

Educational Specification for Mansfield Middle School

Project: Photovoltaic System, Mansfield Middle School,
205 Spring Hill Road, Storrs, Connecticut 06268

1. RATIONALE:

Ninety thousand square feet of the Mansfield Middle School roof is scheduled to be replaced in the summer of 2021. In an effort to be more sustainable, it is the goal of the district to provide a new roof top photovoltaic (PV) solar system to help generate electricity from a renewable energy source. PV panels will be located and positioned on roofs to maximize solar gain and mounted on rack systems, both ballasted and connected to the existing building structure.

The roof replacement project includes removing all roofing components, pea stone ballast, membrane, flashings, drains, and insulation. Storm drainage & plumbing systems will be analyzed and supplemented and/or replaced if found to be insufficient or non-code complaint. The full PV solar system is also scheduled to be installed the summer of 2021, in conjunction with the roof replacement. The roof will be designed concurrent with the PV system and constructed to accommodate the addition of solar panels.

2. LONG – RANGE PLAN:

The district's school facilities provision calls for a quality and appropriate learning environment for the students & staff and to be more environmentally sustainable. In order to comply with this aspect of the plan, a photovoltaic system will be installed concurrent with the replacement of the roof at Mansfield Middle School.

3. THE PROJECT:

The project proposes the following components of its roof replacement project:

- Design and prepare the project for bidding in late 2020.
- Bid and award the PV system in late 2020/early 2021
- Order and procure all materials in the spring of 2021.
- Remove and replace existing roof following roof replacement specifications in summer of 2021.
- Install new PV solar system summer of 2021, including panels, supporting rack structures, ballast, and associated electrical wiring, panels, switches and system components.
- The current school includes grades 5-8 with an enrollment of approximately 552 students and houses various classrooms, Multi-purpose room, gymnasium, auditorium, art rooms, music rooms, special education classes, nurses office, main office, kitchen, server, cafeteria, custodial spaces, storage rooms, boiler room, administration offices.

- The original facility was constructed in 1969 consisting of masonry walls, steel superstructure with steel roof decks. Small additions were added in the 1970s utilizing similar construction and metal roof decks. Additions were also added in 1999 also utilizing similar construction and metal roof decks.
- No FFE will be included in this project.

4. BUILDING SYSTEMS:

- Security: n/a
- Public Address: n/a
- Technology: n/a
- Phone System: n/a
- Clocks: n/a

5. INTERIOR BUILDING ENVIRONMENT:

- Acoustics: na
- Lighting: n/a
- HVAC: The roof replace project includes the possible removal of various rooftop equipment, new curbs installed, and replaced in their current location in order to satisfy roofing warranties.
- Plumbing: The roof replacement project also includes new storm piping if drain locations are relocated or if additional secondary drainage is required by code.
- Windows & Doors: n/a

6. SITE DEVELOPMENT:

- Site Acquisitions: n/a
- Parking: n/a
- Drives: n/a
- Walkways: n/a
- Outdoor Athletic Fields: n/a
- Landscaping: n/a
- Site Improvements: n/a

7. CONSTRUCTION BONUS REQUESTS:

Mansfield Middle School does not house any special program eligible for a school construction bonus.

- School Readiness: n/a
- Lighthouse School: n/a
- CHOICE: n/a
- Full Day kindergarten: n/a
- Reduced class size: n/a
- Regional Vo-ag Center: n/a
- Inter-District Magnet School: n/a

- Inter-District Cooperative School: n/a
- Regional Special Education Center: n/a

8. COMMUNITY USES:

Mansfield Middle School is designed for community use during school hours, before and after school hours and on some weekends throughout the school year and summer months. The uses included but are not limited to include:

- PTO
- The Recreation Department
- Summer Enrichment Programs
- Neighborhood and town wide public meetings
- Boys & Girl scouts
- Community choral and other performing arts programs

Various and sometimes multiple areas are used for these functions.