1. **GENERAL**
   1. **WORK INCLUDED:**
      1. Work includes factory-preformed and pre-finished metal roofing.
   2. **RELATED WORK**:
      1. Section 07 90 00 - Joint Sealers.
   3. **SYSTEM DESCRIPTION**:
      1. Provide a factory prefabricated and pre-finished fully supported (non-structural) batten seam roofing system.
   4. **QUALITY ASSURANCE**:
      1. Manufacturer's Qualifications: Regularly engaged, and specializing for the preceding five years, in the manufacturing and factory pre-finishing of equivalent metal roofing systems.
      2. Installer's Qualifications: Regularly engaged and specializing, for the preceding five years in the installation of equivalent metal roofing systems; licensed, certified or otherwise approved, in writing, by the system manufacturer.
      3. Regulatory Requirements:
         1. Comply with applicable codes and regulations of governmental agencies having jurisdiction.
         2. Where the requirements of applicable codes, regulations and standards conflict with the requirements of this Specification, comply with the more stringent provisions.
      4. Mock-up: When and as directed by the Architect, install an area of metal roofing not less than six feet in width by the total distance from eave to ridge or parapet and shall be representative, in every detail, of the proposed finish work. When approved, the mock-up area will be deemed incorporated into the Work and will serve as the standard by which the subsequent Work of this Section will be judged.
      5. Source Quality Control:
         1. Tests: Materials for which physical characteristics have been stipulated shall have had such characteristics independently confirmed by laboratory tests employing industry recognized procedures. Both the laboratory performing the tests and the test methods employed will be subject to the approval of the Architect.
   5. **REFERENCES**:
      1. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA):
      2. Architectural Sheet Metal Manual.
   6. **SUBMITTALS**:
      1. Product Data: Submit complete manufacturer's description literature and specifications in accordance with the provisions of Section 01 33 00.
      2. Materials List: Submit complete lists of materials proposed for use, giving the manufacturer's name, catalog number, and catalog cut for each item where applicable.
      3. Manufacturer's Recommendations: Submit the manufacturer's current recommended methods of installation.
      4. Shop Drawings: Submit complete shop drawings in accordance with the requirements of Section 01 33 00. Shop Drawings submitted shall indicate not less than the following:
      5. Location of each component of system proposed for use.
      6. Typical and special details, including specifically identified details of field fabrication.
      7. Materials and finishes.
      8. Samples: In accordance with the requirements of Section 01 33 00, submit the following:
         1. Samples of the manufacturer's finish specified, in the color selected, not less than 12 inches by 12 inches in size.
         2. Samples of the manufacturer's standard snap-on batten and clip assembly.
   7. **DELIVERY, STORAGE AND HANDLING**:
      1. Delivery: Deliver materials protectively wrapped and bearing the manufacturer's label in legible condition. The Architect reserves the right to inspect delivered materials, to review the accompanying bills of lading, and to reject the following:
      2. Roofing system components not identifiable as products of the approved manufacturer.
      3. Roofing system components that are dented, bent, warped or otherwise damaged in a manner precluding immediate installation.
      4. Roofing system components, the finish of which has been abraded or otherwise damaged in a manner precluding restoration, to a reasonable facsimile of the original factory application by field touch-up.
      5. Storage: Store materials off-ground and under cover. Protect materials from damage, soiling and moisture collection. Retain protective wrappings in place until the commencement of erection.
      6. Replacements: In the event of damage to materials, or the rejection of materials by the Architect for stipulated cause, replace such materials at no additional cost and in a manner causing no delay in the commencement and performance of the Work.
   8. **WARRANTIES**:
      1. Contractor's Warranties: Furnish the following:
         1. One year limited warranty against defects in materials and workmanship.
         2. A separate one year limited warranty against defects in materials and workmanship, including water integrity.
      2. Manufacturer's Warranty: Furnish the manufacturer's 20 year limited warranty against failure of the specified fluoropolymer coating.
2. **PRODUCTS**
   1. **ACCEPTABLE MANUFACTURERS:**
      1. Design is based on the use of SN (SBS) 24 - (UL 90 Rated) Snap-On Batten Panels manufactured by Architectural Engineering Products Company (AEP-SPAN) as distributed by Architectural Systems, Poway, CA (619) 679-9760.
      2. Materials shall be the products of one manufacturer and shall be either the ones upon which the design is based or the products of the following approved in advance, or equal.
         1. ASC Pacific, Inc., West Sacramento, CA (800) 726-2727 or (916) 372-6851.
   2. **MATERIALS**:
      1. Forming Steel: Form battens, pans, trim, closures and accessory items from not less than 24 gage hot-dip galvanized sheet steel conforming to ASTM A 446 and galvanized in accordance with ASTM A 525 for a G90 class coating minimum 1-mil. thickness.
      2. Underlayment: 30 pound saturated rag felt.
      3. Battens shall be snap on type, two inches wide by two inches high, continuous, with clips at 24 inches on-centers.
      4. Provide clips, clamps, closures, starters, drips, caps, etc., as indicated and as required to provide a complete roofing system installation.
   3. **FINISH:**
      1. Provide surfaces of battens, pans, trim, closures and accessory items permanently exposed to view finished with the manufacturer's standard Kynar 500 fluoropolymer coating color as selected by the Architect.
   4. **OTHER MATERIALS**:
      1. Other materials, not specifically described but required for a complete and proper installation of the Work of this Section, shall be new, first quality of their respective markings, and subject to approval of the Architect.
      2. Seam Clips: Extruded aluminum.
      3. Anchoring Devices and Fasteners: As recommended by manufacturer. Exposed fasteners shall match color of roofing materials.
      4. Sealants: As specified in Section 07 90 00 and as required per manufacturer's recommendations.
3. **EXECUTION**
   1. **PREPARATION OF SUBSTRATE:**
      1. Examine the surface condition of the substrate and the conditions under which roofing work is to be performed and notify the Architect in writing of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected.
      2. Clean the substrate of projections and substances detrimental to the work.
      3. Coordinate metal roofing with other adjoining work to ensure proper sequencing of the entire Work.
   2. **INSTALLATION:**
      1. General: Comply strictly with the instructions and recommendations of the metal roofing materials manufacturer, except to the extent more stringent requirements are indicated.
      2. Installation of Underlayment: Apply one layer of felt underlayment laid dry with six inch minimum lap horizontally and 12 inch minimum end lap.
      3. Installation of Metal Roofing:
         1. It is required that the positioning of the panels relate visually to the other elements of the building. Carefully lay out patterns and have layout reviewed by the Architect prior to installing seam clips.
         2. Install starter strips and pans with seam clips using fasteners of type recommended by the manufacturer.
         3. Roofing panels shall be of sufficient lengths to reduce horizontal joints to a minimum. Where horizontal joints are permitted, pans shall lap four inches with upper pan having a one inch hook into horizontal cleat the full width of pan.
         4. Install top closures, ridge covers, coping pieces, and other required flashing pieces using tape and sealants as recommended by the manufacturer to provide a completely watertight installation.
         5. Any area of the metal roof found to be leaking after a rain storm or hose test, the manufacturer, his representatives, or installers must make necessary repairs to stop the leak(s) to include replacement of all or portions of the metal roof and accessories.

**END OF SECTION**