- Ground Snow Load:
- Snow Load Importance Factor:
- Roof Live Load:
- Basic Wind Speed:
- Wind Load Importance Factor:
- Wind Exposure Category:
- Seismic Use Group:
- Seismic Importance Factor:
- Mapped Spectral Response Acceleration at Short Periods, Ss:
- Mapped Spectral Response Acceleration at 1-Second Period, S1:
- Seismic Site Class:
- Damped Spectral Response Coefficient at Short Periods, Sds:
- Seismic Design Category:

C. Life Safety: All tensile membrane structures shall be detailed so that no life safety issue is created in the event of a loss of a part of the membrane. The tensile membrane structure shall not rely on the membrane for structural stability.

D. Fire Performance: Range of characteristics required of membranes:
   1. Burning Characteristics (NFPA 701)
      a. Flame Spread (After Flame) Class C PASS
      b. Flame Spread (Residual Flame) Class C PASS
      c. Char length Class C PASS
   2. Fire Resistance of Roof Coverings (ASTM E 84)

1.5 QUALITY ASSURANCE

A. Subcontractor Qualifications: Fabrication and erection of the tensile membrane structure is limited to firms with proven experience in fabrication and construction of complex tensile membrane structures. Such firms, through their own experience and/or that of their qualified subcontractors, shall meet the following minimum requirements:
   1. The Subcontractor shall have at least ten (10) years' experience in the successful fabrication and erection of permanent, custom tensile mesh membrane structures.
   2. The Subcontractor shall have fabricated and erected at least twenty (20) PVC/PVDF-coated woven fiberglass tensile mesh membrane structures, with at least five (5) structures of similar size and complexity as this project.
   3. Demonstrate it has maintained an in-house professional engineering design staff for at least ten (10) years and will provide final engineering drawings that have been prepared by licensed Professional Engineers in its employ.
   4. The Subcontractor shall demonstrate it has a fabrication facility of adequate capacity and a staff experienced in the fabrication of PVC/PVDF-Coated polyester tensile mesh membrane structures that will undertake the fabrication of this project.
   5. The Subcontractor shall submit a Corporate Quality Control Manual describing the company's complete quality assurance program.

6. All bidders shall be able to provide proof with their bid of a minimum of $2,000,000 general/public liability insurance, $3,000,000 professional liability (PL) insurance and additional $10,000,000 umbrella/excess liability insurance.

1.6 SUBMITTALS

A. Submit under provision of Section 013300 – Submittal Procedures.

B. General: Not withstanding any provisions of these specifications that may appear to be to the contrary, any and all submittals by the Subcontractor shall be subject to review, approval, and adoption by the Architect/Engineer as part of the overall project design and engineering and shall not create a contractual or other professional design relationship between the Subcontractor and either the Architect/Engineer or the Owner.

C. Product Data: Include manufacturer's specifications for materials, fabrication, installation, and recommendations for maintenance. Include test reports showing compliance with project requirements where test method is indicated.
Sample: Submit selection and verification samples.

D. Design Drawings: Subcontractor shall submit tensile membrane structure drawings defining the completed structure, anchorage, and connection details, interfaces with building construction and general membrane seam arrangements. Design Drawings are to be signed and sealed by a Structural Engineer in the State of New York.

E. Design Calculations: Subcontractor shall submit complete calculations for the tensile membrane structure, as one package with the design drawings, signed and sealed by a Structural Engineer licensed in the State of New York. Structural calculations shall include all required loading cases and load combinations used in the design and resulting member forces, reactions, deflections and drift. The magnitude of maximum reactions on the supporting structures from all critical load combinations shall be separately tabulated. Critical load conditions used in the final sizing of the members shall be emphasized. The design analysis shall include the name and office phone number of the designer to answer questions during the design drawing review.

G. See Section – 17000 – Close-out Procedures: Submit the following items:
1. Warranty: Project Warranty documents as described herein.
2. Record Documents: Project record documents for installed materials in accordance with Contract Conditions and Division 1 Submittal Procedures Section.
3. Maintenance Manual: Submit one (1) copy of a maintenance manual for the tensile membrane structure to the owner. The manual shall include a schedule for routine inspection, and inspection checklist, instructions for emergency repair and use of emergency repair materials, and warranty. During the system erection period, the owner shall provide maintenance personnel to be trained in the se of repair materials.