you, but only to the extent of his, her, or its liability for whom you and such person or organization have agreed in writing in a contract or agreement, signed and executed by you prior to the loss for which coverage is sought, that such person or organization be added as an additional insured on your policy.

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SRS Inc. DBA Superior Roofing Systems
UMB10002544202

COMMERCIAL LIABILITY UMBRELLA
UMB 179 (07 09)

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED PRIMARY / NON CONTRIBUTORY COVERAGE

This endorsement modifies insurance provided under the following:

COMMERCIAL LIABILITY UMBRELLA COVERAGE PART

The following replaces SECTION IV – CONDITIONS, Paragraph 5. “Other Insurance” subsection a.:

- a. This insurance is excess over and shall not contribute with any of the other insurance, whether primary, excess, contingent or on any other basis. This condition will not apply to insurance specifically written as excess over this Coverage Part.

The above will apply to additional insureds unless a written contract specifically requires that this insurance be primary and noncontributing as to the additional insured. The written contract must be currently in effect or become effective during the term of this policy and must be executed prior to the “bodily injury”, “property damage” or “personal and advertising injury.”

When this insurance is excess, we will have no duty under Coverage A or B to defend the insured against any “suit” if any other insurer has a duty to defend the insured against that “suit”. If no other insurer defends, we will undertake to do so, but we will be entitled to the insured’s rights against all those other insurers.

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WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE POLICY

Insured Name: SRS Inc. DBA Superior Roofing Systems
Policy Number: 001WC18A76211
Agency Name: McGriff Insurance Services

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

SCHEDULE

All persons or organizations that, in a written contract executed by both parties prior to the date of the injury covered by this policy, require you to obtain this agreement from us.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise noted.

Issued by: FCCI Insurance Company 24570

Endorsement Number:

Effective Date: 05/18/2019

Date Issued: 05/18/2019

Countersigned by _____
Authorized Representative

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PAYMENT BOND ASA1871-12178

"County:" means Fulton County Government; a political subdivision of the State of Georgia (hereinafter called the "Owner").

"Project:" means [Insert Project Number and Project Name] JAJ ROOF REPLACEMENT @ JUVENILE JUSTICE CENTER & MEDICAL EXAMINER'S BUILDING, Project # 19ITB300390K-JAK

"Principal:" (Legal Name and Business Address),
called the

[Insert Name of Contractor (hereinafter
"Principal")]

SRS, INC. 357 Odel Road Griffin GA 30224

Type of Organization ("X" one): ☐ Individual
☐ Partnership
☐ Joint Venture
☒ Corporation

"Surety:" (Name and Business Address)

Hudson Insurance Company

100 William Street, 5th Floor, New York, New York 10038

duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.

"Contract:" Agreement between Principal and Owner, dated ____ day of _____, 20____, regarding performance of Work relative to the Project.

"Penal Sum:" [100% of contract amount] \$998,700.00

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety hereto, as named above, are held and firmly bound to the Owner in the above Penal Sum for the payment of which well and truly to be made we bind ourselves, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal and the Owner entered into a certain written Contract identified above, which is incorporated herein by reference in its entirety (hereinafter called the "Contract"), for construction-type services for the Project identified above;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall promptly make payment of all persons working on or supplying labor or materials or equipment for the performance of said work, this obligation shall be void; otherwise of full force and effect.

1. A "Claimant" shall be defined herein as any subcontractor, person, party, partnership, corporation or the entity furnishing labor, services or materials used, or reasonably required for use, in the performance of the Contract, without regard to whether such labor, services or materials were sold, leased or rented, and without regard to whether such Claimant is or is not in privity of contract with the Principal or any subcontractor performing work on the Project, including, but not limited to, the following labor, services, or materials: water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
2. In the event a Claimant files a lien against the property of the Owner, and the Principal fails or refuses to satisfy or remove it promptly, the Surety shall satisfy or

remove the lien promptly upon written notice from the Owner, either by bond or as otherwise provided in the Contract.

3. The Surety hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in the payment terms, and any other amendments in or about the Contract and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and amendments.
4. The Surety hereby agrees that this Bond shall be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment or modifications to the Contract, so as to bind the Principal and Surety, jointly and severally, to the full payment of any Claimant under the Contract, as amended or modified, provided only that the Surety shall not be liable for more than the penal sum of the Bond, as specified in the first paragraph hereof.
5. This Bond is made for the use and benefit of all persons, firms, and corporations who or which may furnish any materials or perform any labor for or on account of the construction-type services to be performed or supplied under the Contract, and any amendments thereto, and they and each of them may sue hereon.
6. No action may be maintained on this Bond after one (1) year from the date the last services, labor, or materials were provided under the Contract by the Claimant prosecuting said action.
7. This Bond is intended to comply with O.C.G.A. Section 13-10-1, and shall be interpreted so as to comply with the minimum requirements thereof. However, in the event the express language of this Bond extends protection to the Owner beyond that contemplated by O.C.G.A. Section 13-10-1 and 36-91-1, *et seq.*, or any other statutory law applicable to this Project, then the additional protection shall be enforced in favor of the Owner, whether or not such protection is found in the applicable statutes.

IN WITNESS WHEREOF, the Principal and Surety have hereunto affixed their corporate seals and caused this obligations to be signed by their duly authorized representatives this day of December 23, 2019.

PRINCIPAL: SRS, Inc.



President/Vice President (Sign)

Jeffery P. Kenton

President/Vice President (Type or Print)

Attested to by:



Secretary/Assistant Secretary (Seal)

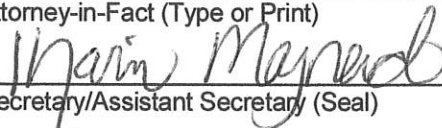
SURETY: Hudson Insurance Company

By: 

Attorney-in-Fact (Sign)

Christy Lackey

Attorney-in-Fact (Type or Print)



Secretary/Assistant Secretary (Seal)

PERFORMANCE BOND ASA1871-12178

"County:" means Fulton County Government; a political subdivision of the State of Georgia (hereinafter called the "Owner").

"Project:" means [Insert Project Number and Project Name] JAJ ROOF REPLACEMENT @ JUVENILE JUSTICE CENTER & MEDICAL EXAMINER'S BUILDING, Project # 19ITB300390K-JAK

"Principal:" (Legal Name and Business Address),

[Insert Name of Contractor (hereinafter called the "Principal")]

SRS, INC. 357 Odel Road Griffin GA 30224

Type of Organization ("X" one): ☐ Individual
☐ Partnership
☐ Joint Venture
☒ Corporation

"Surety:" (Name and Business Address)

Hudson Insurance Company

100 William Street, 5th Floor, New York, New York 10038

duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.

"Contract:" Agreement between Principal and Owner, dated _____ day of _____, 20____, regarding performance of Work relative to the Project.

"Penal Sum:" [100% of contract amount] \$998,700.00

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety hereto, as named above, are held and firmly bound to the Owner in the above Penal Sum for the payment of which well and truly to be made we bind ourselves, our executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal and the Owner entered into a certain written Contract identified above, which is incorporated herein by reference in its entirety (hereinafter called the "Contract"), for construction-type services for the Project identified above;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall faithfully and fully comply with, perform and fulfill all of the undertakings, covenants, conditions and all other of the terms and conditions of said Contract, including any and all duly authorized modifications of such Contract, within the original term of such Contract and any extensions thereof, which shall include, but not be limited to any obligations created by way of warranties and/or guarantees for workmanship and materials which warranty and/or guarantee may extend for a period of time of one year beyond completion of said Contract, this obligation shall be void; otherwise, of full force and effect.

Whenever the Principal shall be, and declared by the Owner to be, in default under the Construction-Type Contract, the Surety shall promptly remedy the default as follows:

1. Complete the Contract in accordance with its terms and conditions; or, at the sole option of the Owner,
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the Surety and the Owner of the lowest responsible bidder, arrange for a contract between such bidder and Owner and make available as the work

progresses (even though there should be a default or 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 penal sum set forth in the first paragraph hereof, as may be adjusted, and the Surety shall make available and pay to the Owner the funds required by this Paragraph prior to the payment of the Owner of the balance of the contract price, or any portion thereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by the Owner to the Contractor under the Contract, and any amendments thereto, less the amount paid by the Owner to the Contractor; or, at the sole option of the Owner,

3. Allow Owner to complete the work and reimburse the Owner for all reasonable costs incurred in completing the work.

In addition to performing as required in the above paragraphs, the Surety shall indemnify and hold harmless the Owner from any and all losses, liability and damages, claims, judgments, liens, costs and fees of every description, including reasonable attorney's fees, litigation costs and expert witness fees, which the Owner may incur, sustain or suffer by reason of the failure or default on the part of the Principal in the performance of any or all of the terms, provisions, and requirements of the Contract, including any and all amendments and modifications thereto, or incurred by the Owner in making good any such failure of performance on the part of the Principal.

The Surety shall commence performance of its obligations and undertakings under this Bond promptly and without delay, after written notice from the Owner to the Surety.

The Surety hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and any other amendments in or about the Contract, and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, change in payment terms, and amendments.

The Surety hereby agrees that this Bond shall be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment to the Contract, so as to bind the Principal and the Surety to the full and faithful performance of the Contract as so amended or modified, and so as to increase the penal sum to the adjusted Contract Price of the Contract.

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

This Bond is intended to comply with O.C.G.A. Section 36-91-1 et seq., and shall be interpreted so; as to comply with; the minimum requirements thereof. However, in the event the express language of this Bond extends protection to; the Owner beyond that contemplated by O.C.G.A. Section 36-91-1 et seq. and O.C.G.A. Section 13-10-1, as amended, or any other statutory law applicable to this Project, then the additional protection shall be enforced in favor of the Owner, whether or not such protection is found in the applicable statutes.

IN WITNESS WHEREOF, the Principal and the Surety have caused these presents to be duly signed and sealed this 23rd day of December, 2019.

PRINCIPAL: SRS, Inc.



President/Vice President (Sign)

Jeffery Pilkenton

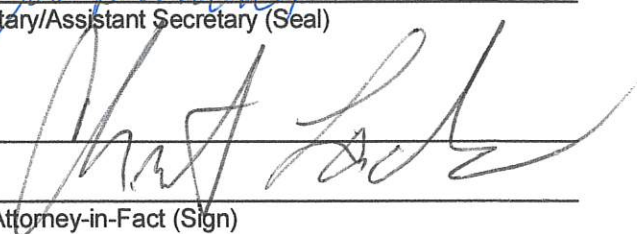
President/Vice President (Type or Print)

Attested to by:



Secretary/Assistant Secretary (Seal)

SURETY: Hudson Insurance Company


By: _____
Attorney-in-Fact (Sign)

Christy Lackey

Attorney-in-Fact (Type or Print)

END OF SECTION

SECTION 4
TECHNICAL SPECIFICATIONS

**Specifications for Roof Replacement @ Juvenile Justice Center (A) and Medical
Examiners 'Building (B) are found on the succeeding pages.**

23994



POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That HUDSON INSURANCE COMPANY, a corporation of the State of Delaware, with offices at 100 William Street, New York, New York, 10038, has made, constituted and appointed, and by these presents, does make, constitute and appoint

**Frederick R. Mitchell, Christy Lackey,
Keith H. Dillon and Carolyn F. Smith
of the State of Georgia**

its true and lawful Attorney(s)-in-Fact, at New York, New York, each of them alone to have full power to act without the other or others, to make, execute and deliver on its behalf, as Surety, bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking shall obligate said Company for any portion of the penal sum thereof in excess of the sum of **Ten Million Dollars (\$10,000,000.00)**.

Such bonds and undertakings when duly executed by said Attorney(s)-in-Fact, shall be binding upon said Company as fully and to the same extent as if signed by the President of said Company under its corporate seal attested by its Secretary.

In Witness Whereof, HUDSON INSURANCE COMPANY has caused these presents to be of its Senior Vice President thereunto duly



Attest...
Dina Daskalakis
Corporate Secretary

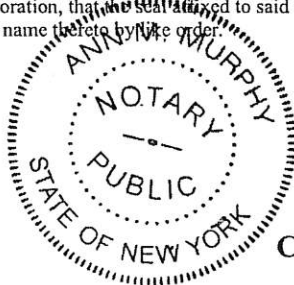
HUDSON INSURANCE COMPANY

By...
Michael P. Cifone
Senior Vice President

STATE OF NEW YORK
COUNTY OF NEW YORK. SS.

On the 7th day of November, 20 17 before me personally came Michael P. Cifone to me known, who being by me duly sworn did depose and say that he is a Senior Vice President of HUDSON INSURANCE COMPANY, the corporation described herein and which executed the above instrument, that he knows the seal of said Corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by order of the Board of Directors of said Corporation, and that he signed his name thereto by like order.

(Notarial Seal)



ANN M. MURPHY
Notary Public, State of New York
No. 01MU6067553
Qualified in Nassau County
Commission Expires December 10, 2021

CERTIFICATION

STATE OF NEW YORK
COUNTY OF NEW YORK. SS.

The undersigned **Dina Daskalakis** hereby certifies:

That the original resolution, of which the following is a true and correct copy, was duly adopted by unanimous written consent of the Board of Directors of Hudson Insurance Company dated July 27th, 2007, and has not since been revoked, amended or modified:

"RESOLVED, that the President, the Executive Vice Presidents, the Senior Vice Presidents and the Vice Presidents shall have the authority and discretion, to appoint such agent or agents, or attorney or attorneys-in-fact, for the purpose of carrying on this Company's surety business, and to empower such agent or agents, or attorney or attorneys-in-fact, to execute and deliver, under this Company's seal or otherwise, bonds obligations, and recognizances, whether made by this Company as surety thereon or otherwise, indemnity contracts, contracts and certificates, and any and all other contracts and undertakings made in the course of this Company's surety business, and renewals, extensions, agreements, waivers, consents or stipulations regarding undertakings so made; and

FURTHER RESOLVED, that the signature of any such Officer of the Company and the Company's seal may be affixed by facsimile to any power of attorney or certification given for the execution of any bond, undertaking, recognizance, contract of indemnity or other written obligation in the nature thereof or related thereto, such signature and seal when so used whether heretofore or hereafter, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed."

THAT the above and foregoing is a full, true and correct copy of Power of Attorney issued by said Company, and of the whole of the original and that the said Power of Attorney is still in full force and effect and has not been revoked, and furthermore that the Resolution of the Board of Directors, set forth in the said Power of Attorney is now in force.

In witness the hand of the undersigned and the seal of said Corporation this _____ day of _____, 20 ____.

By...
Dina Daskalakis, Corporate Secretary

