Addendum No. 1

Four Rivers Sanitation Authority

Scum Separator Building HVAC and Roof Replacement
Capital Project No. 2502

This Addendum Number 1, dated February 9, 2026, for the above-referenced project, supersedes all contrary and conflicting information in the specifications and contract documents, which are hereby supplemented or revised as follows:

BIDDING REQUIREMENTS AND CONTRACT FORMS ADDITIONS

Section I Bidding Requirements, Article 3 Detailed Specifications

- Add the following attached specification sections to *Article 3 Detailed Specifications:*
  - 01 10 00 Summary
  - 01 33 00 Submittal Procedures
  - 01 42 00 References
  - 01 50 00 Temporary Facilities and Controls
  - 01 60 00 Product Requirements
  - 01 74 00 Cleaning and Waste Management
  - 02 41 19 Selective Demolition
  - 05 52 13 Metal Railings
  - 07 01 50 Preparation for Re-Roofing
  - 07 54 23 Thermoplastic Polyolefin Roofing
  - 07 62 00 Metal Flashings
  - 07 72 33 Roof Hatches

CONSTRUCTION PLAN SET REVISIONS

Sheet A1

- Note M – Remove "ballast rock, single ply roofing membrane, roofing insulation, and coping" and replace with "lightweight insulating concrete and pea gravel".

Sheet M7

- Remove Sheet M7 of the construction plan set and replace with Sheet M7 attached to this Addendum No. 1. The revised Sheet M7 calls for a removeable steel diamond plate cover to be installed over the existing opening in the floor. The plate shall have cutouts to accommodate ductwork passing through the opening.

GENERAL INFORMATION

Pre-Bid Meeting Minutes

- The meeting minutes of the non-mandatory pre-bid meeting held February 5, 2026, are attached to this Addendum No. 1.

Scum Separator Building Record Drawings

- Record drawing Sheet ES2, Sheet ES3, and Sheet ES4, from the original March 1975 Scum Separator Building construction plan set are attached to this Addendum No. 1.

Asbestos Testing

- FRSA will have the existing roof materials tested for asbestos and will provide the results in a future Addendum on or before February 13, 2026.

Questions

Q: Note L and Note M on construction plan Sheet A1 offer conflicting information on existing roof type. Which is correct?

A: Note L is correct. The existing roof is comprised of lightweight insulating concrete with pea gravel.

Q: What is the material of the proposed roof hatch?

A: The roof hatch cover and curb shall be 11 gauge aluminum in accordance with specification 07 72 33 – Roof Hatches, Part 2 – Products, 2.1 Roof Hatch.

Q: How are the skylight curbs connected?

A: See record drawing Sheet ES2 and Sheet ES3 – Section 12/ES2.

Q: Where may cranes and dumpsters be located?

A: Cranes may set up on the concrete driveway east of the Scum Separator Building. Coordinate timing with FRSA to allow for driveway access to building. Dumpsters may also be located in this area.

This information shall be taken into consideration when preparing your proposal. Respondents shall acknowledge all project addenda. This addendum will be emailed to all plan holders as well as posted to FRSA's website at fourrivers.illinois.gov.

End of Addendum No. 1

Issued February 9, 2026

Four Rivers Sanitation Authority

Matthew L. Campbell, PE
Director of Engineering

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SECTION 01 10 00 – SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Project Identification: Scum Separator Building HVAC and Roof Replacement, Capital Project Number 2502

1. Project Location: Scum Separator Building, 3333 Kishwaukee Street, Rockford, Illinois 61109-2053

B. Owner: Four Rivers Sanitation Authority (FRSA)

1. Owner's Representative: Warren Adam, wadam@fourrivers.illinois.gov, (815) 871-0787

C. Engineer: System Design Service Engineering (SDS) for all HVAC work, Highland Engineering for all structural work, and FRSA for all roofing work.

1. SDS Representative: Scott Baier, scott@sdsegroup.com
2. FRSA Representative: Warren Adam, wadam@fourrivers.illinois.gov, (815) 871-0787

1.2 PROJECT DESCRIPTION

A. Summary: The Scum Separator Building HVAC and Roof Replacement project consists of the removal and replacement of the existing HVAC system, the removal of the existing rock ballast roof, and the installation of a thermoplastic membrane roofing system on the FRSA Scum Separator building. Roofing work includes the installation of a new hatch with ladder assist system, a mobile safety guard rail system, and all other appurtenances as indicated on the plans and in the specifications.

1.3 TIMETABLE

A. Notice to Prospective Bidders: January 27, 2026

B. Optional Pre-Bid Meeting: February 5, 2026

C. Last Addendum (if necessary) will be issued no later than 3 business days prior to due date of bids: February 13, 2026.

D. Bid Due Date: February 17, 2026, 10:00 a.m.

E. Bid Opening: February 17, 2026, 10:00 a.m.

F. Contract Time: Work under this Contract shall be commenced upon written Notice to Proceed. All work shall be completed by August 31, 2026. All corrective work shall be completed within thirty (30) days of FRSA's notice of required corrective work.

G. The Owner reserves the right to reject any or all bids received for this project. Any changes to the procurement timetable will be communicated by the Owner via Addendum.

1.4 PERFOMANCE REQUIREMENTS

A. Work shall be performed in compliance with current OSHA standards and building codes.

B. The Contractor shall provide submittals for all items supplied under this contract. Submittal drawings will be reviewed by FRSA or SDS as applicable and must be approved prior to delivery to the project site.

C. The Contractor shall be responsible for all site investigations, mobilization, site preparation, and all other appurtenances required for completing the project in accordance with the specifications.

D. The Contractor shall provide all materials and equipment in suitable and adequate quantities as required to accomplish the work specified herein, and as required to complete the project. Equipment belonging to FRSA shall not be used to accomplish this work, unless prior explicit permission is obtained from FRSA.

E. The Contractor shall notify FRSA (owner’s representative) a minimum of forty-eight (48) hours prior to beginning any work so that an inspector may be present. Any work performed by the Contractor without the FRSA's permission or not in the presence of a FRSA inspector may, at the FRSA's sole discretion, be rejected.

F. The materials and workmanship provided for this project shall meet or exceed the requirements specified herein and the manufacturer’s specifications. In the case of contradictions between building codes, these Detailed Specifications, and the manufacturer’s specifications, requirements shall take precedence in that order.

G. The Contractor shall comply with all OSHA and manufacturer's safety requirements. The FRSA assumes no responsibility for enforcement of safety standards.

H. The Contractor shall be responsible for all tests of materials and final installation required by the FRSA. All deficiencies noted by the inspectors shall be promptly corrected by the Contractor without cost to FRSA and prior to final payment.

1.5 MEANS, METHODS, TECHNIQUES AND SAFETY

A. FRSA will not supervise, direct, control, have authority over or be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with laws and regulations applicable to the furnishing or performance of the work. FRSA will not be responsible for the Contractor's failure to perform or furnish the work in accordance with the Contract documents.

1.6 UNITS OF MEASUREMENT

A. Both inch-pound (English) and SI (metric) units of measurement are specified herein; the values expressed in inch-pound units shall govern.

1.7 OFFSITE STORAGE

A. Offsite storage arrangements shall be approved by Owner for all materials and equipment. Such offsite storage arrangements shall be presented in writing and shall afford adequate and satisfactory security and environmental protection. Offsite storage facilities shall be accessible to Owner and Engineer. Applications for Payment for equipment stored off-site shall not be accepted; materials and equipment shall be paid in full and stored on site prior to requesting reimbursement.

1.8 ITEMS FURNISHED BY OWNER

A. Contractor shall provide Owner an opportunity to inspect items intended to be removed and re-used as part of the Work. Owner shall have the right to provide substitute materials if salvage items are not desired for re-use as indicated in the Contract Documents.

1.9 PREPARATION FOR SHIPMENT

A. All materials shall be suitably packaged to facilitate handling and protected against damage during transit and storage. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of Engineer.

B. Each item, package, or bundle of material shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

1.10 LAND FOR CONSTRUCTION PURPOSES

A. Contractor will be permitted to use the fenced grass field south of the Scum Separator building, for construction purposes and for storage of materials and equipment. Refer to *Section III – Exhibits, FRSA Plant Site Map* for location information Contractor shall provide a lock to daisy chain onto existing FRSA chain and lock for gate access.

B. Materials and equipment shall not impede access to the plant hydrant located in the grass field. Contractor shall provide a 36-inch minimum clear space around the hydrant and 60-inch minimum clear space in front of the hydrant.

C. Contractor shall immediately move stored materials or equipment if any occasion arises, as determined by Owner, requiring access to the storage area. Materials or equipment shall not be placed on the property of Owner until Owner has agreed to the precise location to be used for storage.

D. Contractor parking will be allowed in the parking stalls south of the Scum Separator building. Parking will not be allowed along the drive aisles of the plant. Refer to *Section III – Exhibits, FRSA Plant Site Map* for parking information.

1.11 EQUIPMENT

A. The Contractor shall not be permitted to use existing, FRSA-owned equipment.

B. The Contractor shall provide all materials and equipment in suitable and adequate quantities as required to accomplish the work shown, specified herein, and as required to complete the project. Devices, ladders, and other tools or equipment belonging to the FRSA shall not be used to accomplish this work. If FRSA's tools or equipment obstruct the work, Contractor shall notify FRSA's Representative and request that FRSA temporarily relocate such items until such time as work has been accomplished.

C. All tools, materials and equipment shall be clearly labeled with names of Contractor. Containers of materials and equipment shall also include labeling indicating contents.

1.12 OPERATION OF EXISTING FACILITIES

A. The existing facilities must be kept in continuous operation throughout the construction period. No interruption will be permitted which adversely affects the degree of service currently provided. Contractor shall provide temporary facilities per *Section 01 50 00 - Temporary Facilities and Controls* and make temporary modifications as necessary to keep the existing facilities in operation during the construction period. Due to potential health hazards and requirements of State of Illinois Environmental Protection Agency and U.S. EPA, existing wastewater treatment facilities must be maintained in operation during construction. Degree of treatment during construction shall be equal to or exceed efficiency of facility before construction started.

B. Operations shall be done in such manner as to avoid hazards to persons and property and interference with the use of adjacent areas or interruption of free passage to and from such areas. Care shall also be taken to prevent the spread of dust and flying particles.

C. Owner access to the Scum Separator building must be maintained at all times.

D. The allowable length of time for all other planned outages shall be closely coordinated with FRSA Operations and shall not exceed 60 minutes without prior written permission from Owner.

E. As shown on the Drawings, several existing and active connections will be traversed as part of the Work. When required and with Owner permission, these may be taken out of service for short periods of time. The allowable length of time for each service outage shall be coordinated with the Owner, but shall not exceed 4 hours.

F. Unless otherwise noted, the Contractor shall assume that all process piping and electrical wiring is in service.

G. Where interference with facilities occurs, cooperate with FRSA to eliminate interference. Operation of breakers or other disconnecting means on the existing electrical equipment, when required, shall be by or under the direct supervision of the Owner.

H. Take whatever precautions are necessary to prevent any damage to existing buildings and structures which are to remain and promptly repair any such damage that occurs as a result of construction.

I. Cease operations and notify FRSA's Representative immediately if adjacent appurtenances appear to be endangered in any way. Do not resume operations until corrective measures have been taken.

1.13 UNFAVORABLE CONSTRUCTION CONDITIONS

A. During unfavorable weather or other unsuitable construction conditions, Contractor shall confine its operations to work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

1.14 CUTTING AND PATCHING

A. Contractor shall perform all cutting and patching required for the Work and as may be necessary in connection with exposing Work for inspection, or for the correction of defective Work.

B. Contractor shall perform all cutting and patching required for and in connection with the Work, including but not limited to the following:

1. Removal of improperly timed Work.
2. Removal of samples of installed materials for testing.
3. Alteration of existing facilities.
4. Installation of new Work in existing facilities.

C. Contractor shall provide all shoring, bracing, supports, and protective devices necessary to safeguard all Work and existing facilities during cutting and patching operations. Contractor shall not undertake any cutting or demolition which may affect the structural stability of the Work or existing facilities without Engineer's concurrence.

D. Materials shall be cut and removed to the extent indicated on the Drawings or as required to complete the Work. Materials shall be removed in a careful manner, with no damage to adjacent facilities or materials. Materials which are not salvable shall be removed from the site by Contractor.

E. All Work and existing facilities affected by cutting operations shall be restored with new materials, or with salvaged materials acceptable to Engineer, to obtain a finished installation with the strength, appearance, and functional capacity required. If necessary, entire surfaces shall be patched and refinished.

F. Where new Work is to be installed or suspended concealing existing surfaces or spaces, Contractor shall remove foreign substances such as grease, sludge, and odoriferous materials before starting Work.

G. Where surfaces are to remain exposed, Contractor shall remove foreign substances such as grease, sludge, and odoriferous material.

1.15 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE

A. No Hazardous Environmental Conditions at the Site in areas that will be affected by the Work are known to the Owner.

B. If, during the progress of the Work, previously unidentified Hazardous Environmental Conditions are identified, Contractor shall stop work in the affected area and immediately notify the Engineer. At the Owner’s discretion, the Owner may instruct the Contractor to engage an abatement Subcontractor qualified to perform abatement of the suspected Hazardous

Environmental Condition identified, to verify the materials and, if necessary, encapsulate, enclose, or remove and dispose of all ACM, Metal Bearing Protective Coatings, Paints, and Linings, Contaminated Environmental Media, and/or other Hazardous Substances in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor - Occupational Safety and Health Administration, the applicable state regulating agency, and any local government agency. Payment for such work will be made by Change Order.

1.16 CLEAN UP

A. Contractor shall keep the premises free at all times from accumulations of waste materials and rubbish. Contractor shall provide adequate trash receptacles about the Site and shall promptly empty the containers when filled.

B. Perform daily cleaning and final cleaning to FRSA's satisfaction.

1. Clean FRSA-occupied areas daily. Debris shall not be allowed to accumulate. Excess debris and waste material shall be removed from the site daily as the work progresses.
2. Clean spillage, overspray, and heavy collection of dust in FRSA-occupied areas immediately. At completion of alteration and work in area, provide final cleaning and return space to condition suitable for use by FRSA.

C. Where existing materials, equipment and debris are to be removed, Contractor shall be responsible for removal and disposal. Disposal shall be in accordance with all applicable codes and regulations.

D. Remove materials from the site as work progresses. Leave areas in clean condition upon completion of the work. Remove all temporary work.

E. Construction materials, such as concrete forms and scaffolding, shall be neatly stacked by Contractor when not in use. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.

F. Volatile wastes shall be properly stored in covered metal containers and removed daily.

G. Wastes shall not be buried or burned on the Site or disposed of into storm drains, sanitary sewers, streams, or waterways. All wastes shall be removed from the Site and disposed of in a manner complying with local ordinances and antipollution laws.

H. Adequate cleanup will be a condition for recommendation of progress payment applications.

1.17 APPLICABLE CODES

A. References in the Contract Documents to local codes mean the following:

1. ICC International Building Code (with local amendments), 2024 edition
2. ICC International Existing Building Code (with local amendments), 2024 edition
3. ICC International Fire Code (with local amendments), 2024 edition
4. ICC International Mechanical Code (with local amendments), 2024 edition
5. ICC International Fuel Gas Code (with local amendments), 2024 edition
6. IDPH Illinois Plumbing Code (with local amendments), 2025 edition
7. NFPA 70 National Electric Code (with local amendments), 2026 edition

8. NFPA 780 Standard for Installation of Lightning Protection Systems, 2023 Edition
9. NFPA 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities, 2024 edition
10. ICC International Energy Conservation Code as adopted by the Illinois Energy Efficient Building Act (with state and local amendments) 2024 edition
11. IEPA: Part 370, Illinois Recommended Standards for Sewage Works, current edition
12. ASTM Material Standards
13. FRSA General Provisions & Technical Specifications for Sewer Construction, dated 1983
14. Other standard codes which apply to the Work are designated in the Specifications.

1.18 PRE-CONSTRUCTION CONFERENCE

A. Prior to the commencement of Work at the Site, a pre-construction conference will be held at a mutually agreed time and place. The conference shall be attended by:

1. Contractor and its superintendent.
2. Principal Subcontractors.
3. Representatives of principal Suppliers and manufacturers as appropriate.
4. Engineer.
5. Representatives of Owner.
6. Others as requested by Contractor, Owner, or Engineer.

B. Unless previously submitted to Engineer, Contractor shall bring to the conference a preliminary schedule for each of the following:

1. Progress Schedule.
2. Procurement Schedule.
3. Schedule of Values for progress payment purposes.
4. Schedule of Shop Drawings and other submittals.

C. The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

1. Contractor's preliminary schedules.
2. Transmittal, review, and distribution of Contractor's submittals.
3. Processing Applications for Payment.
4. Maintaining record documents.
5. Critical Work sequencing.
6. Field decisions and Change Orders.
7. Use of premises, office and storage areas, security, housekeeping, and Owner's needs.
8. Major equipment deliveries and priorities.

D. The Owner will preside at the conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.

1.19 PROGRESS MEETINGS

A. Contractor shall schedule and hold regular progress meetings at least every other week and at other times as requested by Owner, Engineer or as required by progress of the Work. Contractor, Engineer, and all Subcontractors active on the Site shall be represented at each meeting. Contractor may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors.

B. Contractor shall preside at the meetings. Meeting minutes shall be prepared and distributed by Contractor. The purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

1.20 SITE ADMINISTRATION

A. Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to Owner or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site (except Owner's employees) to observe the same regulations as Contractor requires of its employees.

B. Confine all work operations and activities to the immediate and general vicinities as may be necessary to complete the specified work.

C. Contractor shall coordinate construction operations with FRSA.

D. Contractor shall assume full responsibility for protection and safekeeping of material and products stored on or off premises.

E. Move any stored material or products which interfere with operations of FRSA or other Contractors

F. The Contractor shall be allowed reasonable use of available on-site 120-V electrical power sources for hand held tools, ancillary lighting, etc., as long as it does not interfere with the normal functioning of FRSA operations and as long as the usage does not develop into an abuse. Any power needs greater than 120-V shall be the Contractor’s responsibility.

1.21 SCHEDULE AND SEQUENCE OF OPERATIONS

A. The work shall be performed at such times and in or on such parts of the project and with such forces, materials and equipment to prevent any delay to the completion of the project within the time limits stated in the, and in accordance with the sequences and constraints specified herein.

B. Work Hours: The Contractor may work 7:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays. The Contractor may, with written approval from the Owner and at the Contractor's own expense, carry on work outside regular hours. To obtain Owner consideration of work outside the above-mentioned hours, or on Saturdays, Sundays or holidays, the contractor shall submit a written request, with reasons, to the Owner and shall allow forty-eight (48) hours for written approval and satisfactory arrangements to be made for observing the work in progress. For work within FRSA Wastewater Treatment Plant grounds, all issues relating to timing and access must be cleared with FRSA and coordinated with the Guard in shack at Plant Grounds entrance. Such permission, however, shall be subject to revocation if the Contractor fails to maintain adequate equipment and supervision for the proper execution and control of the work.

C. Sequences and Constraints: The Contractor shall plan, schedule and coordinate his work to minimize the amount of time existing facilities are out of service due to construction. All scheduled outages shall be no greater than 60 minutes. During the entire period of the contract, provide restoration of any unscheduled power interruption within 30 minutes during

regular business hours, and within 2 hours at night and on weekends. The Contractor shall be responsible for scheduling his work per the sequences and constraints specified herein.

D. The Contractor shall perform all work in a manner so as not to interfere with other utility lines in the vicinity. All construction activities shall be coordinated and scheduled with FRSA so as to minimize conflicts with ongoing operations and other construction work. Required removals and relocations of existing piping, wiring and related appurtenances shall be coordinated with FRSA. Contractor shall be responsible for all temporary electrical, piping and any other facilities required to minimize the amount of time the various operations are out of service. Downtime of certain operations and/or processes may be allowed with FRSA's approval. Before any shutdown coordination takes place, verify that all equipment, materials, and other necessary items required for shutdown work are on-site and prepared for installation. Pre-fabricate as much of this work as possible for accurate and proper installation.

E. Any modifications to existing equipment, piping, electrical, etc. required to remove and/or install new equipment shall be approved by the Engineer and performed at the sole expense of the Contractor. The following sequences and constraints are essential to reducing downtime of facilities due to construction and the time of completion of this project.

F. Unless otherwise specified, the Contractor shall provide FRSA Staff with 48 hours advanced notice to request a shutdown or outage of any existing facility needed to complete the work. The Contractor shall provide evidence that all necessary equipment items are on hand or on site at the time of the request. All system shutdowns or outages must be approved by FRSA. FRSA reserves the right to place facilities taken out of service back into service on emergency basis upon notification to Contractor. It shall be the Contractor's responsibility to clean the facilities to enable construction and to transport any waste materials removed to an appropriate on-site location (Plant grounds) directed by the Engineer. The Contractor shall be fully responsible for providing all temporary piping, electrical work, heating, ventilating, air conditioning, lighting, temporary structures, and related work to minimize the time operations are out of service. Not all details of construction are necessarily shown on the Drawings or covered in the Specifications. However, this does not relieve the Contractor of the responsibility of avoiding interruptions to processes that are essential to the safe and normal functioning of various plant operations. All utilities shall be located and marked prior to construction.

G. Overall Construction Schedule:

1. The Overall Schedule shall begin with the date the FRSA issues the Notice to Proceed and conclude with the date of Final Completion of the Contract. Failure to submit a project schedule will be considered cause for withholding of any partial payments otherwise due under the Contract in accordance with the General Conditions.
2. Contractor shall provide a detailed written construction sequencing plan prior to the start of work. The sequencing plan included with the project drawings and specifications provides a minimum scope for bidding purposes. The detailed plan shall include a schedule of all work with special attention given to the transitions to/from temporary facilities.

H. Delays and Recovery:

1. If it becomes evident the work will not be completed by the contract completion date, the Contractor shall submit a revised schedule outlining the additional amount of time needed to expedite completion of the remaining work. Contractor shall be liable for liquidated damages for all unjustifiable delays per the terms of the contract.
2. Once the Contractor starts on any part of the work which could potentially impact the safe and normal operation of various FRSA (Plant) facilities, he shall diligently and expeditiously prosecute such work until such time that the potential for deleterious impact is avoided.

3. Whenever it becomes apparent from the current progress of construction that the interface completion dates and/or contract completion dates will not be met, the Contractor shall take some or all of the following actions:

    a. Increase construction manpower in such quantities and crafts as shall substantially eliminate the backlog of work.
    b. Increase the number of working hours per shift, shifts per work day, work days per week, or the amount of construction equipment, or any combination of the foregoing sufficient to substantially eliminate the backlog of work.
    c. Reschedule work items to achieve concurrency of accomplishment.

4. The addition of equipment or construction forces, increasing the working hours or any other method, manner or procedure needed to make up for time lost due to avoidable delays shall not be considered justification for a Change Order or regarded as an acceleration order.

1.22 SITE PREPARATION

A. Preconstruction Video Recording: FRSA may conduct video recording of the site and all existing appurtenances prior to construction. Video recording is intended for use as evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and is for the protection of the Contractor and the FRSA. Videotaping will provide a means of determining whether and to what extent damage may have occurred as a result of the Contractor's operations.

B. Responsibility: The Contractor shall be responsible for determination of the full extent and nature of the work involved in disconnection and removing existing materials and equipment by careful review of the Plans and Specifications and by conducting a thorough inspection of the project site and surrounding areas prior to submitting a bid. The Contractor shall contact FRSA's Representative to arrange a site visit during normal working hours. Failure to do this shall not relieve the Contractor of responsibility to complete this work for the bid price submitted. Conduct site preparation work to minimize interference with other work being performed in vicinity.

C. Existing Conditions:

1. Some existing conditions may not be shown. Bidders are advised to carefully inspect the existing sites before preparing their bids. The removal of minor obstructions encountered that are not shown on the drawings but could have been foreseen by visual inspection of the site prior to bidding, shall be anticipated and accomplished without a cost adjustment to the contract, even though not shown or specifically mentioned.
2. Major obstructions encountered that are not shown on the drawings or could not have been foreseen by visual inspection of the site prior to bidding, should immediately be brought to the attention of FRSA's Representative. FRSA's Representative will make a determination before proceeding with the Work. If FRSA's Representative finds that the obstruction adversely affects the Contractor's cost or schedule for completion, an appropriate adjustment to the contract will be made.
3. The approximate location of the existing items to be moved or removed is shown on the drawings. All site preparation work shall be coordinated between the specifications and all drawings. Site preparation requirements identified on the drawings shall not be limited to those explicitly identified on drawings.

D. Repair of Damage: Material for repair of facilities damaged and disturbed during site preparation work shall be equal to that existing prior to the start of the work as determined by FRSA.

E. Site Work:

1. Perform work so as not to interfere with the work of other contracts in vicinity.
2. Work equipment shall be selected and operated such that structures, utilities, and other existing works that are to remain will not be damaged and cause injury to workers.
3. Provide temporary shoring, bracing, and other means to ensure safety of workers during demolition and removal.

1.23 PROTECTION OF PROPERTY

A. Provide, erect and maintain temporary barriers and barricades, as required, around the demolition work area to prevent the personnel from entering the work vicinity.

B. The Contractor shall protect the existing buildings, structures and property, in the vicinity of the work from damage. The Contractor shall provide bracing and shoring as necessary. The Contractor shall also protect other miscellaneous items which are not a part of the proposed work.

C. The Contractor shall protect existing property, roads, walks, equipment, or vehicles, and other potentially impacted items, which are not a part of the proposed work, which may be in the vicinity of the proposed work.

D. Perform work with trades qualified to perform work in manner causing least damage to each type of work.

E. Dust, dirt, and debris shall be controlled to protect existing equipment and operations from shutdown.

F. Contractor shall provide watertight and dust-tight enclosures for existing equipment that may be affected by operation of concrete saws, drills, or other work activities. Contractor shall ensure that protective enclosures do not shut down equipment due to excessive heat accumulation.

G. Give special attention to fire protection in areas where welding will be performed. Flame cutting shall not be permitted without special approval by FRSA's Representative. Protect combustible materials. Provide dry chemical extinguisher and train workers in their use.

H. Maintain in service and protect from damage and leakage, all existing utilities that are not being removed or replaced.

1.24 PERMIT REQUIREMENTS

A. No building permit will be required from the City of Rockford, as the project consists of maintenance work occurring within the FRSA wastewater treatment plant campus. All work shall comply with the regulations and requirements of FRSA, which has jurisdictional authority over the project.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION 01 10 00

SECTION 01 10 33 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 DEFINITIONS

A. Submittal Descriptions

1. Submittals requirements are specified in the technical sections. Submittals are identified by Submittal Description numbers and titles as follows:

a. Preconstruction Submittals: Submittals which are required prior to construction which include: certificates of insurance, surety bonds, list of proposed subcontractors, list of proposed products, construction progress schedule, submittal register, and schedule of values.

2. Approving Authority

a. Engineer authorized to approve submittal.

3. Work

a. As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.2 VARIATIONS

A. Variations from contract requirements require Owner approval and will be considered where advantageous to Owner.

1. Considering Variations

a. Discussion with Owner prior to submission will help ensure functional and quality requirements are met and minimize rejections and re-submittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).
b. Specifically point out variations from contract requirements in transmittal letters. Failure to point out deviations may result in the rejection and removal of such work at no additional cost to the Owner.

2. Proposing Variations

a. When proposing variation, deliver written request to the Engineer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Owner, including written analysis of the proposed variation. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

3. Warranting That Variations Are Compatible

   a. When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

4. Review Schedule Is Modified

B. In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the Owner of submittals with variations.

1.3 SUBMITTAL REGISTER

A. Prepare and maintain submittal register, upon contract award. This list may not be all inclusive and additional submittals may be required.

1. Column (a) Activity Number: Activity number from the project schedule.
2. Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.
3. Column (c): Lists specification section in which submittal is required.
4. Column (d): Lists each submittal description required in each specification section.
5. Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.
6. Column (f) Contractor Submit Date: Scheduled date for approving authority to receive submittals.
7. Column (g) Contractor Approval Date: Date Contractor needs approval of submittal.
8. Column (h) Contractor Material: Date that Contractor needs material delivered to Contractor control.
9. Column (i) Action Code: Date of action used to record Contractor's review when forwarding submittals to QC.
10. Column (j) List date of submittal transmission.
11. Column (k) through (m) List Dates related to review actions.
12. Column (o) List date approval received.

B. Use of Submittal Register

1. Submit submittal register. Submit with QC plan and project schedule. Verify that all submittals required for project are listed and add missing submittals. Coordinate and complete the register submitted with the QC plan and the project schedule:

C. Copies Delivered to the Owner

1. Deliver one copy of submittal register updated by Contractor to Owner with each invoice request.

1.4 SCHEDULING

A. Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Include certifications to be submitted with the pertinent drawings at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

1. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.
2. Submittals called for by the contract documents will be listed on the register. If a submittal is called for but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Owner does not relieve the Contractor of supplying submittals required by the contract documents but which have been omitted from the register or marked "N/A."
3. Re-submit register and annotate monthly by the Contractor with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.
4. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.5 ENGINEER APPROVING AUTHORITY

A. When approving authority is Engineer, the Engineer will:

1. Note date on which submittal was received.
2. Review submittals for approval only for conformance with project design concepts and compliance with contract documents. Engineer shall be allocated 10 business days from the time of receipt for submittal review. Contractor to submit an electronic copy of all final approved submittals, prior to substantial completion of the work.
3. Identify returned submittals with one of the actions defined in paragraph entitled, "Review Notations," of this section and with markings appropriate for action indicated.

B. Upon completion of review of submittals requiring Engineer approval, stamp and date approved submittals. All submittals shall be in electronic format.

1.6 DISAPPROVED OR REJECTED SUBMITTALS

A. Contractor shall make corrections required by the Engineer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications; notice as required under the clause entitled, "Changes," is to be given to the Engineer. Contractor is responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Engineer requiring rejection and removal of such work at the Contractor's expense.

B. If changes are necessary to submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.7 APPROVE SUBMITTALS

A. Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for.

B. After submittals have been approved or accepted by the Engineer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.8 OPERATION & MAINTENANCE (O&M) MANUALS AND AS-BUILT DRAWINGS

A. O & M Manuals

1. At termination of work, the Contractor and each major Subcontractor, as it applies to his work, shall submit 3 paper copies and an electronic copy of an operation and maintenance manual presenting full details of care, maintenance and operation of mechanical equipment and other operable equipment of every nature. Manuals shall include such things as:

   a. Manufacturer's instructions for care
   b. Spare parts lists and sources of supply
   c. Wiring diagrams
   d. Control diagrams, etc
   e. Testing results

2. The O&M manuals shall be compiled into hard covered 3–ring binders and submitted by the Contractor to the Owner for review and approval.

B. As-Built Drawings

1. Submit detail drawings showing final equipment layout, including assembly and installation details and electrical connection diagrams; piping layout showing the location of all supports and hangers, typical hanger details, reinforcement spacing rigidity classification, and static pressure. Include any information required to demonstrate that the system has been coordinated and functions properly as a unit on the drawings and show equipment relationship to other parts of the work, including clearances required for operation and maintenance. Submit function designation of the equipment and any other requirements specified throughout this Section with the shop drawings. At termination of work, the Contractor and each major Subcontractor, as it applies to his work, shall submit 3 paper copies and an electronic copy of as-built drawings. As-built drawings to clearly show any field made changes to the original design.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION 01 33 00

SECTION 01 42 00 – REFERENCES

PART 1 - GENERAL

1.1 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

D. The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
1819 L Street, NW, 6th Floor
Washington, DC 20036
Ph: 202-293-8020
Fax: 202-293-9287
E-mail: info@ansi.org
Internet: http://www.ansi.org/

AMERICAN WELDING SOCIETY (AWS)
550 N.W. LeJeune Road
Miami, FL 33126
Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
E-mail: info@aws.org or customerservice@awspubs.com
Internet: http://www.aws.org

ASME INTERNATIONAL (ASME)
Three Park Avenue, M/S 10E
New York, NY 10016-5990
Ph: 800-854-7179 or 800-843-2763
Fax: 212-591-7674
E-mail: infocentral@asme.org
Internet: http://www.asme.org

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9585
Fax: 610-832-9555
E-mail: service@astm.org
Internet: http://www.astm.org

COPPER DEVELOPMENT ASSOCIATION (CDA)
260 Madison Avenue
New York, NY 10016
Ph: 212-251-7200
Fax: 212-251-7234
E-mail: questions@cda.copper.org
Internet: http://www.copper.org

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)
1901 North Moore Street
Arlington, VA 22209-1762
Ph: 703-525-1695
Fax: 703-528-2148
E-mail: isea@safetyequipment.org
Internet: http://www.safetyequipment.org/

INTERNATIONAL CODE COUNCIL (ICC)
5360 Workman Mill Road
Whittier, CA 90601
Ph: 1-888-422-7233
Fax: 562-908-5524
E-mail: webmaster@iccsafe.org
Internet: www.iccsafe.org

NACE INTERNATIONAL (NACE)
1440 South Creek Drive
Houston, TX 77084-4906
Ph: 281-228-6200
Fax: 281-228-6300
E-mail: firstservice@nace.org
Internet: http://www.nace.org

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
Ph: 703-841-3200
Fax: 703-841-5900
Internet: http://www.nema.org/

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
Quincy, MA 02169-7471
Ph: 617-770-3000 or 800-344-3555
Fax: 617-770-0700
E-mail: webmaster@nfpa.org
Internet: http://www.nfpa.org

NSF INTERNATIONAL (NSF)
789 North Dixboro Road
P.O. Box 130140
Ann Arbor, MI 48113-0140
Ph: 734-769-8010 or 800-NSF-MARK
Fax: 734-769-0109
E-mail: info@nsf.org
Internet: http://www.nsf.org

SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL (SAE)
400 Commonwealth Drive
Warrendale, PA 15096-0001
Ph: 724-776-4970
Fax: 724-776-0790
E-mail: customerservice@sae.org
Internet: http://www.sae.org

UNDERWRITERS LABORATORIES (UL)
2600 N.W. Lake Road
Camas, WA 98607-8542
Ph: 877-854-3577
Fax: 360-817-6278
E-mail: CEC.us@us.ul.com
Internet: http://www.ul.com/

U.S. ARMY CORPS OF ENGINEERS (USACE)
Order CRD-C DOCUMENTS from:
Headquarters Points of contact
441 G Street NW
Washington, DC 20314-1000
Ph: 202-761-0011
E-mail: hq-publicaffairs@.usace.army.mil
Internet: http://www.wes.army.mil/SL/MTC/handbook.htm
Order Other Documents from:
USACE Publications Depot
Attn: CEHEC-IM-PD
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081
Fax: 301-394-0084
E-mail: pubs-army@usace.army.mil
Internet: http://www.usace.army.mil/publications
or http://www.hnd.usace.army.mil/techinfo/engpubs.htm

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20004
Ph: 202-272-0167
for Fax and E-mail see below
Internet: http://www.epa.gov
--- Some EPA documents are available only from:
National Technical Information Service (NTIS)
5301 Shawnee Road
Alexandria, VA 22312
Ph: 703-605-6050 or 1-688-584-8332

Fax: 703-605-6900
E-mail: info@ntis.gov
Internet: http://www.ntis.gov

1.2 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ABMA - American Boiler Manufacturers Association; www.abma.com.
8. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
9. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
10. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
11. AF&PA - American Forest & Paper Association; www.afandpa.org.
12. AGA - American Gas Association; www.aga.org.
13. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
15. AI - Asphalt Institute; www.asphaltinstitute.org.
16. AIA - American Institute of Architects (The); www.aia.org.
17. AISC - American Institute of Steel Construction; www.aisc.org.
18. AISI - American Iron and Steel Institute; www.steel.org.
19. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
20. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
21. ANSI - American National Standards Institute; www.ansi.org.
22. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
23. APA - APA - The Engineered Wood Association; www.apawood.org.
24. APA - Architectural Precast Association; www.archprecast.org.
25. API - American Petroleum Institute; www.api.org.
26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
27. ARI - American Refrigeration Institute; (See AHRI).
28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
29. ASCE - American Society of Civil Engineers; www.asce.org.
30. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
31. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
32. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
33. ASSE - American Society of Safety Engineers (The); www.asse.org.
34. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
35. ASTM - ASTM International; www.astm.org.

36. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
37. AWEA - American Wind Energy Association; www.awea.org.
38. AWI - Architectural Woodwork Institute; www.awinet.org.
39. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
40. AWPA - American Wood Protection Association; www.awpa.com.
41. AWS - American Welding Society; www.aws.org.
42. AWWA - American Water Works Association; www.awwa.org.
43. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
44. BIA - Brick Industry Association (The); www.gobrick.com.
45. BICSI - BICSI, Inc.; www.bicsi.org.
46. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org.
47. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
48. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bissc.org.
49. CDA - Copper Development Association; www.copper.org.
50. CE - Conformite Europeenne; http://ec.europa.eu/growth/single-market/ce-marking/.
51. CEA - Canadian Electricity Association; www.electricity.ca.
52. CEA - Consumer Electronics Association; www.ce.org.
53. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
54. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
55. CGA - Compressed Gas Association; www.cganet.com.
56. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
57. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
58. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
59. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
60. CPA - Composite Panel Association; www.pbmdf.com.
61. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
62. CRRC - Cool Roof Rating Council; www.coolroofs.org.
63. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
64. CSA - Canadian Standards Association; www.csa.ca.
65. CSA - CSA International; (Formerly: IAS - International Approval Services); www.csainternational.org.
66. CSI - Construction Specifications Institute (The); www.csinet.org.
67. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
68. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
69. CWC - Composite Wood Council; (See CPA).
70. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
71. DHI - Door and Hardware Institute; www.dhi.org.
72. ECA - Electronic Components Association; (See ECIA).
73. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
74. ECIA - Electronic Components Industry Association; www.eciaonline.org.
75. EIA - Electronic Industries Alliance; (See TIA).
76. EIMA - EIFS Industry Members Association; www.eima.com.
77. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
78. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
79. ESTA - Entertainment Services and Technology Association; (See PLASA).
80. ETL - Intertek (See Intertek); www.intertek.com.
81. EVO - Efficiency Valuation Organization; www.evo-world.org.
82. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
83. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
84. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
85. FM Approvals - FM Approvals LLC; www.fmglobal.com.

86. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
87. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
88. FSA - Fluid Sealing Association; www.fluidsealing.com.
89. FSC - Forest Stewardship Council U.S.; www.fscus.org.
90. GA - Gypsum Association; www.gypsum.org.
91. GANA - Glass Association of North America; www.glasswebsite.com.
92. GS - Green Seal; www.greenseal.org.
93. HI - Hydraulic Institute; www.pumps.org.
94. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
95. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
96. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
97. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
98. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
99. IAS - International Accreditation Service; www.iasonline.org.
100. IAS - International Approval Services; (See CSA).
101. ICBO - International Conference of Building Officials; (See ICC).
102. ICC - International Code Council; www.iccsafe.org.
103. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
104. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
105. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
106. IEC - International Electrotechnical Commission; www.iec.ch.
107. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
108. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
109. IESNA - Illuminating Engineering Society of North America; (See IES).
110. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
111. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
112. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
113. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
114. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
115. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
116. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
117. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
118. ISO - International Organization for Standardization; www.iso.org.
119. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
120. ITU - International Telecommunication Union; www.itu.int/home.
121. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
122. LMA - Laminating Materials Association; (See CPA).
123. LPI - Lightning Protection Institute; www.lightning.org.
124. MBMA - Metal Building Manufacturers Association; www.mbma.com.
125. MCA - Metal Construction Association; www.metalconstruction.org.
126. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
127. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
128. MHIA - Material Handling Industry of America; www.mhia.org.
129. MIA - Marble Institute of America; www.marble-institute.com.
130. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
131. MPI - Master Painters Institute; www.paintinfo.com.
132. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
133. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
134. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.

135. NADCA - National Air Duct Cleaners Association; www.nadca.com.
136. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
137. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
138. NBI - New Buildings Institute; www.newbuildings.org.
139. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
140. NCMA - National Concrete Masonry Association; www.ncma.org.
141. NEBB - National Environmental Balancing Bureau; www.nebb.org.
142. NECA - National Electrical Contractors Association; www.necanet.org.
143. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
144. NEMA - National Electrical Manufacturers Association; www.nema.org.
145. NETA - InterNational Electrical Testing Association; www.netaworld.org.
146. NFHS - National Federation of State High School Associations; www.nfhs.org.
147. NFPA - National Fire Protection Association; www.nfpa.org.
148. NFPA - NFPA International; (See NFPA).
149. NFRC - National Fenestration Rating Council; www.nfrc.org.
150. NHLA - National Hardwood Lumber Association; www.nhla.com.
151. NLGA - National Lumber Grades Authority; www.nlga.org.
152. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
153. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
154. NRCA - National Roofing Contractors Association; www.nrca.net.
155. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
156. NSF - NSF International; www.nsf.org.
157. NSPE - National Society of Professional Engineers; www.nspe.org.
158. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
159. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
160. NWFA - National Wood Flooring Association; www.nwfa.org.
161. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
162. PDI - Plumbing & Drainage Institute; www.pdionline.org.
163. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); http://www.plasa.org.
164. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
165. RFCI - Resilient Floor Covering Institute; www.rfci.com.
166. RIS - Redwood Inspection Service; www.redwoodinspection.com.
167. SAE - SAE International; www.sae.org.
168. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
169. SDI - Steel Deck Institute; www.sdi.org.
170. SDI - Steel Door Institute; www.steeldoor.org.
171. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
172. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
173. SIA - Security Industry Association; www.siaonline.org.
174. SJI - Steel Joist Institute; www.steeljoist.org.
175. SMA - Screen Manufacturers Association; www.smainfo.org.
176. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
177. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
178. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
179. SPIB - Southern Pine Inspection Bureau; www.spib.org.
180. SPRI - Single Ply Roofing Industry; www.spri.org.
181. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
182. SSINA - Specialty Steel Industry of North America; www.ssina.com.
183. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
184. STI - Steel Tank Institute; www.steeltank.com.
185. SWI - Steel Window Institute; www.steelwindows.com.
186. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
187. TCA - Tilt-Up Concrete Association; www.tilt-up.org.

188. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
189. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
190. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
191. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
192. TMS - The Masonry Society; www.masonrysociety.org.
193. TPI - Truss Plate Institute; www.tpinst.org.
194. TPI - Turfgrass Producers International; www.turfgrasssod.org.
195. TRI - Tile Roofing Institute; www.tileroofing.org.
196. UL - Underwriters Laboratories Inc.; http://www.ul.com.
197. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
198. USAV - USA Volleyball; www.usavolleyball.org.
199. USGBC - U.S. Green Building Council; www.usgbc.org.
200. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
201. WASTEC - Waste Equipment Technology Association; www.wastec.org.
202. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
203. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
204. WDMA - Window & Door Manufacturers Association; www.wdma.com.
205. WI - Woodwork Institute; www.wicnet.org.
206. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
207. WWPA - Western Wood Products Association; www.wwpa.org.

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. DIN - Deutsches Institut fur Normung e.V.; www.din.de.
2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
3. ICC - International Code Council; www.iccsafe.org.
4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.

1. COE - Army Corps of Engineers; www.usace.army.mil.
2. CPSC - Consumer Product Safety Commission; www.cpsc.gov.
3. DOC - Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
4. DOD - Department of Defense; www.quicksearch.dla.mil.
5. DOE - Department of Energy; www.energy.gov.
6. EPA - Environmental Protection Agency; www.epa.gov.
7. FAA - Federal Aviation Administration; www.faa.gov.
8. FG - Federal Government Publications; www.gpo.gov/fdsys.
9. GSA - General Services Administration; www.gsa.gov.
10. HUD - Department of Housing and Urban Development; www.hud.gov.
11. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; www.eetd.lbl.gov.
12. OSHA - Occupational Safety & Health Administration; www.osha.gov.
13. SD - Department of State; www.state.gov.
14. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.

15. USDA - Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.
16. USDA - Department of Agriculture; Rural Utilities Service; www.usda.gov.
17. USDOJ - Department of Justice; Office of Justice Programs; National Institute of Justice; www.ojp.usdoj.gov.
18. USP - U.S. Pharmacopeial Convention; www.usp.org.
19. USPS - United States Postal Service; www.usps.com.

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
2. FED-STD - Federal Standard; (See FS).
3. FS - Federal Specification; Available from DLA Document Services; www.quicksearch.dla.mil.

    a. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org/ccb.

4. USAB - United States Access Board; www.access-board.gov.
5. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION 01 42 00

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electric power from existing system.

B. Water.

C. Temporary sanitary facilities.

D. Waste removal facilities and services.

1.2 ELECTRIC POWER FROM EXISTING SYSTEM

A. Electrical power of 120 volts, 60 Hz, single phase at convenience receptacles is available from the Scum Separator Building at no charge. Contractor shall provide any additional or temporary electrical power or power of other voltages it may require for prosecution of the Work.

B. Electrical power shall be used only in such quantities as will not interfere with Owner's requirements, and care shall be taken not to overload the existing facilities.

C. Provide connections and extensions of services as required for construction operations.

D. Existing lighting systems may be utilized by Contractor to the extent available. Any necessary additional or temporary lighting systems shall be provided by Contractor at no additional cost to Owner.

E. These provisions shall not be construed as a guarantee by Owner of the uninterrupted continuation of power, and interruptions beyond the control of Owner shall not be reason for claims for additional costs nor for extensions of time. Contractor shall provide, at no additional cost to Owner, any necessary power required for prosecution of the Work during such interruptions.

1.3 WATER

A. Except as listed herein, all water required for and in connection with the Work to be performed will be furnished by Owner in the vicinity of the Site without charge to Contractor, provided:

1. Contractor shall procure such water in the location and in the manner designated by FRSA.
2. Contractor at its own expense shall make authorized connections and provide means for delivering the water to the Site.
3. Contractor shall provide adequately against waste and needless use of water.

B. Potable water used for domestic purposes, including drinking and handwashing, shall be supplied by the Contractor.

1.4 TEMPORARY SANITARY FACILITIES

A. Contractor shall furnish temporary sanitary facilities at the Site, as provided herein, for the needs of all construction workers and others performing work or furnishing services on the Project. Location of temporary sanitary facilities shall be approved by FRSA.

B. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. Contractor shall furnish at least one toilet facility for each 20 workers at the site. Contractor shall provide at least one handwashing station next to each temporary sanitary facility. Contractor shall enforce the use of such sanitary facilities by all personnel at the Site.

1.5 WASTE DISPOSAL FACILITIES

A. Provide waste-collection containers in sizes adequate to handle waste from construction operation as required to maintain the site in clean and orderly condition. Location of waste disposal facilities shall be approved by FRSA.

B. Transport all waste material removed during construction to an approved dumping area for each item. All fees shall be paid by the Contractor.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION 01 50 00

SECTION 01 60 00 – PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. General product requirements.

B. Transportation, handling, storage and protection.

C. Product option requirements.

D. Substitution limitations.

E. Maintenance materials, including extra materials, spare parts, tools, and software.

1.2 SUBMITTALS

A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 - PRODUCTS

2.1 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by Contract Documents.

B. Use of products having any of the following characteristics is not permitted:

1. Containing lead, cadmium, or asbestos.

2.2 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.3 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 - **EXECUTION**

3.1 SUBSTITUTION LIMITATIONS

A. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

B. A request for substitution constitutes a representation that the submitter:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.

2. Will provide the same warranty for the substitution as for the specified product.

3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.

4. Waives claims for additional costs or time extension that may subsequently become apparent.

5. Will reimburse FRSA for review or redesign services associated with re-approval by authorities.

C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

D. Substitution Submittal Procedure:

1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.

2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.

3. FRSA will notify Contractor in writing of decision to accept or reject request.

3.2 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Provide equipment and personnel to accept all shipments and unload as necessary.

G. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

H. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

I. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.3 STORAGE AND PROTECTION

A. Store and protect products in accordance with manufacturers' instructions.

B. Store with seals and labels intact and legible.

C. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.

D. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

E. Comply with manufacturer's warranty conditions, if any.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Prevent contact with material that may cause corrosion, discoloration, or staining.

H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION 01 60 00

SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Perform cleaning throughout construction and at completion of work.

B. Refer to Specification sections for specific cleaning products or work.

C. Any damage to pavement turf, structures, or other features not scheduled for removal or replacement shall be repaired or replaced without cost to FRSA.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

B. Use only those cleaning materials which will not create hazards to property and persons.

PART 3 - EXECUTION

3.1 DURING CONSTRUCTION

A. Provide on-site containers for collection and removal of waste materials, debris, and rubbish in accordance with applicable regulations.

B. Clean all drive aisles containing mud or construction debris.

C. Broom clean interior hard surface floors and exterior paved surfaces as necessary.

D. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

3.2 FINAL CLEANING

A. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from exposed interior and exterior surfaces.

B. Polish glossy surfaces to clear shine.

C. Ventilating Systems:

1. Clean permanent filters and replace disposable filters if units were operating during construction.

2. Clean ducts, blowers, and coils if units were operated without filters during construction.

D. Electrical Systems:

1. Clean lighting fixtures, lamps, and other electrical equipment soiled during installation.

E. Broom clean interior hard surface floors and exterior paved surfaces. Rake clean other surfaces of grounds.

F. Clean drive aisles of accumulated construction material. Clean paved streets with water.

G. Restore any damaged turf areas to near original contour and state.

H. Clear site of all nails, screws, hardware, and other debris generated by the project.

I. Prior to Final Completion Contractor, with Engineer and Owner, shall conduct a site inspection to confirm all necessary restoration has been completed.

END OF SECTION 01 74 00

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 selected portions of building or structure.
2. Demolition and removal of selected site elements.

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 Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

D. 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.

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

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

1.5 FIELD CONDITIONS

A. Owner will maintain operation of building throughout the construction process. 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 Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

1.6 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. 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.

B. Survey of Existing Conditions: Record existing conditions by use of measured drawings, preconstruction photographs, or video.

1. 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.
2. 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. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove HVAC systems, equipment, and components indicated on Drawings to be removed.

3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent equipment and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary ventilation, heating, and cooling as specified on project drawings.

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

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

C. 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. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials and contractor supplied monitoring equipment shows that the atmosphere is non-explosive and safe for workers. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.

6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
8. Dispose of demolished items and materials promptly.

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

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.

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

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

D. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished and then break up and remove.

E. 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 to prevent corrosion to decking material.

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 methods 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 02 41 19

SECTION 05 52 13 – METAL RAILINGS

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. Mobile safety rail.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data.

1.4 DELIVERY, STORAGE, AND HANDLING

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

1.5 WARRANTY

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

PART 2 - PRODUCTS

2.1 MOBILE SAFETY RAIL

A. Manufacturers:

1. SRC360 Mobile Safety Rail by Safety Rail Company, 4244 Shoreline Drive, MN 55384, 1-866-377-9561, Web: www.safetyrailcompany.com.
2. FRSA approved equal.

B. System: Shall be non-penetrating with a modular design to allow for various configurations. No tools, welding, or drilling shall be necessary for installation.

C. Structural Load: 200 lb (90.7 kg) force minimum in any direction to all components in accordance with OSHA Standard 20 CRFR 1926.502.

D. Railings: System shall have a top and mid rail in accordance with OSHA Standards 29 CFR 1910.29 (b). Assembled height shall be 42” (107 cm) to top rail and 21” (53 cm) to middle rail. Railing tube shall be 1-5/8” (41 mm) O.D. x 0.065W hot rolled pickled electric weld steel tubing, free of sharp edges and snag points. Railing shall be powder coated with a “safety yellow” finish.

E. Mounting Base: Each base shall weigh a minimum of 104 lbs (45.8 kg). EPDM base pads shall come pre-installed on bases for maximum grip and to protect the thermoplastic roofing system.

F. Securing Pins: Shall be 1010 carbon steel, zinc plated, and yellow chromate dipped. Pins shall consist of collared pin and latch.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install products in strict accordance with manufacturer’s instructions and approved submittals.

B. Refer to plan sheet *A2 - Roof New Work Plan* for layout information

3.2 ADJUSTING AND CLEANING

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

END OF SECTION 05 52 13

SECTION 07 01 50 – PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Roof surface examination.
2. Materials removal
3. Temporary protection.
4. Field quality control.

1.3 DEFINITIONS

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

B. 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.

C. Existing Roofing System: Believed to consist of pea gravel and lightweight insulating concrete with components and accessories on the existing concrete deck.

D. Roof Tear-Off: Removal of Existing Roofing System as indicated on the drawings, and all underlayments.

1.4 SUBMITTALS

A. Provide a Work Plan that defines the means of managing precipitation while the old roofing is removed prior to the new roofing being installed.

B. Provide a schedule for existing roof removal and replacement.

1.5 MATERIAL OWNERSHIP

A. Unless otherwise noted, demolished materials shall become property of the Contractor and shall be removed from the Project site.

1.6 QUALITY ASSURANCE

A. Materials Removal Firm: See *Section - 07 54 23 Thermoplastic Polyolefin Roofing* for roofing contractor qualifications.

B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Temporary Protection: Sheet polyethylene or fiber reinforced plastic tarpaulins; provide adequate weights to retain sheeting in place.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Proceed with roofing preparation only when weather conditions permit the work to proceed without water entering the building.

3.2 MATERIALS REMOVAL

A. All materials required to install the proposed thermoplastic membrane roofing system shall be on site prior to the removal of the existing roofing system.

B. Remove flashings, vent flashings, and flashings around roof penetrations.

C. Remove pea gravel and lightweight insulating concrete down to the existing concrete deck to provide a clean working surface to receive the proposed thermoplastic membrane roofing system.

D. Remove existing roof hatch and curb complete down to existing roof deck. Gate sensor receiver cables pass through existing roof hatch wall and shall remain. During removal, verify existing route of cables and match during installation of new roof hatch and curb. Coordinate gate sensor receiver cable work with FRSA Operations.

E. Remove western aluminum cap and curb complete down to existing roof deck. Infill opening as necessary to accommodate HVAC equipment. See plan sheet *S1 – Roof Framing Plan and Details.*

F. Modify roof curbs and patch existing roof penetrations as shown in plan sheet *S1 – Roof Framing Plan and Details*.

G. Clean and fully prepare the existing concrete deck following the removal of the existing roofing system. Existing deck shall be free of dust, debris, moisture, and other substances detrimental to roofing installation according to thermoplastic membrane roofing system manufacturer's

written instructions. Remove sharp projections. Prior to installing the roofing material the Contractor shall verify that the existing deck is suitable for the proposed roofing system.

3.3 TEMPORARY PROTECTION

A. Provide temporary protective sheeting over uncovered deck surfaces.

B. Provide weights or temporary fasteners to retain sheeting in position. Upon removal of the sheeting, repair holes produced by temporary fasteners.

C. Provide for surface drainage from sheeting to existing drainage facilities.

D. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.

1. Prevent debris from entering or blocking roof drains and conductors.

    a. Use roof-drain plugs specifically designed for this purpose.
    b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.

2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.

    a. Do not permit water to enter into or under existing roofing system components that are to remain.

3.4 FIELD QUALITY CONTROL

A. Field inspection shall be performed daily by the Contractor and Owner.

B. Contractor shall notify the Owner in advance of roofing material removal to arrange for inspection of the existing roof decking. Inspections shall be performed jointly by the Contractor and Owner.

END OF SECTION 07 01 50

SECTION 07 54 23 – THERMOPLASTIC POLYOLEFIN ROOFING

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. Thermoplastic polyolefin roofing system.
2. Board roof insulation.
3. Saddles and crickets.
4. Mechanical anchors.
5. Insulation adhesive.
6. Flashings.
7. Termination bars.
8. Copings.
9. Walkway roof pads.

1.3 SUBMITTALS

A. Process all submittals as required in *Section 01 33 00 – Submittal Procedures*.

B. Product Data: Submit roofing materials producer's specifications, material characteristics and installation instructions for each product required including fasteners.

C. Certificates:

1. Submit copy of membrane producer's approval of Installer.
2. Submit membrane producer's letter, signed by an officer of the company, affirming that all construction documents have been reviewed, the materials proposed for use comply with the requirements of the construction documents and are acceptable to the company for issue of the warranties specified.
3. Submit certification that the roof system to be furnished has been tested and approved by Factory Mutual as a Class 1A roof system with 1-60 wind uplift resistance 4. Submit list of foremen who have received factory training for installation of the system to be installed, along with kinds and dates of training.

D. Shop Drawings: Indicate:

1. Outline of roof and dimensions.
2. Typical and special details for flashings, roof curbs, penetrations, roof drains, perimeter conditions, termination details, etc. Reference the locations of details on the roof outline.
3. Number and mark of each factory prepared roofing sheet and flashing.

4. Fastener patterns for insulation and membrane edges at field, perimeter and corner conditions as required to meet design requirements for wind uplift resistance. Include copies of the applicable FM Approval Data pages as required to demonstrate compliance of installation with all FM requirements.

E. Test Strip Results:

1. Submit on a copy of the Shop Drawing plans marked to show where each test strip was cut to verify the integrity of the welded seams.
2. Upon Engineer's request submit the test strips taken, each identified for location and date taken.

1.4 QUALITY ASSURANCE

A. Roofing Contractor: Licensed in the State of Illinois, and specializing for at least 5 years in the type of membrane system involved, who is approved by Engineer and is certified/licensed by roofing membrane system producer and who can furnish for this installation a foreman factory trained by the roof membrane system producer.

B. Source of Supply: Membrane system materials shall be obtained from a single source of supply except as authorized otherwise by membrane producer.

C. Standards of Installation: All components of roof system shall be furnished and installed to meet wind resistance standards for a Class 1-60 roof as established in FM Data Loss Sheets 1-28 and 1- 29.

D. Pre-Construction Conference: Roofing installers shall meet with Owner's representative and roof membrane producer's representative before construction begins to establish the techniques and methods required to complete roofing work as well as inspection criteria.

E. Membrane Producer's Inspection: Membrane producer's qualified inspector shall inspect roofing work during installation. Upon completion, he shall inspect work once again, in company with Owner's authorized representative, at time arranged by Roofing Contractor. Roofer shall pay all manufacturer's charges related to inspections.

1. As a minimum, the membrane producer shall inspect:

a. Adhering of insulation.
b. Adhering of membrane.
c. Construction of seams and base flashings.
d. Other critical points of construction as deemed necessary at the pre-construction conference.

2. Copies of record photographs and inspection reports shall be submitted.

F. Scheduling and Coordination:

1. Coordinate roofing installation with mechanical and electrical work associated with roof penetrations.
2. No phased construction will be considered or approved.

G. Wet and Damaged Materials: Shall not be installed.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Deliver materials to the job site in their original containers or packages, sealed, with legible labels intact, brand name, lot number, warning labels and reference standards clearly shown.

B. Temperatures Prior to Use: Store materials in the dry and in accordance with membrane producer's instructions. Other than roof membrane, all materials furnished by membrane producer shall be stored between 60°F and 80°F. If exposed to lower temperatures, restore to 60 - 80°F prior to use.

C. Warped or Broken Insulation Boards: Shall be removed from site.

1.6 PROJECT CONDITIONS

A. Winds: Do not weld membrane when gusty winds or broken skies cause rapid fluctuations in ambient heat gain and heat loss.

B. Cold Weather: Follow membrane producer's special recommendations when cold weather retards free flow of adhesives and sealants. Do not apply adhesives below adhesive manufacturers' recommended ambient temperature ranges.

C. Electrical Power: Furnish power for heat welders by way of portable generator(s) producing at least 30 amps per welder supplied or at Contractor's option, furnish power to 220V heat welders by way of #10 x 3 or greater power cords and boost the power with a step-up transformer when cord length exceeds 150 feet.

D. Fire Prevention: Take every precaution to prevent fire.

1. Maintain at least 2 portable fire extinguishers, rated 10-B:C-20 pounds, near area where adhesives are being used and train applicators in their proper use.
2. Do not use open flames to heat adhesives. Allow solvents to air-dry.
3. Use only grounded spray equipment.

1.7 WARRANTY

A. Roofing: Shall be provided with a non-prorated, No-Dollar-Limit, full system warranty to Owner, including insulation, against leaks or defects of any kind due to faulty materials or workmanship as follows.

1. Roofing membrane system producer's 15 year warranty for materials and workmanship.
2. Roofing Contractor's 15 year warranty for workmanship.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. System Fire Rating: Provide a fire-resistant membrane and insulation assembly which has been tested and listed by Underwriter's Laboratories, Inc. (UL) as Class A or by Factory Mutual (FM) as Class 1A, for the roof decks and slopes to be used on this project.

B. System Wind Rating: Provide a membrane, flashing and insulation assembly that is currently listed by FM or UL to have a 30 psf wind uplift resistance rating, for example, FM 1-60.

C. System Hail Rating: Provide a membrane, flashing and insulation assembly that is currently listed by FM with a 1-SH hail resistance rating for the roof constructions indicated.

D. System Type: Reinforced thermoplastic olefin (TPO) membrane fully adhered to roof insulation which has been fully adhered to the roof deck.

1. Approved Products: Use one of the following systems to the extent that it meets the requirements of this Section:

a. Carlisle SynTec Incorporated “Sure-Weld”.
b. Firestone Building Products Company “UltraPly TPO”.
c. GAF Materials Corporation “EverGuardTPO”.
d. GenFlex “TPO”.
e. Versico “Versiweld”.

2.2 MATERIALS

A. Roof Membrane: A thermoplastic olefin (TPO) based on ethylene propylene cured rubber, .060" (60 mil) thick, reinforced with a fully encapsulated 10 x 10,1000 denier polyester scrim, white color.

1. Breaking Strength: 225 lbf (1 kN); ASTM D 751, grab method.
2. Elongation at Break: 15 percent; ASTM D 751.
3. Tearing Strength: 55 lbf (245 N) minimum; ASTM D 751, Procedure B.
4. Brittleness Point: Minus 22 deg F (30 deg C).
5. Ozone Resistance: No cracks after sample, wrapped around 3-in.- (75-mm-) diameter mandrel, is exposed for 166 hours to temperature of 104 deg F (40 deg C) and an ozone level of 100 pphm (100 mPa); ASTM D 1149.
6. Resistance to Heat Aging: 90 percent minimum retention of breaking strength, elongation at break, and tearing strength after 166 hours at 240 deg F (116 deg C); ASTM D 573.
7. Water Absorption: Less than 4 percent mass change after 166 hours' immersion at 158 deg F (70 deg C); ASTM D 471.
8. Linear Dimension Change: Plus or minus 2 percent; ASTM D 1204.

B. Roof Board Insulation: Rigid boards with HCHC-free isocyanurate foam core and glass fiber reinforced mat facers or organic/inorganic facers both sides.

1. Manufacturers:

a. Atlas Roofing Corporation “AC Foam II”.
b. Firestone Building Products Company “ISO 95+”.
c. GAF Materials Corporation “EnergyGuard ISO”.
d. Hunter Panels, LLC “H-Shield”.

2. Thickness: For application in minimum 2 layers, one 2-1/2” and one 3” to a total typical system thickness of 5-1/2” or as otherwise shown on drawings, providing a minimum LTTR R of 5.8 per inch.
3. Board Size: 4-feet by 4-feet maximum size for adhered boards.
4. Tapered Insulation: Isocyanurate units by manufacturer of board insulation, tapered as required to achieve 1/8”/ft slopes except as otherwise indicated. No board shall be less than 3/4" thick..

5. R-Value: Minimum R-value shall be R-30.
6. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

C. Saddles and Crickets: Roof membrane manufacturer's recommended fill, or additional tapered insulation installed on top or bottom of typical board insulation.

D. Mechanical Anchors: Types recommended by roof system manufacturer, including compression plates, for the kind of substrate indicated. Anchors shall feature anti-corrosive materials and antibackout design.

1. Approved Types: International Permalite Permafastener, Celotex Insulfast Nail/Disc or SFS Stadler's TPR Peel Rivet.
2. Anti-Corrosion Coating: Fasteners anchoring into wood shall bear zinc-free coatings.
3. Static Backout Resistance: At least 15 inch-pounds in 22-gauge steel deck.
4. Lengths: Selected to penetrate at least 3/4" into top flute of steel deck, but not so long as to penetrate bottom flute.
5. Fasteners for Termination Bars: Furnish fasteners with neoprene washers..

E. Insulation Adhesive: Any of the following, or equal, able to meet FM Class 1-90 requirements, as approved by Engineer:

1. Cold Adhesive: (Note that any costs applicable to establishing a cold adhesive as part of the roof warranty shall be deemed to have been included in any Bid Sum.)

a. Tremco Roofing "FAS-n-FREE".
b. Insta-Foam Products, Inc. "Insta-Stik".
c. Carlisle "Sure-Seal Fast 100".

2. Hot steep asphalt meeting ASTM D 312, Type III. (Note, Roofing Contractor may use steep asphalt only when this product is approved and included as a part of the roofing membrane system producer's warranty).

F. Base and Parapet Flashing: Same material as used for roof membrane.

G. Flashing To Cover Corners In Substrates and Secondary Flashings Over Termination Bars: Same material as roof membrane; or roof membrane producer's unreinforced ethylene propylene-based flashing strips, .055" (55 mil) thick, of matching color.

H. Pipe Flashings: Premolded rubber boots approved by system producer for the membrane system, complete with stainless steel, screw tightened, pipe clamps.

1. For ganged pipe penetrations use "ChemCurb System" manufactured by Chem Link, Inc., Kalamazoo, Michigan, tel. 800-826-1681, fax 616-344-3339.
2. For H-column penetrations use "ChemCurb System" manufactured by Chem Link, Inc., Kalamazoo, Michigan, tel. 800-826-1681, fax 616-344-3339.

I. Termination Bars: Aluminum bars with serrated backs as recommended by membrane system producer.

1. All exposed fasteners shall be installed with neoprene washers.

J. Metal Copings: Match existing dimensions and coloring. Materials shall be per *Section - 07 62 00 Metal Flashings*.

K. Wood Nailer:

1. Contractor shall verify size of wood nailer in field. Lumber shall be pressure-treated Douglas Fir, Southern Yellow Pine, or wood having similar decay-resistant properties. Only lumber pressure-treated with salt preservatives will be allowed. Lumber treated with wood preservatives such as creosote, pentachlorophenol, copper naphthenate, and copper 8-quinolinolate will adversely affect the thermoplastic membrane when in direct contact and will not be accepted.
2. Secure wood nailers to structural concrete using ½ in. (13 mm) or 3/8 in. (10 mm) steel headed or plate anchor bolts (or threaded rod with a nut at the end) with bolts and washers spaced a minimum of 36 in. Embed anchor bolts a minimum of 5 in. (300 mm). Countersink bolt holes a maximum of ¾ in. (20 mm) when 1 ½ (40 mm) thick wood nailers are used.

L. Walkway Pads: Types recommended by roof system manufacturer. Thickness shall be at least 0.150” (150 mil) thick, with tear strength of at least 100 lbf/in. Minimum of 30” width, white color. Provide walkway pads from roof hatch to each piece of roof mounted equipment as shown on Drawings.

M. Auxiliary Materials: Prefabricated flashing units, bonding adhesives, sealants, splicing cements, mastics and other accessory materials shall be as recommended by producer of roof membrane for the system installed.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with following requirements and other conditions affecting performance of roofing system:

1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
3. Verify that existing concrete deck is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
4. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.
5. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean existing concrete deck of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.3 ROOF BOARD INSULATION INSTALLATION

A. General: Lay insulation boards in 2 layers, with joints tightly butted and staggered at least 6" between adjacent rows and between layers.

1. Flatness: Do not allow difference in elevation between units at joints to exceed 1/16".
2. Cuts: Straight or mitered, as required for adjoining faces to mate tightly.
3. Voids: Fill voids tight with slivers of insulation. Cut and fit tightly around obstructions.
4. Extent of Application: No more insulation shall be placed than can be covered with roofing membrane before the end of the day's work or before onset of inclement weather.
5. Adhesives: Shall be applied only to clean, dry surfaces.

B. Crickets and Saddles: Slopes less than 1/8" per foot in the field of the roof, before and after maximum loading, shall not be accepted. Assure positive drainage flow by installing crickets and saddles wherever flow of rain water is obstructed, inadequate or must be positively encouraged during storms to counter the forces of excessive runoff speeds or high winds. Take special care to correct flow patterns at rooftop equipment.

C. Utilize roof board insulation beneath the concrete parapet cap as necessary to create a flush interior wall. See *Detail 1* on plan sheet *A2 - Roof New Work Plan.*

3.4 ROOF MEMBRANE INSTALLATION

A. General: Install roofing membrane and flashings in accordance with details, specifications and best practices recommended by membrane producer. Follow all recommendations and comply with all precautions specified by roofing producer except that where conflict occurs between producer's recommendations and these specifications, the more stringent requirement shall prevail.

1. Direction of Membrane Placement: Orient the membrane so that rainwater runs over rather than along lap joints.
2. Whole Sheets: Use whole, single sheets to the extent practicable.

B. Membrane Installation: Lay membrane in full bed of contact adhesive for 100% adhesion.

1. Relaxing: Roof membrane shall be set in place over substrate without stretching and allowed to relax 30 minutes before bonding.
2. Placement: Set sheets in final position, free of wrinkles and folds, overlapping adjacent sheets, with up-hill sheet on top of joint. Make overlap 2–1/2" on TPO membranes. Then roll sheet back evenly onto itself. Remove bonding contaminants from mating surfaces.
3. Bonding Adhesive Application: Apply evenly to underside of sheet and to insulation at about the same time so as to allow matching drying times. Smooth out adhesive with nap roller. Hold bonding adhesive well back from edges to be spliced over other membrane.
4. Bonding to Insulation: When bonding adhesive is tacky and does not stick or string to touch of a dry finger, roll membrane into the coated substrate slowly and evenly so as not to cause wrinkles. Compress the bond with an approved roller. Do not bond surfaces before adhesive becomes tacky. Should adhesive loose its tackiness, reapply adhesive. Set the pace of work accordingly. When first half of a sheet is fully adhered, complete other half in same manner.

5. Contaminated Adhesive: Should adhesive become contaminated by dust, moisture, walking etc., re-apply adhesive, but only after contaminated adhesive is thoroughly dry, even if redoing entire field of adhesive is required. Remove contaminated adhesives when so recommended by membrane producer.

C. Lap Splices:

1. Seams: Shall be field hot air welded with properly maintained and calibrated welding equipment, according to best practice, after thoroughly cleaning mating surfaces.
2. Exposed Scrim: Apply sealer over any edges that expose membrane's reinforcing scrim.

D. Edge Attachment: Mechanically attach edges of membrane all around roof edges and roof openings, anchoring into parapets, using concrete anchors and bonding plates and/or termination strips according to membrane producer's recommendations and approved details. See *Detail 1* on plan sheet *A2 - Roof New Work Plan.*

E. Flashing and Metal Copings: Bond only to clean surfaces. Contour the membrane to fit substrate to which it is bonded so as not to allow bridging or gapping effect.

1. Roof Interruptions, Curbs and Edges: Flash with longest pieces practicable. Terminate flashings a minimum of 8" above adjacent roof surface unless indicated otherwise.
2. Pipe Penetrations: Flash with prefabricated rubber boots. Seal the top of boots with stainless steel strap clamps and continuous bed of mastic sealant. Form all surfaces so as to provide positive drainage.
3. Pipe Clusters and Other Unusual Penetrations: Seal according to Engineer's approval using sealant pockets having proper metal flashings all around.
4. Base Flashings: Membrane flashings applied over upright surfaces shall be fully adhered to substrate, all across contact area, using techniques similar to those used to bond main roof membrane.
5. Termination Bars: Fasten bars a maximum of 12" o.c. and within 2" of ends of units, using neoprene washered fasteners appropriate to substrate. Allow expansion space between units of 3/16" when metal temperature is 70°F or below and 1/8" when above 70°F.
6. Joints In Membrane Flashings: Provide a minimum lap of 3" at joints and compress the bond with an approved roller. Round off membrane corners. Apply additional patches of flashing membrane over joints and seal all around edges, according to roof membrane system producer's recommendations.
7. Flashing Over Fasteners: Cover the fasteners with flashing membrane, providing a minimum lap of 3" beyond washers.
8. Metal Copings: Field measure, fabricate, and install metal coping over new wood nailer anchored to existing concrete parapet cap. See *Detail 1* on plan sheet *A2 - Roof New Work Plan*.

F. Roof Walkway Pads: Ensure membrane surface is clean, completely dry, and free of debris prior to installation. Install in 10' lengths, leaving a minimum of 1" space between sections to allow for drainage. Adhere to membrane surface via adhesives, tape, or heat welding. Walkway pads shall be installed from the roof hatch to each roof mounted equipment unit and completely surrounding each equipment item as shown on the Drawings.

G. Temporary Closures: Install as needed to prevent water from flowing beneath roof system during inclement weather.

1. Extent: The roof membrane shall be extended at least 2 feet past edge of roof insulation and a continuous layer of sealer applied onto substrate 12" wide along the membrane edge.

2. Sealing Edge: Firmly embed roof membrane into sealer and provide continuous pressure over the length of the cut-off, using lumber and other ballast, so as to prevent blow-off.

H. Repairs:

1. Wrinkles: When within 18" of a splice or running towards a splice or positioned to interrupt proper drainage, cut out the wrinkle and repair with unspliced roof membrane to at least 3" beyond the wrinkle.
2. Cuts and Punctures: Patch over with roof membrane to at least 3" beyond the break.

3.5 FIELD QUALITY CONTROL

A. Manufacturer's Workmanship Quality Control Program: Maintain TPO roof membrane system manufacturer's program throughout the TPO installation, except as follows:

1. Seams: Probe ALL lap edges with approved tool and repair all edges which accept the probe; and cut out and test no less than 1 cross strip of seam immediately after each startup of heat welder, including startups after break times, and major changes in weather. Take additional cuts at irregular areas, T-joints and hand-welded areas.
2. Records of Tests: Save the test strips and label each one with date and time of test. Indicate on a copy of Shop Drawing plans where each test strip was cut, and submit a copy of test locations to Engineer.

B. Calibration: Do not begin welding with robot welders until tests on membrane scraps have established the correct temperature, welder weight and speed of application necessary for consistent, strong and continuous welds..

3.6 PROTECTING AND CLEANING

A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage..

B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 07 54 23

SECTION 07 62 00 – METAL FLASHINGS

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 and sheet metal work not specifically included with other Sections of the Specifications but required to prevent penetration of water through exterior shell of building.
2. Sealant for lap joints in runs of sheet metal flashings and for mounting cleats.

1.3 SUBMITTALS

A. Process all submittals as required in *Section 01 33 00 – Submittal Procedures*.

B. Shop Drawings: Show materials, profiles, thicknesses, reinforcements, locations of work, jointing patterns, terminations, methods of installation and anchorages.

1. Outline of roof and dimensions.
2. Typical and special details for flashings, roof curbs, penetrations, roof drains, perimeter conditions, termination details, etc. Reference the locations of details on the roof outline.
3. Number and mark of each factory prepared roofing sheet and flashing.
4. Fastener patterns for insulation and membrane edges at field, perimeter and corner conditions as required to meet design requirements for wind uplift resistance. Include copies of the applicable FM Approval Data pages as required to demonstrate compliance of installation with all FM requirements.

C. Certifications:

1. Submit 2 roof membrane producer's certification that metal items to be furnished for roofing are acceptable for inclusion in roof system producer's warranty.
2. Submit certification that metal and fastening system to be furnished has been tested and approved by Factory Mutual for 1-60 wind up-lift requirements.

D. Samples: Submit 2 complete sets of color options for FRSA's preliminary selection, using the specified finish on the same metal as will be used for the sheet metal flashing items. Submit 3 additional samples of each selected color, not less than 3" x 5", for District's final selection.

1. Outline of roof and dimensions.
2. Typical and special details for flashings, roof curbs, penetrations, roof drains, perimeter conditions, termination details, etc. Reference the locations of details on the roof outline.
3. Number and mark of each factory prepared flashing.

4. Fastener patterns for insulation and membrane edges at field, perimeter and corner conditions as required to meet design requirements for wind uplift resistance. Include copies of the applicable FM Approval Data pages as required to demonstrate compliance of installation with all FM requirements.

1.4 WARRANTIES

A. Pre-finished Metal Flashings: Furnish with written warranty covering color fade, chalking and film integrity for 15 years.

1.5 QUALITY ASSURANCE

A. Fabrication: Work shall be water and weather-tight work, with surfaces free from waves and buckles, and seams avoided as much as possible.

B. Standards: Comply with applicable recommendations and details of the latest editions of the SMACNA Architectural Sheet Metal Manual and the NRCA Roofing & Waterproofing Manual, including workmanship and installation.

C. Applicator: A company specializing in sheet metal flashing work and approved by membrane roofing subcontractor having 10 years' minimum experience.

D. Coordination:

1. Roofing: Coordinate fabrication and installation of metal roof flashings with roof membrane system installers so as to meet requirements of roof warranty (specified in roofing specifications Section).
2. Adjoining Work: Coordinate metal flashings work with adjoining work for proper sequencing of each installation to ensure the best possible weather resistance and the protection of materials and finishes from damage.

E. Package and Delivery: Deliver prefinished sheet metal components free of surface blemishes.

PART 2 - PRODUCTS

2.1 METAL FLASHING MATERIALS

A. Basic Metal:

1. Galvanized Steel Sheet Commercial quality with 0.20% copper, meeting ASTM A 525/526 except A 527 for lock forming, with G90 hot-dip galvanized coating, 26-gauge (0.0179") except at indicated otherwise.
2. Exposed Surfaces Finish: Factory applied fluoropolymer coating containing a minimum of 70% by weight, Kynar 500, Kynar 500 VLD or Hylar 5000 resin; color as selected by Engineer from manufacturer's full range of standard options.

2.2 FABRICATED SHEET METAL COMPONENTS

A. Sheet Metal Flashings & Roof Trim: As shown and detailed on drawings.

2.3 AUXILLIARY MATERIALS

A. Flashing Cement: Asphalt mastic cement formulated for weathering and flow resistance, meeting requirements of Fed. Spec. SS-C-153

B. Adhesives: Type recommended by flashing sheet manufacturer for intended installation.

C. Dissimilar Metal Protection:

1. Bituminous coating conforming to Fed. Spec. TT-C-494 or SSPC-Paint 12, or plastic separators, or insulating tape, subject to Architect's approval.
2. For metal flashing in contact with roofing, use separation materials or methods compatible with roofing system materials as approved by roofing system manufacturer.

D. Sealant Tape for Surface Mounted Flashings: Protective Treatments, Inc. "Product #606 Architectural Sealant Tape" 3/16" x 3/4" minimum size.

E. Sealant for Metal Flashing Joints: Use one of the following, color as best blends with color of flashing material:

1. Dap, inc. "Butyl-Flex"
2. Pecora Corp. "BC 158"
3. Protective Treatments, Inc. (PTI) "757 Butyl Sealant"
4. Tremco "Butyl Sealant"
5. Sonneborn Bldg. Products "Butakauk"

F. Nails and Fasteners:

1. General: Use same metal for fastener as metal being attached. Nail heads shall be significantly larger than nailing slots in flashings.
2. For Cleats to Nailers: Ring-shank or screw-shank long enough to penetrate wood nailer at least 1-3/4", or #8 galvanized screws long enough to penetrate wood nailer 3/4".
3. For Fastening Galvanized Metal Flashings: Hot-dip galvanized nails of Stronghold type, with large, flat heads and shanks not smaller than No. 12 Stuffs Gauge (0.109") and of sufficient length to penetrate wood blocking at least 7/8".
4. Compressible Filler for Expansion Joints: Non-asphaltic polybutylene-waterproofed polyurethane foam equal to "Poly tite" by Sandell Company, sized to compress to ½ of joint width before installation.

2.4 FABRICATION

A. General: Fabricate all metal flashings necessary to provide complete leakproof conditions throughout the Work. Examine roof plans, details, sections and Mechanical Drawings to determine scope of sheet metal flashing work required.

1. Workmanship: Make work weathertight, according to field measurements, formed true to detail, with sharply defined profiles, accurate in size, and free from distortion and defects. Do not use any techniques that will invalidate the warranty of precoated materials. Form pieces in longest lengths practical.
2. Expansion: Holes for fasteners shall be punched slots. Provide 4" end laps accurately fitted and firmly fastened in all continuous runs of sheet metal work, at intervals no more than 10'. Fill end laps with specified mastic.
3. Drip Edges: All exposed edges of flashing, except as specified otherwise, shall have 1/2" projecting hemmed edge.

B. Seams: Form metal with cover plate seam.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordination with Other Trades: As required to provide flashings, etc. to secure their work.

B. Cleaning of Surfaces to be Covered: As required, removing dirt and other foreign matter.

C. Dissimilar Metals: Prepare all surfaces where dissimilar metals meet, using dissimilar metal protection materials herein before specified.

3.2 3.2 INSTALLATION

A. General: Secure flashings in place using concealed fasteners. Use no exposed fasteners except as detailed. Install work watertight, making allowances for expansion and contraction. Install fasteners snug; do not over-tighten. Finished work shall be free of waves, warps, buckles, fastening stress, and distortions.

3.3 TOUCHUP

A. Damaged Sheet Metal Work: Repair or replace.

B. Finish: Minor damage to finish may be repaired in accordance with metal manufacturer’s recommendations. Engineer shall be final judge of acceptability of repairs to damaged finishes; replace sheet metal that cannot be repaired to satisfaction of Architect.

END OF SECTION 07 62 00

SECTION 07 72 33 – ROOF HATCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Roof hatch.
2. Ladder safety post.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data.

B. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.

1.4 QUALITY ASSURANCE

A. Manufacturer: A minimum of 5 years experience manufacturing similar products.

B. Installer: A minimum of 2 years experience installing similar products.

C. Manufacturer's Quality System: Registered to ISO 9001 Quality Standards including in-house engineering for product design activities.

1.5 DELIVERY, STORAGE, AND HANDLING

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

1.6 WARRANTY

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

PART 2 - PRODUCTS

2.1 ROOF HATCH

A. Manufacturers:

1. Type S Roof Hatch by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-535-1582, Web: www.bilco.com.
2. FRSA approved equal.

B. Furnish and install where indicated on plans metal roof hatch Type S, size width: 36" (914mm) x length: 30" (762mm). Length denotes hinge side. The roof hatch shall be single leaf. The roof hatch shall be pre-assembled from the manufacturer.

C. Performance characteristics:

1. Cover shall be reinforced to support a minimum live load of 40 psf with a maximum deflection of 1/150th of the span and a 140 psf wind uplift.
2. Operation of the cover shall be smooth and easy with controlled operation throughout the entire arc of opening and closing.
3. Operation of the cover shall not be affected by temperature.
4. Entire hatch shall be weather tight with fully welded corner joints on cover and curb.

D. Cover: Shall be 11 gauge (2.3mm) aluminum with a 3” (76mm) beaded flange with formed reinforcing members. Cover shall have a heavy extruded EPDM rubber gasket that is bonded to the cover interior to assure a continuous seal when compressed to the top surface of the curb.

E. Cover insulation: Shall be fiberglass of 1” (25mm) thickness, fully covered and protected by a metal liner 22 gauge (.8mm) galvannealed steel.

F. Curb: Shall be 12” (305mm) in height above the adjacent proposed roofing and of 11 gauge (2.3mm) aluminum. The curb shall be formed with a 3-1/2” (89mm) flange with 7/16” (11.1mm) holes provided for securing to the roof deck. The curb shall be equipped with an integral metal cap flashing of the same gauge and material as the curb, fully welded at the corners, including stamped tabs, 6” (153mm) on center, to be bent inward to hold single ply roofing membrane securely in place. Curb and cap-flashing shall be structurally designed to support a clamp/bolt connected hatch rail system.

G. Curb insulation: Shall be rigid, high-density fiberboard of 1” (25mm) thickness on outside of curb.

H. Lifting mechanisms: Manufacturer shall provide compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe.

I. Hardware

1. Heavy pintle hinges shall be provided
2. Cover shall be equipped with a spring latch with interior and exterior turn handles
3. Roof hatch shall be equipped with interior and exterior padlock hasps.
4. The latch strike shall be a stamped component bolted to the curb assembly.

5. Cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1" (25mm) diameter vinyl grip handle to permit easy release for closing.
6. Compression spring tubes shall be an anti-corrosive composite material and all hardware shall be Type 316 stainless steel hardware.
7. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.

J. Finishes: Factory finish shall be mill finish aluminum.

2.2 LADDER SAFETY POST

A. Manufacturer:

1. Type LU-4 Ladder Safety Post by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-535-1582, Web: www.bilco.com.
2. FRSA approved equal.

B. Furnish and install where indicated on plans. The ladder safety post shall be pre-assembled from the manufacturer.

C. Performance characteristics:

1. Tubular post shall lock automatically when fully extended.
2. Safety post shall have controlled upward and downward movement.
3. Release lever shall disengage the post to allow it to be returned to its lowered position.
4. Post shall have adjustable mounting brackets to fit ladder rung spacing up to 14" (356mm) on center and clamp brackets to accommodate ladder rungs up to 1-3/4" (44mm) in diameter.

D. Post: Shall be manufactured of high strength square tubing. A pull up loop shall be provided at the upper end of the post to facilitate raising the post.

E. Material of construction: Shall be aluminum.

F. Balancing spring: A stainless steel spring balancing mechanism shall be provided to provide smooth, easy, controlled operation when raising and lowering the safety post.

G. Hardware: All mounting hardware shall be Type 316 stainless steel.

H. Finishes: Factory finish shall be mill finish aluminum.

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 INSTALLATION

A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.

1. Test units for proper function and adjust until proper operation is achieved.
2. Repair finishes damaged during installation.
3. Restore finishes so no evidence remains of corrective work.

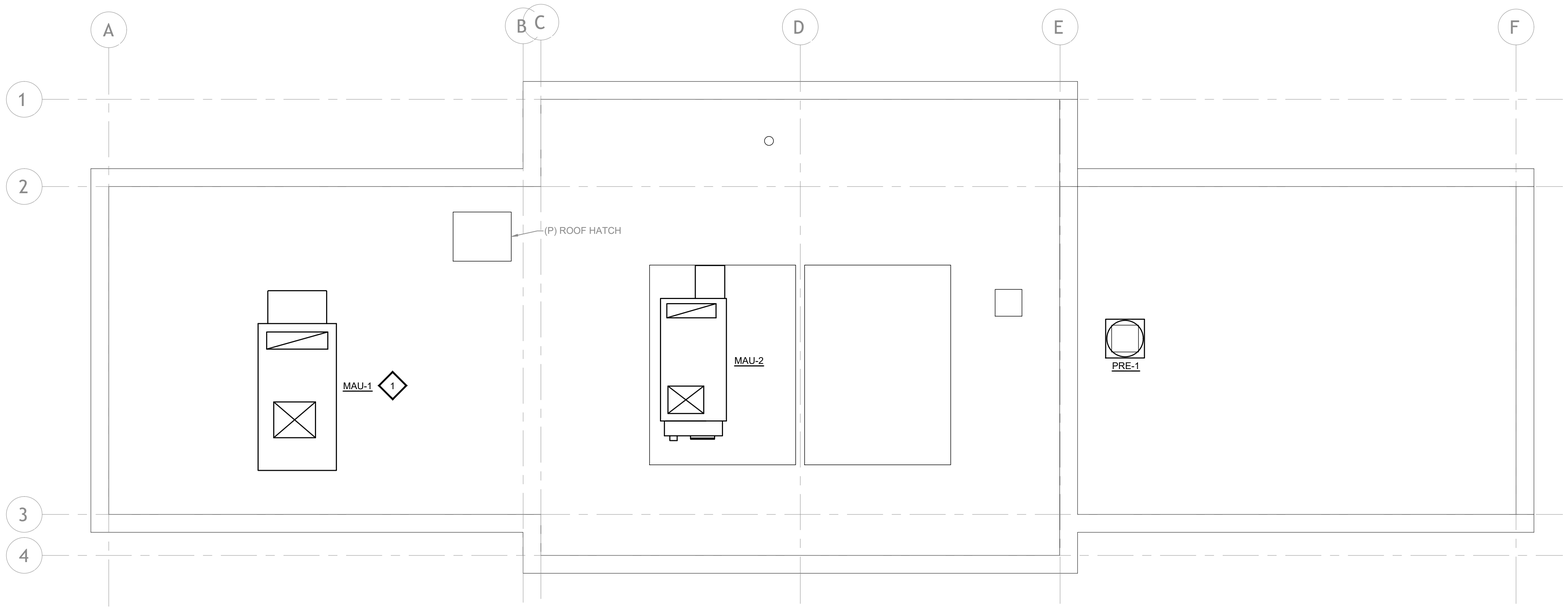
B. Proposed thermoplastic roofing membrane shall wrap up and over the new curb as required for a watertight condition.

C. Route existing gate sensor receiver cables through roof hatch wall matching route and method identified during removal of the existing roof hatch and curb. Coordinate gate sensor receiver cable work with FRSA Operations.

3.3 ADJUSTING AND CLEANING

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

END OF SECTION 07 72 33



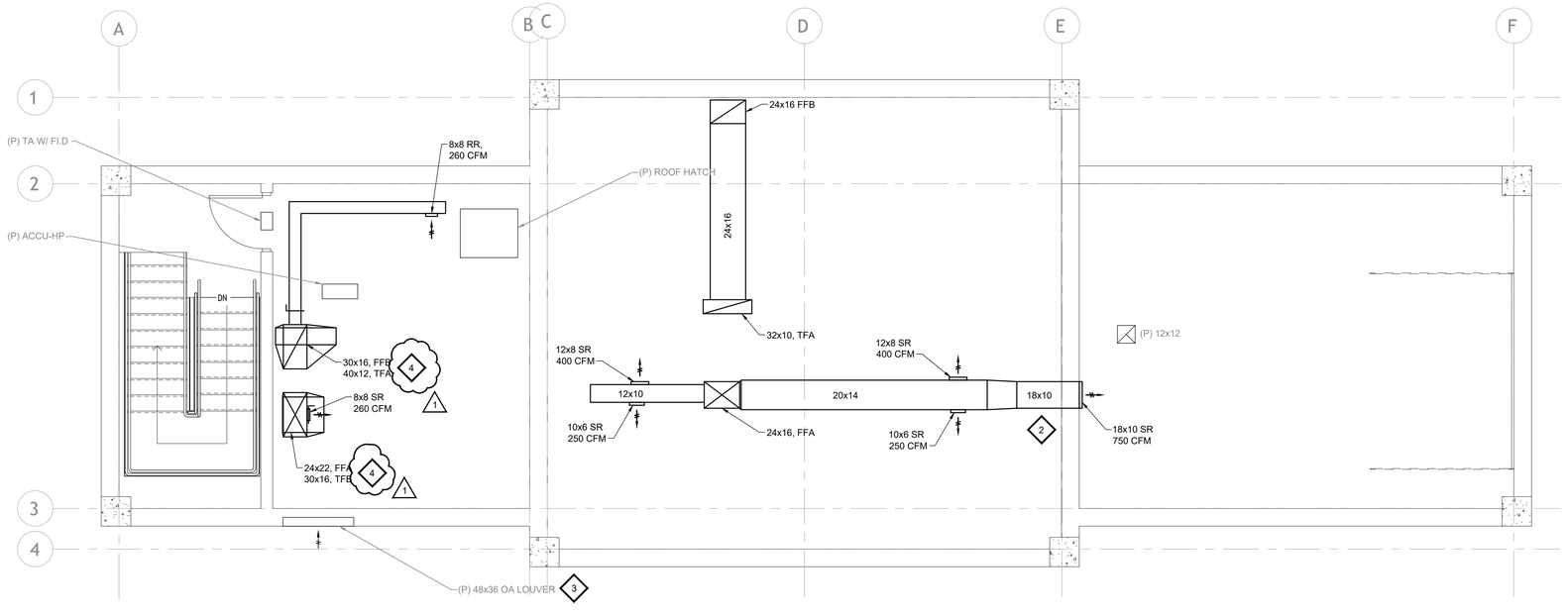
ROOF NEW WORK PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"

N

KEY NOTES

1. RE-USE AS MUCH OF EXISTING OPENING IN ROOF AS POSSIBLE, RE-WORK OPENING AS REQUIRED, SEE STRUCTURAL DRAWINGS.
2. CUT AND PATCH BLOCK WALL TO MATCH EXISTING FOR NEW DUCT INSTALLATION. INSTALL LINTEL FOR OPENING.
3. INSTALL INSULATED SHEET METAL COVER OVER LOUVER OPENING ON INTERIOR.
4. INSTALL A REMOVABLE STEEL DIAMOND PLATE COVER OVER EXISTING OPENING IN FLOOR, COVER SHALL BE CUTOUT TO ACCOMMODATE DUCTWORK PASSING THROUGH. 1



SECOND FLOOR NEW WORK PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"

N

SYSTEMS DESIGN SERVICE ENGINEERING
3600 EAST STATE STREET SUITE 215
ROCKFORD, ILLINOIS 61108
PHONE (815) 399-3381 FAX (815) 399-3387
WWW.SDSEGROUP.COM
IL PROF DESIGN FIRM #184.004999

SCUM SEPARATOR BUILDING HVAC AND ROOF REPLACEMENT

Four Rivers Sanitation Authority

3501 Kishwaukee St.
Rockford, Illinois 61109

No.	Description	Date
1	BID SET	01/27/26
2	ADDENDUM 1	02/06/26

SECOND FLOOR AND ROOF MECHANICAL NEW WORK PLANS

PROJECT NUMBER:
FRSA 2502 (SDSE 25-010)

DATE: JANUARY 27, 2026
DR BY: SDS
CK BY: SDSE

M7

SCALE: AS NOTED

Scum Separator Building HVAC and Roof Replacement, Capital Project 2502
Non-Mandatory Pre-Bid Meeting
Thursday, February 5, 2026, 10:00 a.m.
Meeting Notes in Red

I. Introduction
   a. Sign-in sheet. See attached sign-in sheet for attendance.
   b. The Scum Separator Building HVAC and Roof Replacement project consists of the removal and replacement of the existing HVAC system, the removal of the existing rock ballast roof, and the installation of a thermoplastic membrane roofing system on the FRSA Scum Separator building. Roofing work includes the installation of a new hatch with ladder assist system, a mobile safety guard rail system, and all other appurtenances as indicated on the plans and in the specifications.
   c. The roof specs were inadvertently omitted from the bid documents PDF and will be included in an addendum along with today's meeting notes.
   d. Important Dates
      i. Last day to send questions will be Thursday, February 12, 2026.
      ii. Last day for an addenda to be issued will be Friday, February 13, 2026.
      iii. Bids are due Tuesday, February 17, 2026, at 10:00 AM.
      iv. Project expected to be awarded at the next Board meeting currently scheduled for Monday, February 23, 2026.
   e. Bids
      i. Single lump sum bid for all work. See proposal form.
      ii. FRSA reserves the right to limit total subcontracts to 60% of the total contract price. (*FRSA General Provisions and Technical Specifications G.C. 6:1*)

II. Scum Separator Building
   a. The Scum Separator Building must be kept in continuous operation throughout the construction period. Owner access to the building must be maintained at all times.
   b. The Contractor will be permitted to use the fenced-in grass field south of the building for construction purposes and storage of material and equipment.
      i. A locked vehicle gate is present south of the grass field. Contractor shall provide lock to daisy-chain the gate for access.
      ii. Following construction, the grass field should be restored to original condition.
   c. Contractor parking will be allowed in the parking stalls south of the Scum Separator building. Parking will not be allowed along the drive aisles of the plant.
   d. If vehicular access to the north side of the building is required, a key fob can be provided for gate access.
   e. Electrical power of 120 volts, 60 Hz, single phase from convenience receptacles is available at the building at no charge. The Contractor will be responsible for any electrical power needs beyond that.
   f. Temporary sanitary facilities shall be provided by the Contractor.
   g. The hours that the Contractor may work are 7:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays.

i. To work outside the above-mentioned hours, or on Saturdays, Sundays or holidays, the Contractor shall submit a written request 48 hours in advance of the requested time.

ii. FRSA holidays falling within the Contract timeframe are Good Friday (April 3), Memorial Day (May 25), and Independence Day (July 3).

III. Proposed Work

a. No building permit will be required from the City of Rockford as the project consists of maintenance work on a plant-process building within the FRSA wastewater treatment plant campus.

b. Roof Removal and Replacement

i. Remove existing roofing system consisting of ballast rock, single ply-roofing membrane, and roofing insulation down to the roof deck.

ii. Remove existing roof hatch and curb down to roof deck.

1. Gate sensor receiver cable passes through wall of the roof hatch.
2. Coordinate receiver cable work with FRSA.

iii. Remove aluminum cap on western skylight and curb down to roof deck. Eastern aluminum cap and skylight remain.

iv. Infill roof penetrations as indicated on the plans.

v. Install new roof hatch and curb with ladder assist system.

1. Match existing gate sensor cable route.

vi. Install roof board insulation.

1. Average insulation thickness shall provide a ~~minimum~~ R-value of 30.
2. Use roof board insulation to create flush interior wall on parapet.
3. Provide crickets and saddles as necessary to maintain positive drainage.

vii. Install wood nailers on concrete caps.

viii. Install TPO membrane.

1. Membrane shall go up and over curbs and wood nailers to create a watertight condition.

ix. Install metal coping over TPO covered wood nailer.

x. Install mobile safety guard rail system.

xi. Install roof walkway pads.

c. HVAC System Removal and Replacement

i. SDS plan sheet review; detailed discussion of the scope of work.

ii. Coordinate gas shut off with FRSA.

IV. Questions

Q: Note L and Note M on Sheet A1 offer conflicting information on existing roof type. Which is correct?

A: FRSA will verify. *(Post Meeting Note: Note L is correct. The existing roof is comprised of lightweight insulating concrete with pea gravel.)*

Q: What is the material of the proposed roof hatch?

A: FRSA will review specifications and verify. *(Post Meeting Note: The roof hatch cover and curb shall be 11 gauge aluminum in accordance with specification 07 72 33 – Roof Hatches, Part 2 – Products, 2.1 Roof Hatch.)*

Q: How are the skylight curbs connected?

A: FRSA will provide record drawings. *(Post Meeting Note: See Record Drawing Sheet ES2 and Sheet ES3 – Section 12/ES2.)*

Q: Where may cranes and dumpsters be located?

A: Cranes may set up on the concrete driveway east of the Scum Separator Building. Coordinate timing with FRSA to allow for driveway access to building. Dumpsters may also be located in this area.

V. Site Visit

a. Due to the age of the existing roof, flashings may contain asbestos. *(Post Meeting Note: FRSA will have the flashings tested with results provided in an addendum on or before February 13, 2026.)*

Four Rivers
Sanitation Authority

Scum Separator Building HVAC and Roof Replacement, Capital Project No. 2502
Pre-Bid Meeting Sign-In Sheet

3501 Kishwaukee Street, Rockford, Illinois
February 5, 2026, 10:00 A.M.

Name	Representing	Phone	E-Mail
Warren Adam	Four Rivers Sanitation Authority	(815) 387-7615	wadam@fourrivers.illinois.gov
Brooke Baier	Systems Design Service Engineering	(815) 399-3381x15	brooke@sdsegroup.com
Scott Baier	Systems Design Service Engineering	(815) 399-3381x12	scott@sdsegroup.com
Matt Campbell	Four Rivers Sanitation Authority	(815) 387-7684	mcampbell@fourrivers.illinois.gov
Mike Christensen	Four Rivers Sanitation Authority	(815) 387-7614	mchristensen@fourrivers.illinois.gov
Angie Good	Four Rivers Sanitation Authority	(815) 387-7662	agood@fourrivers.illinois.gov
Andrew Hess	Four Rivers Sanitation Authority	(815) 298-3110	ahess@fourrivers.illinois.gov
Nikelle Synove	Four Rivers Sanitation Authority	(815) 387-7682	nsynove@fourrivers.illinois.gov
Jamie Hunter	Scanapol Construction	815-540-6668	Estimating@scanapol.com
Brent Anderson	Distinctive Roofing	815-299-0964	Dank.distinctive@gmail.com
Paul Varetta	McDermaid Rfg	815-963-8458	MCRoofe MCDERMAIDRoofing.com
Carbin Haynes	Roofing Systems Inc	815-654 9540	Haynes308@yahoo.com
Edwin Carlson	Roofing Systems, Inc	815 654 9540	ROOFSYS@AOL.com
Todd Byxbe	Miller Eng.	815-963-4878	TByxbe@Mecogroup.com

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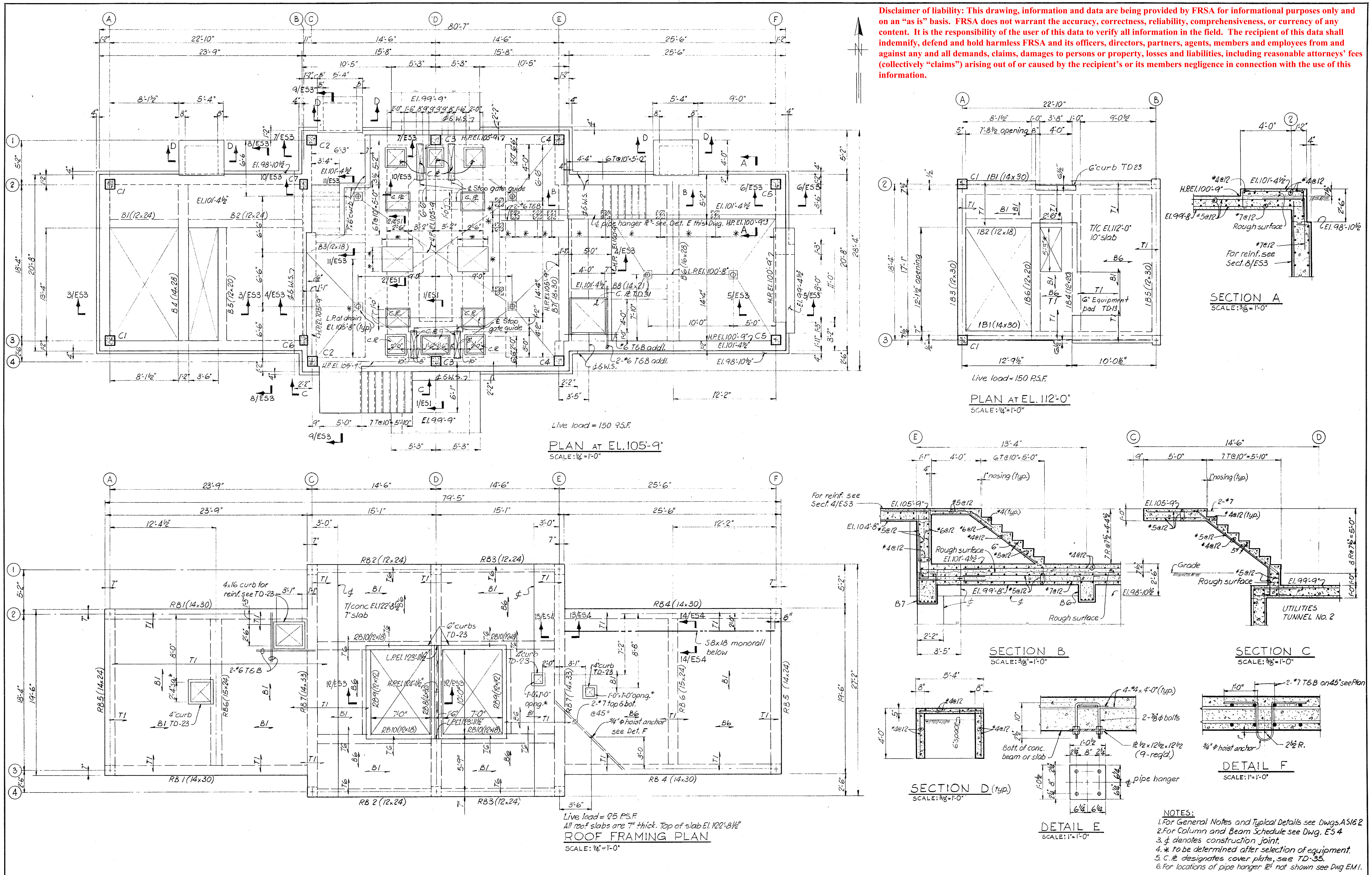


NOTES:

1. For General Notes and Typical Details see Dwgs. AS1 & 2
2. For Column and Beam Schedule see Dwg. ES4
3. ℄ denotes construction joint.
4. ✱ to be determined after selection of equipment.
5. C.℘ designates cover plate, see TD-35.
6. For locations of pipe hanger ℘s not shown see Dwg EM1.

GREELEY AND HANSEN ENGINEERS 222 S. RIVERSIDE PLAZA CHICAGO, ILLINOIS 60606	DESIGNED CYC	APPROVED	
	DRAWN LT		
	CHECKED EP		

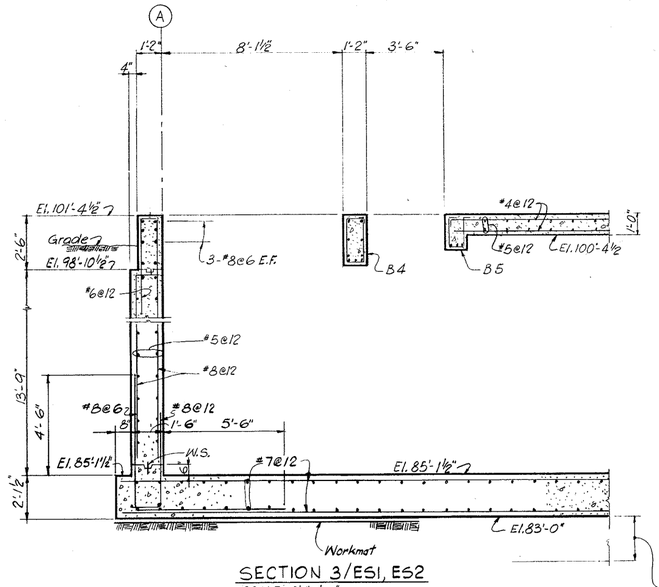
NO.	DATE	APPD	REVISION

SCALE: 1/4"=1'-0" · 3/8"=1'-0" · 1"=1'-0"

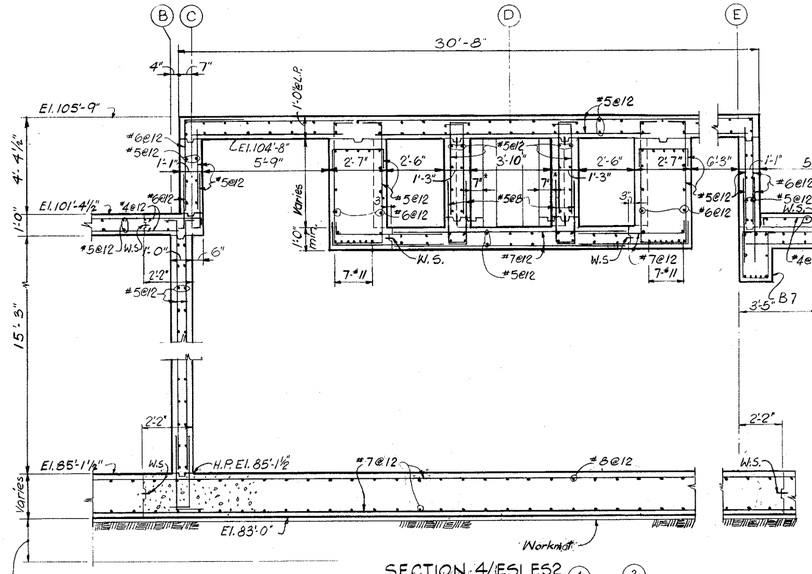
THE SANITARY DISTRICT OF ROCKFORD
ROCKFORD, ILLINOIS
DIVISION TPI-P
SEWAGE TREATMENT PLANT ADDITIONS

SLUDGE SCREENING BUILDING
STRUCTURAL
PLANS AND SECTIONS

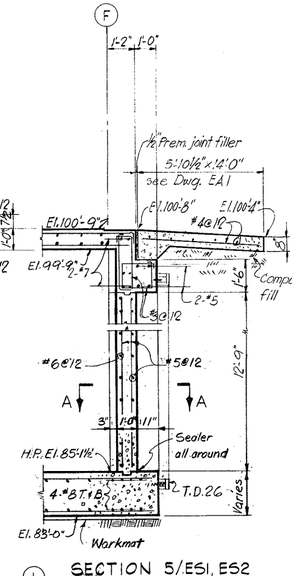
PROJ NO. 0772-300
DWG ES2
SHEET 34 OF 59
DATE MARCH 1975 REV 0



SECTION 3/ES1, ES2
SCALE : ⅜"=1'-0"



SECTION 4/ES1, ES2
SCALE : ⅜"=1'-0"



SECTION 5/ESI, ES2
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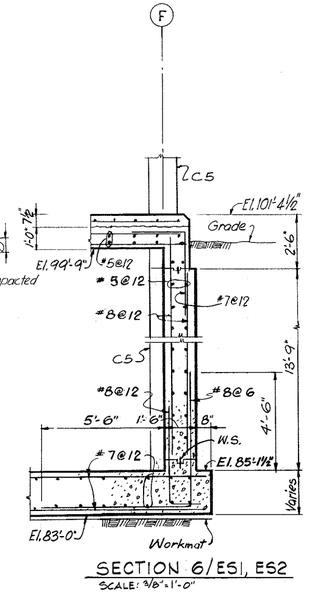

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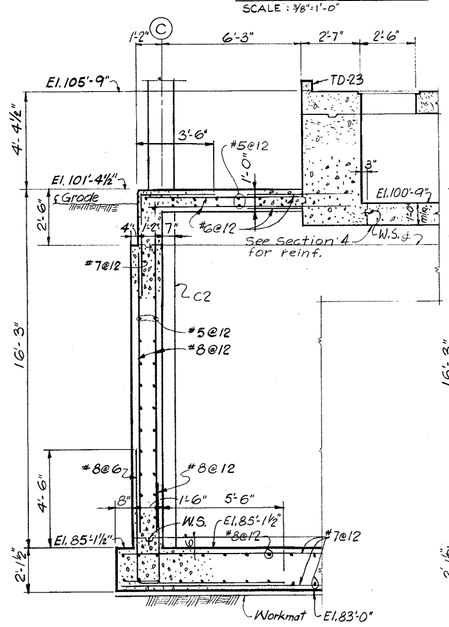

SECTION 7/ESI, ES2
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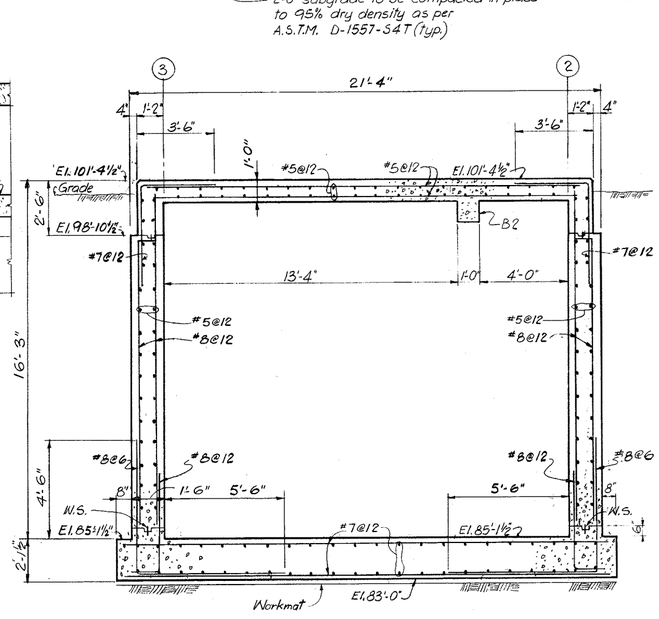

SECTION 8/ESI, ES2
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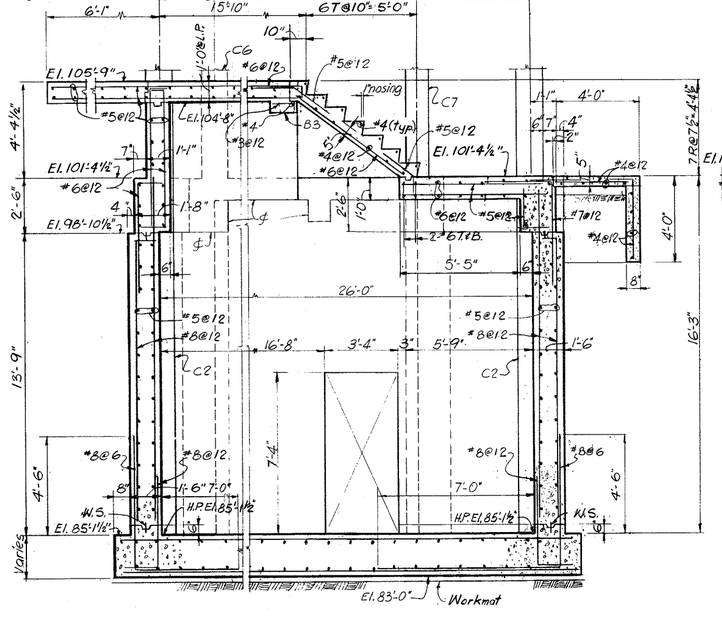

SECTION 9/ESI, ES2
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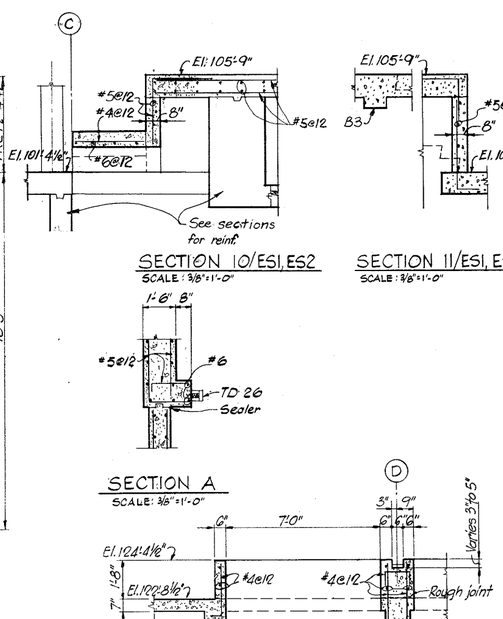

SECTION 10/ESI, ES2
SCALE: ⅜"=1'-0"

SECTION 11/ESI, ES2
SCALE: ⅜"=1'-0"

SECTION A
SCALE: ⅜"=1'-0"

SECTION 12/ES2
SCALE: ⅜"=1'-0"

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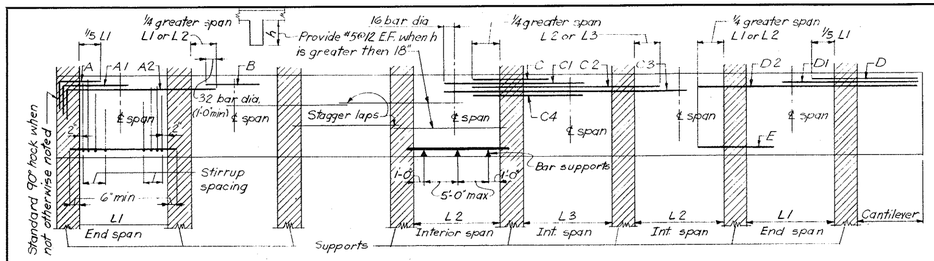
NOTES:
1. For General Notes and Typical Details see Dwgs. AS1 & 2
2. For Column & Beam Schedule see Dwg. ES4

GREELEY AND HANSEN ENGINEERS 222 S. RIVERSIDE PLAZA CHICAGO, ILLINOIS 60606	DESIGNED EP DRAWN EL CHECKED EP	APPROVED	NO. DATE APPD REVISION	SCALE 1 0 1 2 3 4 5 6 7 FT 3/8"=1'-0"	THE SANITARY DISTRICT OF ROCKFORD ROCKFORD, ILLINOIS DIVISION TPI-P SEWAGE TREATMENT PLANT ADDITIONS	SLUDGE SCREENING BUILDING STRUCTURAL SECTIONS	PROJ NO. 0772-300 DWG ES3 SHEET 35 OF 59 DATE MARCH 1975 REV 0



BEAM BAR PLACING DIAGRAM

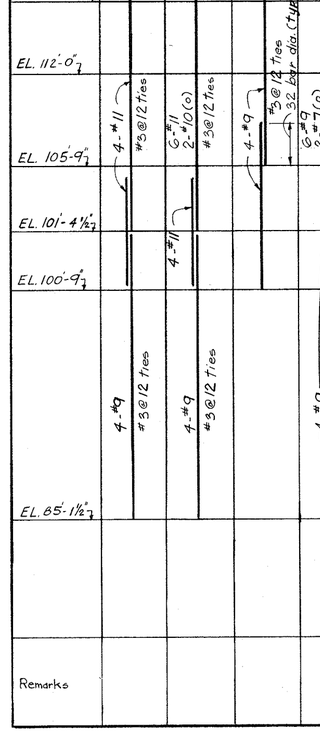
Provide Beam Bolsters as per ACI Standard 315-65

BEAM SCHEDULE

Mark	Size W×D	Bot. Bars	Top Bars A	B	C	D	E	Stirrups Size	Spacing from sup. each end	Width of support	Remarks
RB1	14×30	4-#10	3-#8A1		3-#8C4			#3 ▯	@12		
RB2	12×24	2-#8	2-#6A1		2-#6C1			#3 ▯	@12		
RB3	12×24	2-#8	2-#6A1					#3 ▯	@12		
RB4	14×30	4-#10	3-#8A1		3-#8C4			#3 ▯	@12		
RB5	14×24	3-#8	2-#8A1					#3 ▯	@12		2A1 bars each end
RB6	15×24	4-#8	3-#6A1					#3 ▯	@12		3A1 bars each end
RB7	14×33	4-#11	3-#8A1					#3 ▯	6@8, 2@10 bal. @12		3A1 bars each end
RB8	14×30	4-#11	3-#8A1					#3 ▯	@12		3A1 bars each end
RB9	12×12	2-#7			2-#5C2			#3 ▯	@12		
RB10	12×18	3-#9	2-#6A1					#3 ▯	@12		2A1 bars each end
1B1	14×30	4-#7	3-#7A1		3-#7C4			#3 ▯	@12		
1B2	12×18	2-#8	2-#6A2					#3 ▯	@12		
1B3	12×30	3-#9	2-#6A1					#3 ▯	@12		
1B4	12×20	3-#9	2-#6A1					#3 ▯	@12		2A1 bars each end
1B5	12×30	3-#9	3-#6A1					#3 ▯	@12		2A1 bars each end
1B6	12×20	3-#8	2-#6A1					#3 ▯	@12		2A1 bars each end
B1	12×24	2-#8	2-#8A2					#3 ▯	@12		
B2	12×24	3-#9	2-#9A1		2-#9C1			#3 ▯	8@8, bal. @12		
B3	12×18	2-#8	2-#8A2					#3 ▯	@12	1'-6"	
B4	14×28	2-#10 / 3-#10	2-#10A1 / 3-#10					#3 ▯	8@8, bal. @12		2A1 - 3A bars each end
B5	12×20	3-#9	2-#9A2 / 1-#5A6					#3 ▯	8@8, bal. @12	3'-0" South	
B6	16×28	5-#10	2-#9A1 / 2-#9					#3 ▯	6@6, 6@9, bal.@12		2A1 - 2A bars each end
B7	18×30	5-#10	3-#9A1					#3 ▯	@12		2A1 bars each end
B8	14×21	3-#9	3-#6A1		3-#6C4			#3 ▯	@12		

COLUMN SCHEDULE

Column Group	C1	C2	C3	C4	C5	C6	C7
Size	14×14	14×14	14×14	14×14	14×14	12×14	12×14
Section above El. 112'-0"							
EL 122'-8½"							
EL. 116'-10½"	4-#6	4-#9	4-#9	4-#9	4-#8	4-#7	4-#7
EL. 112'-0"	#3@12 ties	#3@12 ties	#3@12 ties	#3@12 ties	#3@12 ties	#3@12 ties	#3@12 ties
EL. 105'-9½"	4-#11	6-#11	4-#9	6-#9	4-#9	4-#7	4-#7 vert.
EL. 101'-4½"	#5@12 ties	2-#10 (o)	#5@12 ties (typ) 32 bar dia. (typ)	2-#7 (o)	#3@12 ties	#3@12 ties	#3@12 ties
EL. 100'-9½"		4-#11	#3@12 ties	#3@12 ties			
EL. 85'-1½"		#3@12 ties		#3@12 ties	#3@12 ties	#3@12 ties	#3@12 ties
Remarks						14" in North-South direction	14" in North-South direction



SECTION 13/ES3
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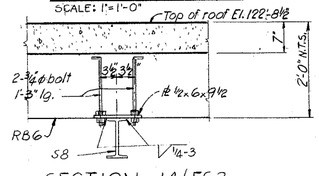

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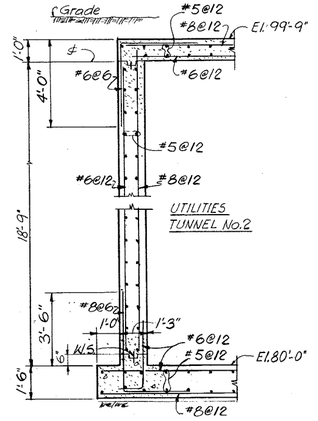

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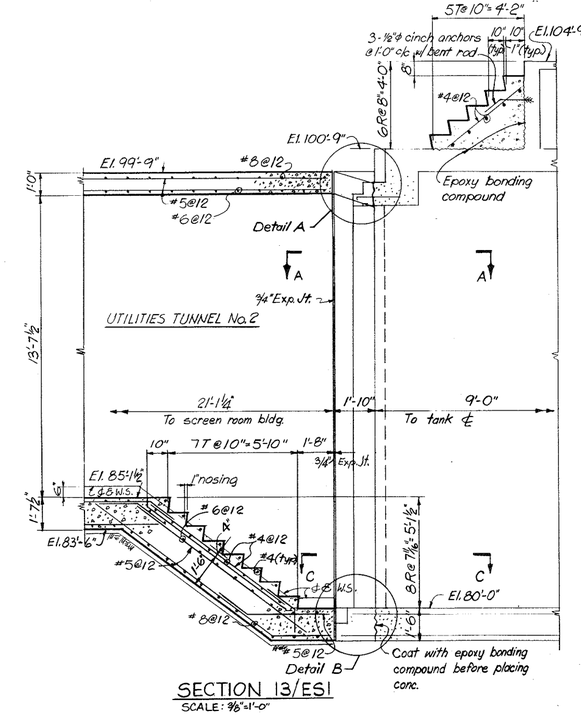

SECTION 13/ES1
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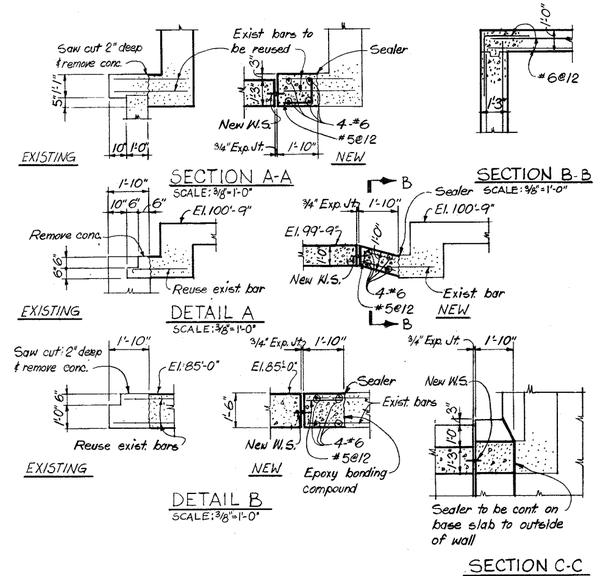

NOTES:
1. For General Notes and Typical Details see Dwgs. AS162
2. ℄ denotes construction joint.

GREELEY AND HANSEN
ENGINEERS
222 S. RIVERSIDE PLAZA
CHICAGO, ILLINOIS 60606

DESIGNED EP CYC
DRAWN EL
CHECKED EP
APPROVED

NO.	DATE	APPD	REVISION

SCALE
0 1 2 3 4 5 6 7 FT 3/8"=1'-0"
0 1 2 FT 1"=1'-0"

THE SANITARY DISTRICT OF ROCKFORD
ROCKFORD, ILLINOIS
DIVISION TPI-P
SEWAGE TREATMENT PLANT ADDITIONS

SLUDGE SCREENING BUILDING
STRUCTURAL
SCHEDULES, SECTIONS AND DETAILS

PROJ NO. 0772-300
DWG ES4
SHEET 36 OF 59
DATE MARCH 1975
REV 0