WATERBURY PUBLIC SCHOOLS

Committee Meeting Agenda/Minutes

Committee:	BOE Building & School Facilities Committee		
Location: Duggan School 38 West Porter Street Room 335	**Date of Meeting:** Thursday June 4, 2026	**Start Time:** 4:45 p.m.	**Finish Time:** Click or tap here to enter text.

Team Norms:

1. All meetings will start on time
2. All team members will agree to stay on specific agenda topics
3. A specific agenda will be set for all meeting

Commissioners Present:	Staff Present:
Click or tap here to enter text.	Click or tap here to enter text.

AGENDA			MINUTES
	Agenda Item	**Time Allotted**	• **Motion** • **Motion by/seconded by** • **Vote tally**
1.	Educational Specifications for the proposed Waterbury Preschool Center Project.		Click or tap here to enter text.
2.	Approval of SCG-042 (#2), Request For Review of Final Plans, for the *Wendell L. Cross* Elementary School Rooftop Solar Photovoltaic Project (151-0310PV) ~ *N. Albini.*		Click or tap here to enter text.
3.	Approval of SCG-042 (#2), Request For Review of Final Plans, for the *M. M. Generali* Elementary School Rooftop Solar Photovoltaic Project (151-0311PV) ~ *N. Albini.*		Click or tap here to enter text.
4.	Approval of SCG-042 (#2), Request For Review of Final Plans, for the *Sprague* Elementary School Rooftop Solar Photovoltaic Project (151-0312PV) ~ *N. Albini.*		Click or tap here to enter text.
5.	Approval of SCG-042 (#2), Review For Review of Final Plans, for the B. W. Tinker Elementary School Rooftop Solar Photovoltaic Project (151-0313PV) ~ *N. Albini.*		Click or tap here to enter text.
6.	Approval of SCG-042 (#2), Request for Review of Final Plans, for the West Side Middle School Rooftop Solar Photovoltaic Project (151-0314PV) ~ *N. Albini.*		Click or tap here to enter text.
7.	Adjournment		Click or tap here to enter text.

Additional notes/minutes: Click or tap here to enter text.

Minutes prepared by: Click or tap here to enter text.

Waterbury Public Schools

#1

Educational Specifications

for Pre-K School

June 2026

Dr. Darren Schwartz, Superintendent of Schools
Nicholas Albini, Chief Operating Officer
Doreen Biolo, Chief Financial Officer
Amy Simms, Principal
Maureen Bergin, Supervisor of Early Childhood Education
Mike Konopka, School Inspector
Will Zhuta, Supervisor of Management
Dan Barry, Director of Safety and Security
Adam Shaban, Food Services
Jeff Hunter, Busing/Crossing Guard Coordinator
Friar Architecture Inc.

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Project Rationale

The new Waterbury Pre-K School is designed to be a multi-functional center that serves students and the broader community throughout the entire year. Choosing to enroll a child in Pre-K is often the first major "educational" milestone for a family. While it might seem like a lot of "organized play," those early years are actually a critical window for brain development. The **"Hidden" Benefit:** One of the greatest educational gains is **Curiosity**. By making learning feel like a series of "wins" and discoveries, Pre-K fosters a positive association with school that can last a lifetime. In addition, this facility will also benefit students from birth to 3 years of age. Preschool is a structured environment for infants and toddlers that provides a critical foundation that is difficult to replicate at home. A high-quality early childhood environment for the birth-to-three age group exposes students to a “mini society” earlier than their peers. Research shows that the sheer volume of words a child hears before age three directly impacts their future literacy.

Foundational Academic Skills

While it is not about intense testing, Pre-K introduces the building blocks of literacy and logic through "play-based learning". Pre-K is not just about learning ABCs; it is about developing the cognitive pathways that make future learning possible.

- **Pre-math skills:** Sorting objects by color or size, counting, and recognizing patterns.
- Language development: Exposure to new vocabulary through storytelling and peer interaction.
- **Fine motor skills:** Using scissors, crayons, and clay to strengthen the hand muscles needed for writing later on in development.
- **Emergent Literacy:** Instead of rote memorization, children learn the concept of print. They realize that letters form words and words tell stories. This includes phonological awareness—the ability to hear and manipulate sounds in language.
- **Logical Reasoning and Pre-Math:** Through "manipulatives" (such as blocks or beads), children grasp physical concepts of quantity, volume, and geometry long before they see an equation.
- **Inquiry-Based Learning:** Pre-K encourages "Executive Function"—the ability to plan, focus attention, and remember instructions. This is often taught through science experiments or building projects.
- **Vocabulary Expansion:** Children in a classroom setting are exposed to a "richer" linguistic environment, often learning hundreds of new words through themed units (e.g., space, underwater life, or community helpers).

Social and Emotional Maturity

In a home environment, a child is often the center of attention. Pre-K introduces them to a community where they must learn new skills. In many ways, the social "soft skills" learned in Pre-K are more predictive of long-term success than early reading.

- **Share and Cooperate:** Navigating toys and teacher attention helps build empathy.
- **Regulate Emotions:** Teachers provide a safe space for children to manage "big feelings" when things don't go their way.
- **Build Independence:** Learning to take off their own coat or clean up their station builds significant self-esteem.
- **Social Perspective-Taking:** This is the age where children move from "parallel play" (playing near each other) to "cooperative play" (playing with each other). They learn to

understand that other people have different feelings and perspectives.
- **Conflict Resolution:** In a supervised setting, children learn to use their words to solve problems rather than resorting to physical impulses. Teachers facilitate "restorative" conversations when a toy is taken or a feeling is hurt.
- **Independence and Agency:** Simple tasks like hanging up a backpack or choosing a learning center help a child see themselves as a capable individual, reducing "separation anxiety" when they eventually head to full-day Kindergarten.
- **Diversity and Inclusion:** Pre-K is often a child's first encounter with peers from different cultural, linguistic, or economic backgrounds, fostering early habits of tolerance and curiosity.

Expanding on the previous points, the benefits of Pre-K can be categorized into two main pillars:

- The **Educational** (cognitive and academic) and
- The **Social** (interpersonal and emotional)

Both pillars work together to build a "whole child" who is ready for the rigors of primary school. Beyond the classroom skills and playground manners, Pre-K offers profound psychological advantages that shape a child's "inner architecture." This stage is less about what they know and more about **who they believe they are** in relation to the world.

The "Student" Mindset

Pre-K acts as a bridge between the freedom of home and the structure of Kindergarten. It introduces the **rhythm of a school day**, including:

- **Following** multi-step instructions.
- **Transitioning** between activities (e.g., moving from playtime to circle time).
- **Learning** to sit and focus for short, age-appropriate increments.

Brain Development & Equity

Research consistently shows that children who attend high-quality Pre-K programs enter Kindergarten with higher readiness scores.

- **Closing the Gap**: It ensures all children start on a level playing field, regardless of their background.
- **Neuroplasticity**: Between the ages of 3 and 5, the brain is incredibly "plastic," meaning it is primed to absorb new information and social cues more efficiently than at any other time in life.

Here are the core psychological benefits of a quality Pre-K environment:

Developing "Self-Efficacy"

Psychologically, Pre-K is a training ground for **self-efficacy**—the belief in one's own ability to succeed.

- **Small Wins:** Completing a puzzle, pouring their own milk, or zip-up a jacket provides a dopamine hit that reinforces a "can-do" attitude.
- **Competence:** When a child realizes they can function without a parent, their internal narrative shifts from "I am taken care of" to "I am capable."

Emotional Regulation and Resilience

The Pre-K years are the peak of the "limbic" stage, where emotions are intense and logical processing is low.

- **The "Safety Net" for Failure:** In a controlled setting, failing at a task (like a block tower falling) is not a catastrophe. Teachers help children "name it to tame it," moving the emotional response from the amygdala to the prefrontal cortex.
- **Delayed Gratification:** Waiting for a turn at the swing or for snack time builds the "patience muscle," which is a key psychological predictor for long-term academic and professional success.

Formation of Secure Non-Familial Attachments

Psychological health relies on the ability to form "secondary attachments."

- **Trusting Others:** Learning that a teacher (a non-parent adult) can be a source of safety and comfort helps a child develop a secure attachment style.
- **Social Safety:** It teaches the brain that "strangers" can become "community," which reduces baseline anxiety in new environments later in life.

The Transition from Egocentrism

- **Theory of Mind:** Pre-K hastens the development of "Theory of Mind"—the psychological understanding that others have different thoughts, secrets, and motives.
- **Reduced Social Anxiety:** By understanding that others have their own "internal worlds," children often become less self-conscious and more empathetic.

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Long Range Educational Plan

This comprehensive framework outlines the educational and structural requirements for a new Pre-K facility. This plan serves as a roadmap to ensure that the new construction aligns with both the immediate needs of early childhood learners and the district's long-term strategic vision.

Goals and Objectives of the Educational Program

The primary goal is to provide a high-quality, inclusive, and developmentally appropriate learning environment that prepares students for Kindergarten and beyond.

- **Holistic Development:** Focusing on the "whole child" through social-emotional, cognitive, and physical growth.
- **Literacy and Numeracy Readiness:** Implementing evidence-based curricula to bridge the achievement gap before Grade 1.
- **Inclusionary Excellence:** Ensuring that students with disabilities are educated alongside their peers in the Least Restrictive Environment (LRE).
- **Community Engagement:** Creating a "hub" for families to access resources, workshops, and early intervention services.

Organizational Pattern for the School System

The district operates under a **centralized early childhood model**. While K-12 follows a traditional neighborhood school structure, the Pre-K program is organized as follows:

- **Grade Configuration:** Pre-K (Ages 3–5).
- **Supervision:** A dedicated Early Childhood Director overseeing the site to ensure specialized instructional leadership.
- **Support Services:** On-site integration of Speech, Occupational, and Physical Therapy services to streamline the student experience.

Plans for Year-Round Schooling

Currently, the district **does not intend** to transition the entire school system to a year-round calendar. However, the proposed Pre-K building will be designed for multi-seasonal use to support:

- **Extended School Year (ESY):** Services for students with Individualized Education Programs (IEPs).
- **Summer Bridge Programs:** Enrichment for "at-risk" learners during July and August.
- **Climate Control:** The facility will feature full HVAC and high-efficiency insulation to ensure comfort during potential future shifts in scheduling.

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Relationship to Regional Plans for School Utilization

The proposed project is a key component of the regional cooperative agreement.

- **Regional Capacity:** This building will help alleviate overcrowding in neighboring elementary schools by relocating Pre-K classrooms to a dedicated site.
- **Resource Sharing:** The district has entered into a memorandum of understanding (MOU) with neighboring towns to offer a limited number of "tuition-based" seats, maximizing building utilization and regional collaboration.

Relationship to the Long-Range Plan

This construction project is the cornerstone of the district's "2030 Strategic Facilities Plan."

- **Primary Education Realignment:** By moving Pre-K to a new facility, the district can convert existing classrooms in elementary buildings back into specialized labs (STEM, Art, Music) that were previously lost to rising enrollment.
- **Modernization:** This building sets the architectural and technological standard for all future district renovations.

Projected Utilization Period

The Board of Education projects that this building will remain a functional, primary asset for at least **50 years**.

- **Adaptability:** The internal walls are designed to be non-load-bearing where possible, allowing for future reconfiguration if educational pedagogical trends shift.
- **Sustainability:** Using durable, low-maintenance materials ensures the physical plant remains viable through the middle of the 21st century.

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Pre-K Learning / Educational Plan

Early childhood education from **Birth to Age 3** and through **Pre-K** (ages 3–5) is centered on the concept of **"Play as Work"**. During these years, the brain forms millions of neural connections every second through sensory experiences and responsive relationships. Pre-kindergarten (ages 4–5) is a critical window where **90% of brain development** occurs. At this stage, children are shifting from simple play to more structured exploration, asking "why" and "how" about everything. The most effective Pre-K activities balance **structured learning** (literacy and math) with **unstructured play** (social-emotional and motor skills).

Birth to 12 Months: The Sensory Explorer

At this stage, learning is about building trust, sensory awareness, and basic motor skills.

- **Tummy Time:** Essential for strengthening neck and shoulder muscles. Place high-contrast (black and white) cards or a mirror in front of them to encourage head-lifting.
- **Visual Tracking:** Move a brightly colored rattle slowly from side to side 8–10 inches from their face to help develop eye-tracking and focus.
- **Narrated Routines:** Talk through everything you do ("I am putting on your blue sock now"). This builds the "receptive language" foundation they need before they can speak.
- **Object Permanence Games:** Classic Peek-a-boo or hiding a toy under a soft cloth helps babies understand that things still exist even when they can't see them.

12 to 36 Months: The Active Investigator

Toddlers are driven by a need for independence and an obsession with "cause and effect."

Cognitive & STEM Activities

- **The "Dump and Fill" Station:** Use plastic bins with measuring cups and dry pasta (or water). It teaches volume, gravity, and fine motor control.
- **Sorting & Categorizing:** Provide a basket of socks or plastic animals. Ask them to find "all the blue ones" or "the big ones."
- **Block Engineering:** Simple stacking and—more importantly—knocking over towers teaches the basics of physics and spatial awareness.

Literacy & Language Activities

By age 5, most children can recognize their name, recite the alphabet, and use sentences of 5–8 words.

- **The Name Hunt:** Write letters of their name on sticky notes and hide them around the room. Have them find the letters and arrange them in the correct order.
- **Rhyme Time:** Play "I Spy" with a twist - "I spy something that rhymes with log." (i.e. dog, frog).

- **Story Retelling:** After reading a book, ask them to "be the teacher" and tell you what happened first, next, and last.
- **Sensory Writing:** Put salt, flour, or sand in a shallow tray. Have them use their finger or a paintbrush to "write" letters and numbers.

Math & Logic (Numeracy)

Pre-K math is about more than just counting; it's about one-to-one correspondence (understanding that the number "3" represents three physical objects).

- **Sticky Note Match:** Draw dots (1 to 10) on a large piece of paper taped to the wall. Give your child sticky notes with the corresponding numbers to match over the dots.
- **Pipe Cleaner Beads:** Label pipe cleaners with numbers 1–10. Have the child thread the matching number of beads onto each one.
- **The Sorting Box:** Give them a bin of mixed items (buttons, toy cars, leaves). Ask them to sort by one attribute at a time: first by **color**, then by **size**, then by **shape**.

STEAM (Science & Engineering)

These activities foster curiosity and basic problem-solving skills.

- **Ice Age Rescue:** Freeze small plastic dinosaurs or toys in a block of ice. Provide warm water, salt, and "tools" (spoons) to help them "excavate" the toys.
- **Sink or Float?:** Fill a tub with water and gather household objects (cork, coin, leaf, toy). Ask for a prediction before dropping each one in.
- **Shadow Play:** Use a flashlight in a dark room to explore how moving an object closer to the light makes its shadow bigger or smaller.

Physical & Motor Skills

Fine motor skills (fingers) are essential for writing, while gross motor skills (limbs) build confidence and health.

- **Kick the Cup:** Label plastic cups with letters or numbers. Call out a target ("Kick the 'A'!") and have them try to knock it over with a soft ball.
- **"Save the Animals":** Wrap toy animals in masking tape or string and ask the child to "rescue" them. This is excellent for **pincer grip** and finger strength.
- **Animal Yoga:** Call out an animal and have them imitate the pose: "Cat" (arching back), "Flamingo" (balancing on one foot), or "Snake" (slithering).

Top Educational Digital Tools (2026)

If you use screen time, choose "active" learning apps rather than passive videos:

- Khan Academy Kids: Entirely free, covering math, reading, and social-emotional skills.
- **Pok Pok:** Montessori-inspired, open-ended play with no "winning" or "losing"—great for creative focus.

- **Endless Alphabet:** Excellent for vocabulary and letter sounds through interactive "monster" puzzles.
- **PBS Kids Games:** Features familiar characters and focuses heavily on STEM and emotional regulation.

Pro-Tip for Parents

At this age, **curiosity is more important than correctness**. If they "spell" a word wrong or count a bit out of order, focus on the effort and the process. Their brain is building the "wiring" for these concepts through the trial and error of play.

What specific area are you looking to focus on—preparing for Kindergarten, or just looking for fun weekend projects?

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Capacity Data

Waterbury Public School's current Pre-K facility houses 290 students in 11 classrooms. This project calls for the construction of a new facility to serve approximately 578 students from birth - 3 and Pre-K 3/4. Waterbury Public Schools plans to transfer six (6) classrooms to the new facility from three elementary schools (Kingsbury, Maloney, and Sprague) that have two (2) Pre-K classrooms each. This new school would allow the City to house the programs in one facility and add additional programs as well such as a Transitional Kindergarten class.

Waterbury Public Schools would also add services to a growing special needs population, adding more full day Pre-K opportunities to present and additional students, and expanding the program to students due to a presently undersized school. This new facility is critical in the context of addressing children's developmental needs as this is presently an under-served group of children as they enter kindergarten. The design will need to incorporate indoor learning opportunities and amenities as well as outdoor exploration growth and development, both in a safe and welcoming environment.

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Operating Enrollment at Completion of Project

	Classroom Type	AM	PM	Full Day	Total
1	Pre-K			18 (16 Gen / 2 SPED)	18
2	Pre-K			18 (16 Gen / 2 SPED)	18
3	Pre-K			18 (16 Gen / 2 SPED)	18
4	Pre-K			18 (16 Gen / 2 SPED)	18
5	Co-Taught 3	18 (9 Gen / 9 SPED)	18 (9 Gen / 9 SPED)		36
6	Co-Taught 3	18 (9 Gen / 9 SPED)	18 (9 Gen / 9 SPED)		36
7	Co-Taught 3	18 (9 Gen / 9 SPED)	18 (9 Gen / 9 SPED)		36
8	Co-Taught 3	18 (9 Gen / 9 SPED)	18 (9 Gen / 9 SPED)		36
9	Early Start Co-Taught 4			18 (9 Gen / 9 SPED)	18
10	Early Start Co-Taught 4			18 (9 Gen / 9 SPED)	18
11	Co-Taught 4			18 (9 Gen / 9 SPED)	18
12	Self-Contained 3	10 (SPED)	10 (SPED)		20
13	Self-Contained 3 / 4 "Full Day"			12 (SPED)	12
14	Self-Contained 3 / 4 "Full Day"			12 (SPED)	12
15	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
16	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
17	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
18	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
19	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
20	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24

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21	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
22	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
23	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
24	Self-Contained 3 / 4 AM/PM	12 (SPED)	12 (SPED)		24
25	Transitional Kindergarten AM / PM	12	12		24

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Site Development

The following is a general description of the site requirements:

- Parking:
  - Provide parking below in parking garage for faculty and stuff use only.
  - Provide site parking for all visitors and staff that drive to the building.
  - Additional parking for assembly activities and visitors.
  - ADA and other code requirements shall be addressed in design of parking.
  - Parking spaces for parent drop off for Pre-K drop off / pick up.
  - Electric vehicle charging stations as required.
  - Solar canopy structures over parking areas
- Drives:
  - Consideration to be given to community access, parking locations and student safety.
  - Access drives to allow for safe bus drop off and pick up.
  - Heavy duty pavement at all bus lanes.
  - Guardrails at perimeters of all parking areas and drive aisles.
  - Separate the bus and part drop offs.
  - Secure driveway entry gates with access control.
  - Permeable paving in selected parking or walkway areas
- Walkways:
  - To be featured around the perimeter of the building.
  - Student safety is a key concern in design of walkways as well as ADA compliance.
  - Concrete walks with integral CIP concrete curbs.
- Landscaping:
  - Outdoor education space incorporated into the site layout.
  - Nature based learning gardens / STEM landscape zones
  - Vegetation along the streets to provide protection and privacy.
  - Low maintenance landscaping with shrubs and mostly ornamental grass (low water and no maintenance).
  - Decorative gateway entry feature / signage monument
- Playscape(s):
  - Provide a minimum of two (2) 3,000 square feet accessible playgrounds for Pre-K aged students.
  - Play areas to be fenced in with appropriate security measures.
  - Shade structures at playground and student waiting areas (bus loading zones, parent drop off, etc.)
  - Inclusive sensory playground equipment.
- Fencing with privacy slats along perimeter of the site.
- New bike racks will be installed along the front of the main entrance.
- Provide exterior signage at all entrances and provide appropriate way finding signage throughout the site.
- Dedicated space to plow snow.
- Dedicated space for HVAC equipment on the ground.
- Separate secured service / delivery access point / loading dock.

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Building Systems

MECHANICAL SYSTEM

- Chiller system for cooling. Located to mitigate noise and vibration.
- Provide heat piping and insulation throughout the building
- Provide ventilation system. System to be sized for code minimum ventilation requirements.
- DOAS units for air control (fresh air, filtration, dehumidification, pre-heating,etc.)
- Provide digital controls system for HVAC equipment and appurtenances.
- Provide testing and balancing and commissioning of systems
- All spaces to receive air conditioning.

SECURITY SYSTEM

- Full facility security system (interior and exterior)
- Grade level windows to have School Guard grade glazing and/or safety film.
- Intrusion detection for after school/business hours
- Interior and exterior security cameras to cover the entirety of the building
- Motion sensors in all corridors
- AiPhone at all main entrances with card readers
- AiPhone at all delivery entrances
- Alarm/sensors at all exterior doors (sound alarm). Sensors to be connected to the security system.
- Card reader access at interior lobby doors and waiting room doors.
- Man trap with bullet resistant transaction window at main entrance vestibule. Interlocked doors with access control.
- Lockdown alert system with panic button(s) at main office. Allow for access by emergency personnel. S2 access control and announcement through fire system.
- Doors with vision panes to have one-way viewing film
- Classroom doors to have interior locks
- All exterior windows to have shades
- Gateway and fob access for main office staff
- Site security:
  - Cameras in the parking areas, bus loop and parent drop off.
  - Bollards between traffic, connecting corridors and building entrances.
  - Exterior site fencing to separate from adjacent properties and streets.
  - Fenced in playground(s). Minimum 8 feet tall with privacy slats and security cameras.
- Repeater for all emergency staff radios
- Alarm system / PA system in large indoor play area for announcements.
- Design the plan in such a away to prevent access to instructional areas of the school when community events take place in assembly areas during non-school hours.
- AED units within Nurse's Suite and Indoor Play Area

LIGHTING SYSTEM

- Efficient and appropriate natural lighting will be maintained within the facility as appropriate for the programmatic use of the spaces.
- Floor level natural lighting opportunities to be provided in classrooms.
- Motion sensors and dual switching will be installed in classrooms.
- Use LED light fixtures throughout.
- Security lighting for both interior and exterior of the building.
- Emergency back-up via local battery ballasts

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ELECTRICAL SYSTEM

- Power to be provided by the local utility company.
- Distribution to include customer utility metering as well as load metering for plug loads, lighting, mechanical equipment, etc.
- A standby generator shall be provided to maintain heating and other essential building loads.
- Alternate energy source will be considered for this project. (Example would be photo voltaic cells located on the roof)

PUBLIC ACCESS

- The Public Address (PA) system to be provided in all instructional and support spaces.
- The PA system to be developed in conjunction with the phone, clock, data and voice and video systems of the school.

TECHNOLOGY

- Typical 75" touchscreen in each classroom
- Teacher's station with adjacent HDMI, data and power and laptop docking station.
- Chromebook cart and storage for chromebooks in each classroom
- The most up to date voice/video/data systems to be included in all instructional and support spaces. A WAN to be networked to the other schools and Board of Education Offices within the City of Waterbury

PHONE SYSTEM

- Phones to be installed in every room of the school occupied by teachers or students at any given time, including all support and instructional spaces.
- Phone system to be tied into the PA system.
- A typical user will have the capability to call room to room or access outside local and long-distance lines using access codes.

CLOCKS

- Wireless wall mounted clock system
- All support and instructional spaces to include clocks

PLUMBING SYSTEM

- The plumbing fixtures / system will be designed per current and applicable codes.
- Fixtures to be self-operating
- Copper piping to be used for all domestic water.
- Dedicated water heater(s) to service the entire building.

FIRE PROTECTION SYSTEM

- The building is to be fully protected by a sprinkler system installed per NFPA 13.

FIRE ALARM SYSTEM

- The building will be protected by a fully addressable analog, manual and automatic fire alarm system.
- System design must be 100 percent compatible with the current district standard.

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ACOUSTICS

- Suspended acoustical ceilings will be installed throughout the building with the exception of the Vestibule and toilet rooms.
- Corridor, play area, kitchen, classroom and office walls to provide adequate separation for sound control.

WINDOWS AND DOORS

- All windows are to be high efficiency, low-e glass.
- Emergency egress windows and rated doors will be installed in accordance with applicable codes.

BUILDING EXTERIOR

- Materials to be appropriate for long term wear and maintenance.
- Aesthetics to match or complement neighborhood architecture.
- Energy efficient envelope

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Interior Building Environment

The following is a general description of each space, it is understood that all spaces, other than storage will be built with the following items included:

- Air conditioned and adequate air ventilation to meet current codes
- Fire alarm system with horn/strobe and voice T.T.S. interior and exterior
- School-wide intercom system, interior and exterior and linked with the emergency notification system
- Sprinkler system to meet current codes
- Emergency lighting as required by code
- Semi-darkening, manual shades on all windows
- Vision panes in classroom doors with one-way viewing film
- Soft color, dimmable LED lighting
- Acoustical insulation for soundproofing
- ANSI compliant building standards
- Wall mounted clock tied into PA system
- Wireless / internet access
- Multiple convenience outlets - with childproof capabilities in areas accessible to students
- Desktop phone system tied in PA system
- Optimal natural light and ventilation

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Academic Programs

Pre-K Classroom	
NAEYC Req'd SF	756 sf (each) (42 sf per student)
Proposed SF	950 sf (each)
Number of Rooms	Four (4) Classrooms
Number of Students	18 Full Day
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • 4-5 students per table with additional chair for adult. • One (1) cubby per student with coat hook
Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.
Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls

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Accessories	• Automatic soap and paper towel dispenser adjacent to hand washing sink • In-room drinking fountain with bottle fill station • Bulletin boards
Co-Taught 3 Classroom	
NAEYC Req'd SF	756 sf (each) (42 sf per student)
Proposed SF	950 sf (each)
Number of Rooms	Four (4) Classrooms
Number of Students	18 AM, 18 PM
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • 4-5 students per table with additional chair for adult. • One (1) cubby per student with coat hook
Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.
Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry

Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls
Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • In-room drinking fountain with bottle fill station • Bulletin boards
Early Start Co-Taught 4 Classroom	
NAEYC Req'd SF	756 sf (each) (42 sf per student)
Proposed SF	950 sf (each)
Number of Rooms	Two (2) Classrooms
Number of Students	18 Full Day
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • 4-5 students per table with additional chair for adult. • One (1) cubby per student with coat hook
Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.
Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls

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Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls
Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • In-room drinking fountain with bottle fill station • Bulletin boards
Co-Taught 4 Classroom	
NAEYC Req'd SF	756 sf (42 sf per student)
Proposed SF	950 sf
Number of Rooms	One (1) Classroom
Number of Students	18 Full Day
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • 4-5 students per table with additional chair for adult. • One (1) cubby per student with coat hook
Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.

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Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls
Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • In-room drinking fountain with bottle fill station • Bulletin boards
Self-Contained 3 Classroom	
NAEYC Req'd SF	420 sf (42 sf per student)
Proposed SF	750 sf Classroom 200 sf Observation Room
Number of Rooms	One (1) each
Number of Students	10 AM, 10 PM
Access / Adjacencies	Observation Room
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • 4-5 students per table with additional chair for adult. • One (1) cubby per student with coat hook
Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space

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Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.
Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls
Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • In-room drinking fountain with bottle fill station • Bulletin boards • Sensory wall at floor level
Evaluation Area	• Adjacent to Observation Room • Play area for evaluations
Observation Room	• 150 square feet • Viewing window with one way glass between Evaluation Area and Observation Room. • One-way audio capabilities • Table at observation window with 3-4 chairs • Access to power and wifi
Self-Contained 3/4 Classroom	
NAEYC Req'd SF	504 sf (each) (42 sf per student)
Proposed SF	800 sf (each)
Number of Rooms	Twelve (12) Classrooms
Number of Students	Two (2) Classrooms: 12 Full Day Ten (10) Classrooms: 12 AM, 12 PM
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • 4-5 students per table with additional chair for adult. • One (1) cubby per student with coat hook

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Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.
Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls
Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • In-room drinking fountain with bottle fill station • Bulletin boards

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Transitional Kindergarten Classroom	
NAEYC Req'd SF	504 sf (each) (42 sf per student)
Proposed SF	800 sf
Number of Rooms	One (1) Classroom
Number of Students	12 AM, 12 PM
Classroom Technology	• Interactive display with sliding enclosure with lock • Remote voice amplification capabilities • GFI outlets at counter height
Student Furniture / Storage	• Tables for collaborative learning with student chairs (durable and stackable). • Kidney shaped student tables with additional chair for adult. • Child height rectangular tables with chairs • One (1) cubby per student with coat hook
Teacher Furniture / Storage	• Two adult chairs with one shared workspace • One shared lockable filing cabinet
General Furniture / Storage	• Built-in open shelf bookcases around perimeter at child appropriate height. • Mobile bookshelves • Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet • Lockable upper cabinets for supply storage • Space for strollers, wheelchairs, etc
Toilet Room	• All fixtures to be appropriate heights for children ages 3-5 • Meet accessibility requirements • Provide changing station with space
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lowered to the ground to provide viewing for students.
Finishes	• Luxury vinyl tile flooring with base and area rugs • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls

Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • In-room drinking fountain with bottle fill station • Bulletin boards
Sensory Rooms	
NAEYC Req'd SF	375 sf (each) (75 sf per student)
Proposed SF	800 sf (each)
Number of Rooms	Two (2)
Number of Students	4-5 at one time (maximum)
Access / Adjacencies	OT / PT Room
Classroom Technology	• Security camera within space linked to security system
Specialty Fixtures	• Ball pit • Bubble wall with adjacent outlet and shelf for machine • Space for trampolines, sensory pods, etc.
Teacher Furniture / Storage	• Wardrobe for staff storage
General Furniture / Storage	• Lockable storage for cleaning supplies • Built-in open shelving for sensory and handheld items - easily accessible to students • High cabinets for storage
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lower to the ground to provide viewing for students.
Finishes	• Soft, easy to clean flooring with base • Acoustic ceiling tiles • Painted walls with wall pads
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls

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Physical Therapy & Occupational Therapy Room	
NAEYC Req'd SF	375 sf (each) (75 sf per student)
Proposed SF	750 sf
Number of Rooms	One (1) Classroom
Number of Students	4-5 at one time (maximum)
Access / Adjacencies	Storage space for equipment - 150 sf
Specialty Fixtures	• Space for large equipment • Trampolines, sensory pods, etc.
Student Furniture / Storage	• Two (2) tables with chairs • Therapy swing and associated structural support
Teacher Furniture / Storage	• Partitioned area from rest of space. Cubicle height wall(s) • Four work stations, each with a chair • Access to power and wifi • Wardrobe for each teacher
General Furniture / Storage	• Durable counter top with hand washing stainless steel sink at child height with motion sensor faucet
Lighting	• Soft color, dimmable • Windows for natural light with manual shades. Some windows to be lower to the ground to provide viewing for students.
Finishes	• Soft, easy to clean flooring with base • Acoustic ceiling tiles • Painted walls
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Acoustics	• Walls between classrooms to meet STC requirements • Acoustic panels on walls
Accessories	• Automatic soap and paper towel dispenser adjacent to handwashing sink • Bulletin boards and white board • Wall with full height mirrors. Bar attached to wall for walking/standing exercises.
Storage Room	• Direct connection to PT/OT Room • Shelving for equipment

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Administration

Secure Vestibule	
Proposed SF	100 sf
Access / Adjacencies	Main Office; Waiting Room
Technology	• Secure main trap with appropriate security measures to ensure the safety of all students and staff • Video surveillance at exterior and interior
Furniture	• Parent mail drop / document drop • Sign in/out and parent greeting counter
Finishes	• Hard, durable ceiling and walls • Entry mat system • Bullet resistant transaction window with deal tray
Door, Frame & Hardware	• Exterior door equipped with access control • Bullet resistant • Key card access / access control to waiting room
Visitor Waiting Room	
Proposed SF	310 sf
Number of Rooms	Two (2)
Access / Adjacencies	Secure Vestibule; Main Office
Technology	• Video surveillance • Transaction windows with counter between waiting room and main office • Digital signage communication system to display important announcements, events, emergency information and other information that needs to be disseminated to students, staff, parents and visitors. • Clock (wall-mounted) connected to PA system
Furniture	• Durable, stackable chairs
Toilet Room	• Direct connection to waiting room for visitors / parents only • Meet accessibility requirements • Provide changing station
Finishes	• Hard ceiling with soft color lighting • Entry mat system and durable flooring • Bullet resistant transaction window • Child size table, chairs and built-in book shelf
Door, Frame & Hardware	• Exterior door equipped with access control • Key card access / access control

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Main Office - Secretary/Admin	
Proposed SF	600 sf
Access / Adjacencies	Secure Vestibule; Waiting Room
Technology	• 55" wall mounted monitor for security viewing • Panic button
Furniture	• (3) Three workstations with view of waiting area and secure vestibule. Each with desk with lockable drawer, chair, laptop • Lockable filing cabinets • Lockable storage / wardrobe • Counter with storage below at transaction windows • Counter space with lower and upper storage with electrical outlets at counter height • (2) two copy/print machines
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Principal's Office	
Proposed SF	215 sf
Access / Adjacencies	Small Conference Room
Technology	• 55" wall mounted monitor for security viewing
Furniture	• (1) One workstation with lockable drawer, chair, lockable storage/wardrobe cabinet, laptop • Small table with chairs
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Assistant Principal's Office	
Proposed SF	175 sf
Furniture	• (1) One workstation with lockable drawer, chair, lockable storage/wardrobe cabinet, laptop
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry

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Parent Liaison Office	
Proposed SF	250 sf
Access / Adjacencies	Main Office / Waiting Room
Furniture	• (1) One workstation with lockable drawer, chair, lockable storage/wardrobe cabinet, laptop • Seating for two guests
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Speech & Language Pathologist Office	
Proposed SF	300 sf
Access / Adjacencies	Classrooms / Social Worker
Furniture	• Two adult chairs with one shared workspace • One shared lockable filing cabinet • (3) Three small child height tables • 10 child height, durable, stackable chairs
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Storage	• Lockable storage for materials
Social Worker Office	
Proposed SF	250 sf
Access / Adjacencies	Classrooms / Speech Pathologist
Furniture	• Two adult chairs with one shared workspace • One shared lockable filing cabinet • (3) Three small child height tables • 10 child height, durable, stackable chairs
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with vision pane • One-way window film at vision pane • Keyed entry
Storage	• Lockable storage for materials

General Admin Offices	
Proposed SF	120 sf (each)
Number of Rooms	Four (4)
Furniture	• (1) One workstation with lockable drawer, chair, lockable storage/wardrobe cabinet, laptop
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
Small Conference Room	
Proposed SF	300 sf
Access / Adjacencies	Principal's Office
Technology	• Monitor, conference phone, speakers • Wi-fi access / ethernet ports • Power strips /outlets / USB charging
Furniture	• Conference table for four (4) people • Comfortable, adjustable chairs • Lower casework for storage items
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
Large Conference Room	
Proposed SF	600 sf
Access / Adjacencies	General Admin. Offices
Technology	• Monitor, conference phone, speakers • Wi-fi access / ethernet ports • Power strips /outlets / USB charging
Furniture	• Conference table for four (4) people • Comfortable, adjustable chairs • Lower casework for storage items
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry

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Mail / Copy Room	
Proposed SF	250 sf
Technology	• Two (2) copy/print machines • Fax machine
Furniture	• Faculty mailboxes • Countertop with storage above and below • Space for packages
Finishes	• Luxury Vinyl Tile with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
Teacher Work Room	
Proposed SF	250 sf (each)
Number of Rooms	Two (2)
Furniture / Equipment	• Copier/printer • Storage for supplies
Finishes	• Luxury Vinyl Tile with wall base; painted walls • Acoustic ceilings with soft color
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Card reader access
Laundry Room	
Proposed SF	200 sf
Access / Adjacencies	Teacher Work Room
Furniture	• Two heavy duty washing machines • Two heavy duty dryers with ventilation • One sanitation machine
Finishes	• Epoxy flooring with integral base and floor drain • Tile on wet walls, all other walls epoxy paint • Hard ceiling with LED light fixtures
Door, Frame & Hardware	• Durable door and frame
Staff Break Room	
Proposed SF	400 sf
Furniture / Equipment	• Counter with stainless steel sink, paper towel dispenser, soap dispenser, storage below and above. Counter height GFI outlets • Table and chairs for 10 people • Refrigerator, Microwave, Toaster Oven

Finishes	• Luxury Vinyl Tile with wall base; painted walls • Acoustic ceilings with soft color
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Card reader access
Secure Records Storage	
Proposed SF	200 sf
Technology	• Video surveillance
Furniture	• Durable storage suitably sized for corrugated boxes
Finishes	• Luxury Vinyl Tile with wall base; painted walls • Acoustic ceilings with lighting, occupancy sensor
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
E.C.O Secretary / Reception	
Proposed SF	500 sf
Access / Adjacencies	Secure Vestibule / Waiting Room
Technology	• 55" wall mounted monitor for security viewing • Panic button
Furniture	• (4) Four workstations with view of waiting area and secure vestibule. Each with desk with lockable drawer, chair, laptop • Lockable filing cabinets • Lockable storage / wardrobe • Counter with storage below at transaction windows • Counter space with lower and upper storage with electrical outlets at counter height • (2) two copy/print machines
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
E.C.O. Offices	
Proposed SF	125 sf (each)
Number of Rooms	Fourteen (14)
Furniture	• (1) One workstation with lockable drawer, chair, lockable storage/wardrobe cabinet, laptop
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry

E.C.O. Work Room	
Proposed SF	225 sf
Technology	• Three (3) copy/print machines • Fax machine
Furniture	• Staff mailboxes • Countertop with storage above and below • Large space for packages • Bulletin boards
Finishes	• Luxury Vinyl Tile with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
E.C.O. Break Room	
Proposed SF	350 sf
Furniture / Equipment	• Counter with stainless steel sink, paper towel dispenser, soap dispenser, storage below and above. Counter height GFI outlets • Table and chairs sufficient for number of staff • Refrigerator, Microwave, Oven/Range, Toaster Oven
Finishes	• Luxury Vinyl Tile with wall base; painted walls • Acoustic ceilings with soft color
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Card reader access
E.C.O Large Conference Room	
Proposed SF	600 sf
Access / Adjacencies	Centralized within ECO Admin
Technology	• Monitor, conference phone, speakers • Wi-fi access / ethernet ports • Power strips /outlets / USB charging
Furniture	• Conference table for 10-12 people • Comfortable, adjustable chairs • Storage cabinets
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry

E.C.O Small Conference Room	
Proposed SF	300 sf
Access / Adjacencies	Centralized within ECO Admin
Technology	• Monitor, conference phone, speakers • Wi-fi access / ethernet ports • Power strips /outlets / USB charging
Furniture	• Conference table for 4-6 people • Comfortable, adjustable chairs • Storage cabinets
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
E.C.O Evaluation Room	
Proposed SF	150 sf
Number of Rooms	Two (2)
Furniture	• Small tables with stackable chairs for adults • Tables and chairs for children • Low storage shelving for child materials • Tall lockable storage for files
Finishes	• Carpet flooring with wall base; painted walls • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
E.C.O. Secure File Storage	
Proposed SF	200 sf
Furniture	• Durable storage shelving for file
Finishes	• Sealed concrete floor with wall base; painted walls • Acoustic ceilings with LED lighting, occupancy sensor
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
E.C.O. General Storage	
Proposed SF	200 sf
Furniture	• Durable storage shelving for office supplies
Finishes	• Sealed concrete floor with wall base; painted walls • Acoustic ceilings with lighting, occupancy sensor

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Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry
Unisex Staff Toilet Rooms	
Proposed SF	Dispersed through the building per code, single occupancy
Furniture	• Accessible, adult height fixtures • Soap and paper towel dispenser • Changing table
Finishes	• Epoxy flooring with integral base and floor drain • Tile on wet walls, all other walls epoxy paint • Hard ceiling with LED light fixtures
Door, Frame & Hardware	• Durable door and frame
Unisex Child Toilet Room	
Adjacency	Evaluation Rooms
Furniture	• Accessible, child height fixtures • Soap and paper towel dispenser • Changing table
Finishes	• Epoxy flooring with integral base and floor drain • Tile on wet walls, all other walls epoxy paint • Hard ceiling with LED light fixtures
Door, Frame & Hardware	• Durable door and frame

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Nurse's Suite

Nurse's Suite	
Proposed SF	960 sf
Access / Adjacencies	Main Office
Health Aide / Cot Area	• Recovery area with two cots • Cots with privacy curtains • Sink with foot pedal controls outside of toilet room • Soap and paper towel dispensers • Shower with eyewash station • Area for vision screening
Examination Room	• Examination table • Counter with lockable storage above and below
Office	• One workstation: Desk with lockable drawer, chair, lockable storage/wardrobe cabinet, one laptop
Toilet Room	• Child height accessible fixtures • Soap and paper towel dispenser • Changing table
Storage / Equipment	• Lockable storage cabinet • Lockable cabinets for medicine • Extra storage area for medical supplies and materials • Wheelchair • Rolling cart • AED with alarm box • Refrigerator • Ice machine
Finishes	• Luxury Vinyl Tile with wall base • Acoustic ceilings with soft color, dimmable lighting
Door, Frame & Hardware	• Durable door and frame with one-way vision pane • Keyed entry

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Food Services

Kitchen	
Proposed SF	1,660 sf
Access / Adjacencies	Custodial closet with mop sink
Technology	• Interactive display with sliding enclosure • Remote voice amplification capabilities • GFI outlets at counter height • Convenience outlets with child proof capabilities • Thermometers / connection to monitoring system
Equipment	• (1) Double stack oven with exhaust hood • (1) Walk-in freezer with double doors • (1) Walk-in cooler with double doors • (2) hot boxes • (2) stainless steel prep tables with shelving below • Three-bay sink for dish washing with drain boards, chemical pump and pre-rinse spray assembly • (1) hand washing sink • (1) lockable chemical cabinet • Stainless steel serving line • Floor drains, exterior in-line grease trap, eye-wash station • High efficiency energy star label equipment and lighting • Temperature maintenance, water infiltration and sanitation
Storage	• Large, walk-in dry storage room with heavy-duty wire mesh shelving; keyed entry • Storage area for mobile delivery cards - minimum 6 carts
Lighting	• Task Lighting • High out-put LED lighting for efficiency and color correction
Finishes	• Resilient, washable and slip-resistant flooring with integral cove base. • Anti-fatigue mats, dispersed throughout Kitchen • Stainless steel counters • Durable and washable acoustic ceiling tiles • Epoxy painted walls
Door, Frame & Hardware	• Oversized door at exterior for deliveries with key card access
Office	• One workstation: Desk with lockable drawer, chair, lockable storage/wardrobe cabinet, one laptop
Staff Locker Area	• Metal lockers for six employees • Benches • Private, accessible toilet room

Indoor Play Area

Kitchen	
Proposed SF	4,580 sf
Access / Adjacencies	Away from Classrooms and Sensory Room
Technology	• Sound system
Equipment	• Recessed drinking station and bottle filler • Folding/stackable seating to hold faculty and staff assembly • Dividing partitions • Ceiling mounted air destratification fans
Storage	• Chair Storage - direct access to play area(s) • Equipment storage with durable shelving for equipment
Lighting	• Lighting with safety cages within play areas • High out-put LED lighting for efficiency and color correction
Finishes	• All purpose wood floor • Removable protective matting • Sound deadening walls and acoustic treatment • High ceilings, lowest feature to be a minimum of 25 feet from the floor • Wall padding around the entire perimeter, from height of wall base to six feet minimum above finished floor
Door, Frame & Hardware	• Direct access to the exterior • Durable door and frame with one-way vision pane • Keyed entry

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Support Spaces

GENERAL STORAGE

- Shelving for various items
- Sealed concrete floor with wall base; epoxy painted walls
- Acoustic ceilings with LED lighting, occupancy sensor
- Door hardware: keyed access

CUSTODIAL OFFICE / WORK ROOM

- One workstation: Desk with lockable drawer, chair, lockable storage/wardrobe cabinet, one laptop
- Table and seating for custodial staff
- Luxury vinyl tile with wall base; painted walls
- Acoustic ceilings with LED lighting
- Door hardware: key access

CUSTODIAL CLOSET

- Dispersed throughout facility
- Mop sink with associated hardware
- Chemical station
- Sealed concrete floor with wall base; epoxy painted walls
- Acoustic ceilings with LED lighting, occupancy sensor
- Door hardware: key access

MDF / IDF SPACES

- Dispersed throughout facility as required
- Adequate lighting and ventilation
- WAPs throughout building
- Racks as required, UPS
- Sealed concrete floor with wall base; painted walls
- Acoustic ceilings with LED lighting, occupancy sensor
- Door hardware: key access

MECHANICAL / ELECTRICAL SUPPORT SPACES

- Energy efficient equipment - refer to building systems for additional information
- Sealed concrete floor with wall base; epoxy painted walls
- Acoustic ceilings with LED lighting, occupancy sensor
- Door hardware: key access

ELEVATOR / LIFT

- Vertical conveying as required for accessibility

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Construction Bonus Requests

- Early Childhood Bonus
- Special Education Bonus

Community Uses

The new Pre-K facility will be designed to facilitate activities during the school hours, before and after school hours and throughout the calendar year.

A Pre-K facility is a specialized environment designed for safety, accessibility, and early childhood development. Because these buildings are often vacant during evenings, weekends, and summer breaks, they represent a goldmine of untapped "civic infrastructure" by utilizing the Board of Education Building Use Policy.

Here is how a Pre-K facility can serve the broader community:

Educational & Family Support

Since the furniture and layout are already geared toward children and parents, these spaces are perfect for family-centric programming.

- **Parenting Workshops:** Hosting classes on nutrition, early literacy, or positive discipline.
- **English as a Second Language (ESL) Classes:** Utilizing the classrooms in the evenings for adult learners while providing a familiar space for their children.
- **Teacher Professional Development:** A hub for local educators to meet, share resources, and conduct training.

Health & Wellness Hub

Many Pre-K centers are built to meet strict health and safety codes, making them ideal for mobile or temporary health services.

- **Vaccination & Screening Clinics:** Using the lobby or large multipurpose rooms for flu shots, dental screenings, or hearing/vision tests for the neighborhood.
- **Indoor "Play Gyms":** During winter months or extreme heat, opening the padded indoor play areas to local families for a small fee or free of charge.
- **Yoga or Low-Impact Fitness:** Utilizing the open floor space of a "great room" for community wellness classes.

Civic & Social Gathering Space

Public buildings often lack small-to-medium meeting venues. A Pre-K facility fills this gap perfectly.

- **Polling Stations:** Their locations in residential neighborhoods make them accessible spots for local elections.

DRA

- **HOA or Neighborhood Watch Meetings:** Providing a safe, neutral ground for residents to discuss local issues.
- **Micro-Library or Book Exchange:** Setting up a "take a book, leave a book" station in the foyer to encourage community literacy.

Economic & Creative Use

- **Small Business "Pop-ups":** Allowing local artisans or farmers to use the parking lot or foyer for weekend markets.
- **Voting/Census Hubs:** Serving as a command center for community outreach programs.
- **Art Gallery:** Showcasing local student and community art on the walls during "Open House" nights.

DRAFT

Project	Pre-K School	Architect:	Friar Architecture	OSCGR Project #	xxx-xxxx xx
District / Location	Waterbury, CT	Construction Manager:	NA		
Date	30-Apr-26				

	Level 1	Level 2	Level 3	Quantity	UoM	Unit Rate	Sub-Total	Element Total	Group Total	Ineligible Costs by Element	Ineligible Costs Total by Group
A	SUBSTRUCTURE								$ 13,784,000.00		$ -
		A10	Foundations					$ 428,000.00	Remarks		
			A1010 Standard Foundations	0	CY	$ -	$ 50,000.00			$ -	
			A1020 Special Foundations (Underpinning)	0	CY	$ -	$ -			$ -	
			A1030 Slab on Grade	0	SY	$ -	$ 378,000.00			$ -	
		A20	Basement Construction					$ 13,356,000.00			
			A2010 Basement Excavation	0	CY	$ -	$ 2,700,000.00			$ -	
			A2020 Basement Walls	0	SY	$ -	$ 10,656,000.00			$ -	
B	SHELL								$ 10,129,590.00		$ -
		B10	Superstructure					$ 2,776,275.00	Remarks		
			B1010 Floor Construction	0	SF	$ -	$ 1,233,900.00			$ -	
			B1020 Roof Construction	0	SF	$ -	$ 1,542,375.00			$ -	
		B20	Exterior Enclosure					$ 5,205,685.00			
			B2010 Exterior Walls	0	SF	$ -	$ 3,454,920.00			$ -	
			B2020 Exterior Windows	0	SF	$ -	$ 1,665,765.00			$ -	
			B2030 Exterior Doors	0	LS	$ -	$ 85,000.00			$ -	
		B30	Roofing					$ 2,147,630.00			
			B3010 Roof Covering	0	SF	$ -	$ 2,097,630.00			$ -	
			B3020 Roof Openings	0	LS	$ -	$ 50,000.00			$ -	
C	INTERIORS								$ 4,846,244.00		$ -
		C10	Interior Construction					$ 2,555,088.00	Remarks		
			C1010 Partitions	0	SF	$ -	$ 925,425.00			$ -	
			C1020 Interior Doors	0	LS	$ -	$ 550,000.00			$ -	
			C1030 Fittings	0	LS	$ -	$ 1,079,663.00			$ -	
		C20	Stairs					$ 320,000.00			
			C2010 Stair Construction	0	EA	$ -	$ 220,000.00			$ -	
			C2020 Stair Finishes	0	EA	$ -	$ 100,000.00			$ -	
		C30	Interior Finishes					$ 1,971,156.00			
			C3010 Wall Finishes	0	SF	$ -	$ 339,323.00			$ -	
			C3020 Floor Finishes	0	SF	$ -	$ 860,645.00			$ -	
			C3030 Ceiling Finishes	0	SF	$ -	$ 771,188.00			$ -	
D	SERVICES								$ 16,033,765.00		$ -
		D10	Conveying					$ 320,000.00	Remarks		
			D1010 Elevators and Lifts	0	Stop	$ -	$ 320,000.00			$ -	
			D1020 Escalators and Moving Walks	0	EA	$ -	$ -			$ -	
			D1090 Other Conveying Systems	0	EA	$ -	$ -			$ -	
		D20	Plumbing					$ 1,759,344.00			
			D2010 Plumbing Fixtures	0	LS	$ -	$ 363,803.00			$ -	
			D2020 Domestic Water Distribution	0	LS	$ -	$ 664,085.00			$ -	
			D2030 Sanitary Waste	0	LS	$ -	$ 362,520.00			$ -	
			D2040 Rain Water Drainage	0	LS	$ -	$ 234,194.00			$ -	
			D2090 Other Plumbing Systems	0	LS	$ -	$ 134,742.00			$ -	
		D30	HVAC					$ 5,567,109.00			
			D3010 Energy Supply	0	LS	$ -	$ -			$ -	
			D3020 Heat Generation Systems	0	LS	$ -	$ 616,950.00			$ -	
			D3030 Cooling Generation Systems	0	LS	$ -	$ -			$ -	
			D3040 Distribution Systems	0	LS	$ -	$ 1,539,907.00			$ -	
			D3050 Terminal & Package Units	0	LS	$ -	$ 2,117,372.00			$ -	
			D3060 Controls and Instrumentation	0	LS	$ -	$ 513,302.00			$ -	
			D3070 Systems Testing and Balancing	0	LS	$ -	$ 73,787.00			$ -	
			D3090 Other HVAC Systems	0	LS	$ -	$ 705,791.00			$ -	
		D40	Fire Protection					$ 1,348,269.00			
			D4010 Sprinklers	0	LS	$ -	$ 1,117,631.00			$ -	
			D4020 Standpipes	0	LS	$ -	$ 35,561.00			$ -	
			D4030 Fire Protection Specialties	0	LS	$ -	$ 42,673.00			$ -	
			D4090 Other F.P. Systems	0	LS	$ -	$ 152,404.00			$ -	
		D50	Electrical					$ 7,039,043.00			
			D5010 Electrical Service & Distribution	0	LS	$ -	$ 2,050,345.00			$ -	
			D5020 Lighting and Branch Wiring	0	LS	$ -	$ 2,560,391.00			$ -	
			D5030 Communications and Security	0	LS	$ -	$ 2,148,899.00			$ -	
			D5090 Other Electrical Systems	0	LS	$ -	$ 279,408.00			$ -	
E	EQUIPMENT AND FURNISHINGS								$ 1,420,219.00		$ -
		E10	Equipment					$ 457,777.00	Remarks		
			E1010 Commercial Equipment	0	LS	$ -	$ 457,777.00			$ -	
			E1020 Institutional Equipment	0	LS	$ -	$ -			$ -	
			E1030 Vehicular Equipment	0	LS	$ -	$ -			$ -	
			E1090 Other Equipment	0	LS	$ -	$ -			$ -	
		E20	Furnishings					$ 962,442.00			
			E2010 Fixed Furnishings	0	LS	$ -	$ 962,442.00			$ -	
			E2020 Movable Furnishings	0	LS	$ -	$ -			$ -	
F	SPECIAL CONSTRUCTION AND DEMOLITION								$ 835,276.00		$ -
		F10	Special Construction					$ -	Remarks		
			F1010 Special Structures	0	LS	$ -	$ -			$ -	
			F1020 Integrated Construction	0	LS	$ -	$ -			$ -	
			F1030 Special Construction Systems	0	LS	$ -	$ -			$ -	
			F1040 Special Facilities	0	LS	$ -	$ -			$ -	
			F1050 Special Controls and Instrumentation	0	LS	$ -	$ -			$ -	
		F20	Selective Demolition					$ 835,276.00			
			F2010 Building Element Demolition	0	LS	$ -	$ 481,890.00			$ -	
			F2020 Hazardous Components Abatement	0	LS	$ -	$ 353,386.00			$ -	
X	GENERAL CONDITIONS, OFFICE OVERHEAD & PROFIT								$ 7,645,254.00		$ -
		X10	X1010 General Conditions	0	LS	$ -	$ 5,881,137.00			$ -	
		X20	X2010 Overhead and Profit	0	LS	$ -	$ 1,764,117.00			$ -	
Z	ALLOWANCES								$ 12,751,481.00		$ 12,751,481.00
		Z10	Z1010 Design Contingency	0	LS	$ -	$ 4,940,155.00			$ 4,940,155.00	
		Z20	Z2010 Escalation	0	LS	$ -	$ 5,458,871.00			$ 5,458,871.00	
		Z30	Z3010 Construction Contingency	0	LS	$ -	$ 2,352,455.00			$ 2,352,455.00	
							CONSTRUCTION COST SUBTOTAL		$ 67,445,829		$ 12,751,481

Project	Pre-K School			Architect:	Friar Architecture		OSCGR Project #	xxx-xxxx xx
District / Location	Waterbury, CT			Construction Manager:	NA			
Date	30-Apr-26						Ineligible Costs	

Level 1	Level 2	Level 3	Quantity	UoM	Unit Rate	Sub-Total	Element Total	Group Total	Ineligible Costs by Element	Ineligible Costs Total by Group
SOFT COSTS										
G	**BUILDING SITEWORK**							**$ 10,460,598.00**		$ -
	G10	**Site Preparation**					**$ 2,150,500.00**	Remarks		
		G1010	Site Clearing	0	AC	$ -	$ 177,500.00		$ -	
		G1020	Site Demolition	0	AC	$ -	$ 254,000.00		$ -	
		G1030	Site Earthwork	0	AC	$ -	$ 1,668,000.00		$ -	
		G1040	Hazardous Waste Remediation	0	CY	$ -	$ 51,000.00		$ -	
	G20	**Site Improvements**					**$ 6,733,740.00**	Remarks		
		G2010	Roadways	0	SF	$ -	$ 550,000.00		$ -	
		G2020	Parking Lots	0	SF	$ -	$ 3,358,140.00		$ -	
		G2030	Pedestrian Paving	0	SF	$ -	$ 337,500.00		$ -	
		G2040	Site Development	0	AC	$ -	$ 2,196,200.00		$ -	
		G2045	Athletic Fields	0	AC	$ -	$ -		$ -	
		G2050	Landscaping	0	LS	$ -	$ 291,900.00		$ -	
	G30	**Site Mechanical Utilities**					**$ 695,775.00**	Remarks		
		G3010	Water Supply	0	LF	$ -	$ 120,000.00		$ -	
		G3020	Sanitary Sewer	0	LF	$ -	$ 98,000.00		$ -	
		G3030	Storm Sewer	0	LF	$ -	$ 196,500.00		$ -	
		G3040	Heating Distribution	0	LF	$ -	$ -		$ -	
		G3050	Cooling Distribution	0	LF	$ -	$ -		$ -	
		G3060	Fuel Distribution	0	LF	$ -	$ 256,275.00		$ -	
		G3090	Other Site Mechanical Utilities	0	LS	$ -	$ 25,000.00		$ -	
	G40	**Site Electrical Utilities**					**$ 730,823.00**	Remarks		
		G4010	Electrical Distribution	0	LF	$ -	$ 175,000.00		$ -	
		G4020	Site Lighting	0	LS	$ -	$ 354,830.00		$ -	
		G4030	Site Communications and Security	0	LS	$ -	$ 200,993.00		$ -	
		G4040	Other Site Electrical Utilities	0	LS	$ -	$ -		$ -	
	G90	**Other Site Construction**					**$ 149,760.00**	Remarks		
		G9010	Service and Pedestrian Tunnels	0	SF	$ -	$ -		$ -	
		G9020	Bleachers, Concession Stands, etc.	0	LS	$ -	$ -		$ -	
		G9090	Other Site Systems and Equipment	0	LS	$ -	$ 149,760.00		$ -	
Y	**SITE GENERAL CONDITIONS, OFFICE OVERHEAD, PROFIT AND ALLOWANCES**							**$ 4,278,385.00**		$ 2,217,647.00
	Y10	Y1010	Site General Conditions	0	LS	$ -	$ 1,307,575.00		$ -	
	Y20	Y2010	Site Overhead and Profit	0	LS	$ -	$ 230,133.00		$ -	
	Y30	Y3010	Site Design Contingency	0	LS	$ -	$ 1,046,060.00		$ 1,046,060.00	
		Y3020	Site Construction Contingency	0	LS	$ -	$ 73,224.00		$ 73,224.00	
	Y40	Y4010	Site Escalation	0	LS	$ -	$ 1,098,363.00		$ 1,098,363.00	
	Y50	Y5010	Trade Contractor Bond Cost	0	LS	$ -	$ 523,030.00		$ -	
R	**CONSULTANTS**							**$ 8,353,279.00**		$ 435,277.48
	R10	R1010	Architect / Engineer	0	LS	$ -	$ 5,752,937.00		$ 230,117.48	
	R20	R2010	Environmental	0	LS	$ -	$ 48,189.00		$ -	
	R30	R3010	Commissioning	0	LS	$ -	$ 127,000.00		$ -	
	R40	R4010	Geotechnical	0	LS	$ -	$ 101,603.00		$ -	
	R50	R5010	Cost Estimator	0	LS	$ -	$ 50,000.00		$ -	
	R60	R6010	Owner's Representative	0	LS	$ -	$ 1,560,000.00		$ -	
	R70	R7010	CM Pre-Construction	0	LS	$ -	$ 313,000.00		$ -	
	R80	R8010	FF&E Coordinator	0	LS	$ -	$ 195,390.00		$ -	
	R90	R9010	Legal	0	LS	$ -	$ 205,160.00		$ 205,160.00	
S	**FF&E**							**$ 2,537,390.00**		$ -
	S10	S1010	FF&E	0	LS	$ -	$ 900,000.00		$ -	
	S20	S2010	Technology	0	LS	$ -	$ 840,000.00		$ -	
	S30	S3010	Playground Equipment	0	LS	$ -	$ 450,000.00		$ -	
	S40	S4010	Playground Surfacing	0	SF	$ -	$ 224,000.00		$ -	
	S50	S5010	Moving	0	LS	$ -	$ 123,390.00		$ -	
T	**FEES**							**$ 1,053,446.00**		$ 15,579.00
	T10	T1010	District Bonding Fees	0	LS	$ -	$ 324,553.00		$ -	
	T20	T2010	Insurance Cost	0	LS	$ -	$ 123,277.00		$ -	
	T30	T3010	Town Staff Cost	0	LS	$ -	$ -		$ -	
	T40	T4010	Town Permit Fees	0	LS	$ -	$ -		$ -	
	T50	T5010	State Permit Fees	0	LS	$ -	$ 15,579.00		$ 15,579.00	
	T60	T6010	Testing / Inspection Fees	0	LS	$ -	$ 259,642.00		$ -	
	T70	T7010	Printing and Mailing	0	LS	$ -	$ 5,842.00		$ -	
	T80	T8010	Other Costs	0	LS	$ -	$ 324,553.00		$ -	
U	**CONTINGENCIES**							**$ 4,520,165.00**		$ 4,520,165.00
	U10	U1010	Owner Contingency	0	LS	$ -	$ 4,520,165.00		$ 4,520,165.00	
W	**ACQUISITION COSTS**							**$ 1,105,000.00**		$ -
	W10	W1010	Land / Building Purchase	0	LS	$ -	$ 1,000,000.00		$ -	
	W20	W2010	Swing Space / Portables	0	LS	$ -	$ -		$ -	
	W30	W3010	Site Remediation	0	LS	$ -	$ -		$ -	
	W40	W4010	Appraisals	0	LS	$ -	$ 10,000.00		$ -	
	W50	W5010	Land Survey	0	LS	$ -	$ 15,000.00		$ -	
	W60	W6010	Other Acquisition Costs	0	LS	$ -	$ 80,000.00		$ -	
							SOFT COST SUBTOTAL	**$ 32,308,263**		**$ 7,188,668**
							PROJECT TOTAL	**$ 99,754,092**		**$ 19,940,149**

#2

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

Date: May 29, 2026

To: Elizabeth C Brown
President, Board of Education

Members, Board of Education
Building and School Facilities Members

Dr. Darren Schwartz, Superintendent

Mayor Paul K. Pernerewski, Jr.

From: Nicholas Albini, Chief Operating Officer

Subject: Review of Plans for RFP#8595 Rooftop Solar Photovoltaic Systems

Dear Honorable Members of the Board of Education and Building School Facilities Committee,

This Honorable Board of Education ("BOE") and the Honorable Board of Aldermen previously approved a construction contract between the City of Waterbury and All-Electric Construction & Communication LLC ("All-Electric") to design and install rooftop solar systems at the following five schools: B.W. Tinker Elementary School, M.M. Generali Elementary School, Sprague Elementary School, Wendell L. Cross Elementary School, and West Side Middle School.

This submission today requests that the BOE Building School Facilities Committee and the BOE authorize their respective Chairpersons to sign the CT Department of Administrative Services Office of Grants Administration ("DAS-OGA") form "SCG-042 – Request for Review of Final Plans" for the school rooftop solar projects at five schools, as well as, The Department of Administrative Services (DAS-OSCG&R) form" SCG-3030 – Code Conformity Certification: Tinker, Generali, Sprague, Wendell Cross, and West Side. In support of this request, we include the final plans, building permits, and updated cost estimates for each of these five-school rooftop solar projects. In addition, we have attached the required separate motions for each school rooftop solar project that need to be passed by both the BOE Building Facilities Committee and the BOE for these projects to proceed through the DAS-OGA review process.

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

The goal at this stage of these five-school rooftop solar projects is to receive approval for the Chairperson of the BOE Building Facilities Committee to sign form SCG-042 and the SCG-3030 at their June 4th meeting, and to receive approval for the Chairperson of the BOE to sign form SCG-042 at their June 18th meeting. Following that June 18th meeting, all required DAS-OGA forms and final plans in support of these five-school rooftop solar projects will be signed by the appropriate municipal officials in advance of a final plan review meeting to be scheduled with DAS-OGA. Once the plan review meeting with DAS-OGA occurs, and the final plans are approved by DAS-OGA, the city will receive authorization to begin construction of these five-school rooftop solar projects.

Members of CSW and WDC will be at the June 4th and June 18th meetings to answer any questions.

The City of Waterbury
Department of Inspection
185 South Main Street, 5th floor
(1 Jefferson Square)
Waterbury, CT 06702
Applications & Permits: Monday – Friday 8:00 a.m. to 4:00 p.m.
Building: 203 574 6832 Electrical: 203 574 8382
HVAC / Plumbing: 203 574 6856 Fax: 203 574 6854
Sealer of Weights and Measures: 203 574 8387

BD - Electrical Permit

Permit #: PR20260000911 Date of Issue: 4/30/26

Location of Work: 1255 HAMILTON AVE, Waterbury, CT

This permit is hereby granted to perform the following work:

Install
Other
Install 501 roof mount solar panels 298.590 KW
With installation of new second service off existing
ground mount transformer to P.V. system only

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

All work covered by this permit has been authorized by the owner of this property.
This permit is granted under the condition that the work shall be done in accordance with the laws of the State of Connecticut and the ordinance of the City of Waterbury. If any statements of said application are false, or if any change is made to the plans/specifications without the consent of the Building Inspector or his duly appointed agent, this permit shall be revocable.

Approved plans must be retained on the job and this card must be kept posted until final inspection has been made. Such building shall not be occupied until final inspection has been made, and where applicable, a Certificate of Occupancy/Approval has been issued.

The Following Permit in no way relieves the Architect, Engineer, or Contractor from the responsibility of having their design/construction meet all requirements of the Connecticut Fire Saftey Code (C.F.S.C.) and all applicable standards.

Contacts:

Applicant	Angelica Guild/AEC Solar LLC180 Wampus La.Milford, CT 06460
Contractor	Patrick Lewis/AEC Solar180 Wampus La.Milford, CT 06460
Owner	CITY OF WATERBURY WENDELL CROSS235 GRAND STWATERBURY, CT 06702

Donation Bin ●wner

Issued By: Domenic Mascolo Title: Electrical Inspector

Signature: D. Mascolo

Connecticut Department of Administrative Services
Office of School Construction Grants
Public School Construction Cost Database

Construction Documents Estimate

State Project #	EstNum000462				
LEA	Waterbury Public Schools				
School Name	Wendell L. Cross School				
Project Type					
Square Footage of Construction	22,440				
Grades	G1				
Enrollment Projections					
Reimbursement Rate			Cost/Square Feet	Ineligible Costs	
Project Cost	$1,028,000.00	of Project Costs	$45.81	Project Ineligible Costs	$317,887.40
All Soft Cost	$415,611.42			Ineligible Soft Costs	$317,887.40
Construction Cost	$612,388.58	of Construction Cost	$27.29	Ineligible Construction Costs	$0.00
Eligible Construction Costs	$612,388.58	of Eligible Costs	$27.29		

Construction Cost			Cost	Ineligibles
A. SUBSTRUCTURE	A10. Foundations	A1010. Standard Foundations	0.00	0.00
		A1020. Special Foundations	0.00	0.00
		A1030. Slab on Grade	0.00	0.00
	A20. Basements	A2010. Basement Excavation	0.00	0.00
		A2020. Basement Walls	0.00	0.00
B. SHELL	B10. Super Structure	B1010. Floor Construction	0.00	0.00
		B1020. Roof Construction	0.00	0.00
	B20. Exterior Enclosures	B2010. Exterior Walls	0.00	0.00
		B2020. Exterior Windows	0.00	0.00
		B2030. Exterior Doors	0.00	0.00

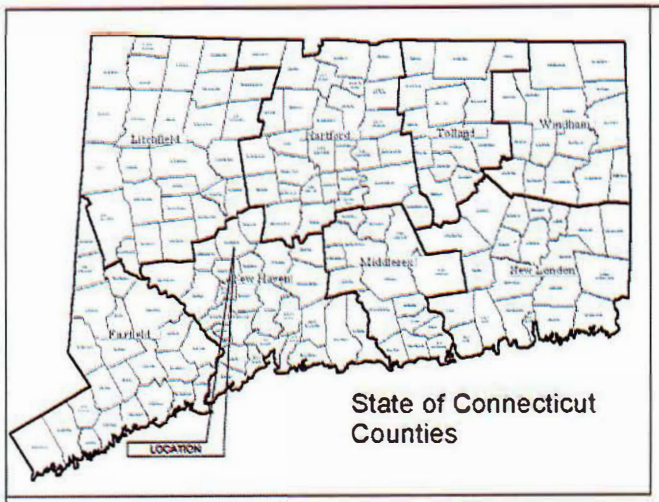
E. EQUIPMENT & FURNISHINGS	E10. Equipment	E1010. Commercial Equipment	0.00	0.00
		E1020. Institutional Equipment	0.00	0.00
		E1030. Vehicular Equipment (Bldg fixed)	0.00	0.00
		E1090. Other Equipment	0.00	0.00
	E20. Furnishings	E2010. Fixed Furnishings	0.00	0.00
F. SPECIAL CONSTRUCTION AND DEMOLITION	F10. Special Construction	F1010. Special Structures	0.00	0.00
		F1020. Integrated Construction	0.00	0.00
		F1030. Special Construction Systems	0.00	0.00
		F1040. Special Facilities	0.00	0.00
		F1050. Special Controls & Instrumentation	0.00	0.00
	F20. Selective Building Demolition	F2010. Building Elements Demolition	0.00	0.00
	F30. Abatement	F3010. PCB/Asbestos/Lead Abatement	0.00	0.00
X. GENERAL CONDITIONS, OFFICE OVERHEAD, & PROFIT	X10. General Conditions	X1010. General Conditions	90154.95	0.00
	X20. Overhead & Profit	X2020. Office Overhead & Profit	72936.83	0.00
		X2030. Trade Contractor Bond Costs	0.00	0.00
Z. ALLOWANCES	Z10. Design Contingency	Z10. Design Contingency	0.00	0.00
	Z20. Inflation (Escalation) Allowance	Z20. Inflation (Escalation) Allowance	0.00	0.00
	Z30. Construction Contingency	Z30. Construction Contingency	0.00	0.00

Soft Cost		Cost	Ineligibles
G. SITEWORK (beyond 5 ft from Building)	G1010. Site Clearing	0.00	0.00
	G1020. Site Demolition & Relocation	0.00	0.00
	G1030. Site Earthwork	0.00	0.00
	G1040. Hazardous Waste Remediation	0.00	0.00
	G2010 Roadways	0.00	0.00
	G2020. Parking	0.00	0.00
	G2030. Pedestrian Paving	0.00	0.00
	G2040. Site Development	0.00	0.00
	G2045. Athletic Fields	0.00	0.00
	G2050. Landscaping	0.00	0.00
	G3010. Water Supply	0.00	0.00
	G3020. Sanitary Sewer	0.00	0.00
	G3030. Storm Sewer	0.00	0.00
	G3040. Heating Distribution	0.00	0.00
	G3050. Cooling Distribution	0.00	0.00
	G3060. Fuel Distribution	0.00	0.00

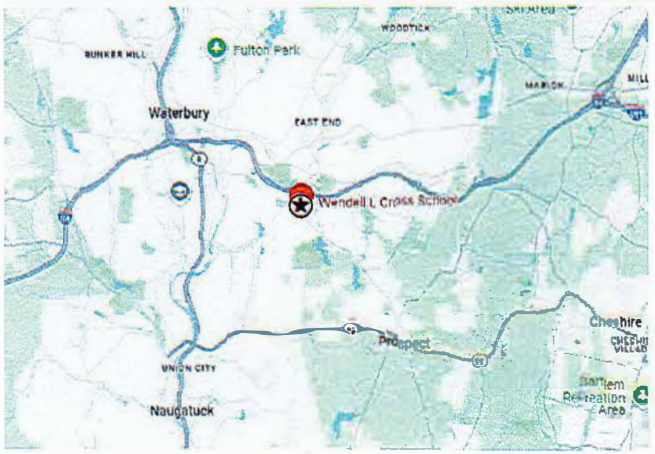
	W4010. Appraisals	0.00	0.00
	W5010. Land Survey	0.00	0.00
	W6010. Other Acquisition Costs	0.00	0.00

Save CD Estimate And Continue | Save CD Estimate And Exit | Submit CD Estimate

ROOFTOP PV ARRAY INSTALLATION AT:



LOCATION MAP
SCALE: N.T.S.



VICINITY MAP
SCALE: N.T.S.

WENDELL L. CROSS ELEMENTARY SCHOOL

1255 HAMILTON AVE

WATERBURY, CT 06706

DAS PROJECT #151-0310-PV

APPLICABLE CODES

NATIONAL ELECTRIC CODE - 2020
ARTICLE 230 - SERVICES
ARTICLE 240 - OVERCURRENT PROTECTION
ARTICLE 250 - GROUNDING AND BONDING
ARTICLE 300 - WIRING METHODS
ARTICLE 310 - CONDUCTORS
ARTICLE 690 - SOLAR PHOTOVOLTAIC SYSTEMS
ARTICLE 705 - INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

PV SYSTEM INFORMATION

SYSTEM SIZE (DC):	295.350 kW STC + BIFACIAL GAIN
SYSTEM SIZE (AC):	253.000 kW / 263.800 kVA
INVERTER QUANTITY:	2
INVERTER TYPE:	SOLAREDGE SE100K-US (100 kVAAC)
MODULE QUANTITY:	491
MODULE TYPE:	SEG SOLAR SEG-XXX-BTB-BG (XXW STC + BIFACIAL GAIN)
RACKING TYPE:	IRONRIDGE
RAPID SHUTDOWN DEVICES:	SOLAREDGE P401-0 OPTIMIZERS

UTILITY INFORMATION

COMPANY:	EVERSOURCE
ACCOUNT NUMBER:	9101308202 (SERVICE)
METER NUMBER:	0812384851 (EXISTING)
NRES ID NUMBER:	329-ESNRES-01256
DAS PROJECT NUMBER:	151-0310-PV

PROJECT SIGNATURES

AHJ	NAME	SIGNATURE	DATE
BUILDING INSPECTOR			
FIRE MARSHAL			
HEALTH INSPECTOR			
ADA EDI COORD			

Stephen Gendreau, P.E.

Digitally signed by Stephen Gendreau, P.E.
Date: 2026.03.13 14:22:28 -04'00'

PREPARED FOR:

ALL ELECTRIC LLC
CONSTRUCTION & COMMUNICATION
allelectricct.com

PREPARED BY:

SG ENGINEERING LLC
sgedesign.com

PROJECT DESCRIPTION

THIS INSTALLATION CONSISTS OF A UTILITY INTERACTIVE SOLAR PHOTOVOLTAIC SYSTEM AT A SCHOOL BUILDING IN WATERBURY, CONNECTICUT. THE PV SYSTEM IS COMPRISED OF MODULES MOUNTED ON THE ROOF OF BUILDING. THE PV SYSTEM ALSO INCLUDES INVERTERS LOCATED ON THE EXTERIOR WALL OF THE BUILDING. THE AC INVERTER OUTPUT POWER IS FED THROUGH AN AC COMBINER PANEL. DISCONNECT SWITCHES AND UTILITY METER TO THE POINT OF CONNECTION AT AN EXISTING UTILITY TRANSFORMER.

DRAWING LIST

N/A	COVER SHEET
PV-1	THREE-LINE DIAGRAM
PV-2	PROFILE VIEWS & PARTIAL PLANS
PV-3	OVERALL ROOF PLAN
PV-4 & 5	PARTIAL DETAILED ROOF PLANS
PV-6 & 7	[NOT USED]
PV-8	NOTES, DETAILS & ABBREVIATIONS
PV-9	EQUIPMENT DATA SHEETS
PV-10	LABELS & SIGNAGE
PV-11	SPECIFICATIONS

DOCUMENTS BY OTHERS

RACKING MANUFACTURER DRAWINGS
STRUCTURAL ENGINEERING CALCULATIONS

REVISIONS:

03-19-2026:	INTERCONNECTION APPLICATION
03-13-2026:	ISSUED FOR CONSTRUCTION

INVERTER RELAY SETTINGS

TABLE I: INVERTERS' VOLTAGE TRIP SETTINGS

TABLE II: INVERTERS' FREQUENCY TRIP SETTINGS

TABLE III: INVERTERS' VOLTAGE RIDE-THROUGH CAPABILITY & OPERATIONAL REQUIREMENTS

TABLE IV: INVERTERS' FREQUENCY RIDE-THROUGH CAPABILITY

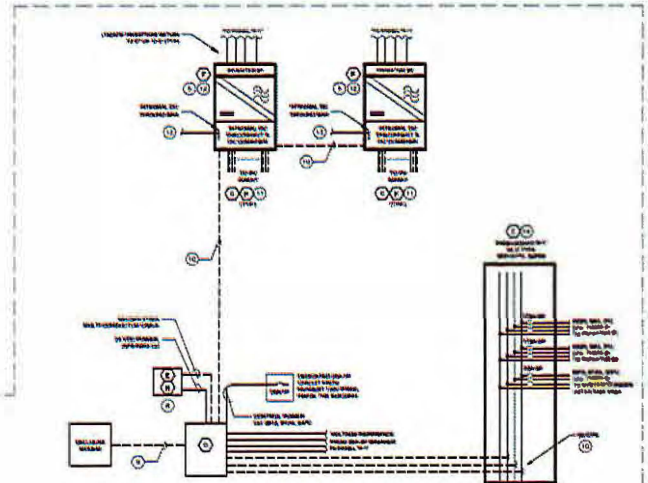
TABLE V: GRID SUPPORT UTILITY INTERACTIVE INVERTER FUNCTIONS STATUS

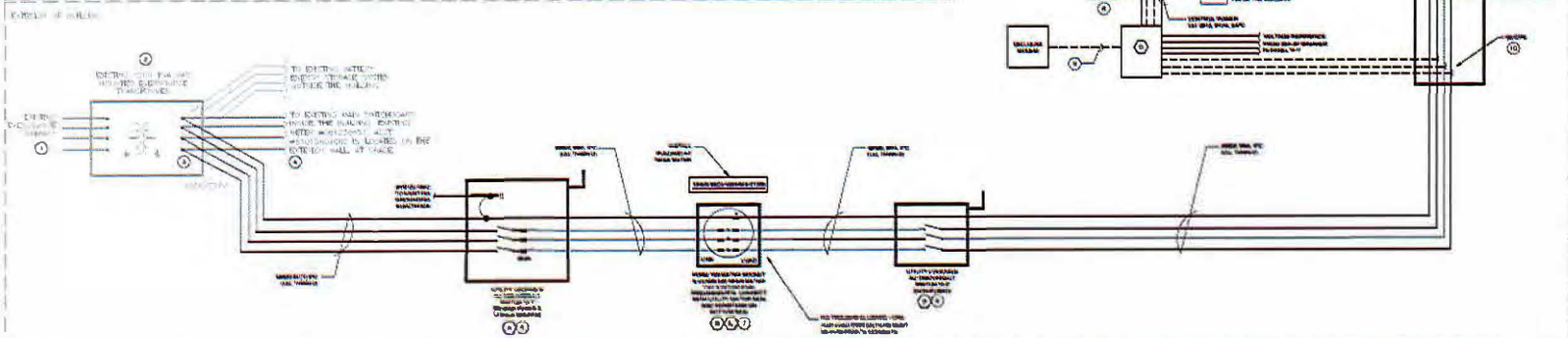
SOLAR PV GENERAL NOTES

KEY NOTES

INVERTER DATA

EQUIPMENT SCHEDULE





Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 295.380 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (501) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)
- TILT = 10°

EVERSOURCE METER
08133845T (EXISTING)

EVERSOURCE ACCOUNT
5101[redacted]2 (EXISTING)

NRES ID # SEA-ESNRES-01259

DAS PROJECT #151-0310-PV

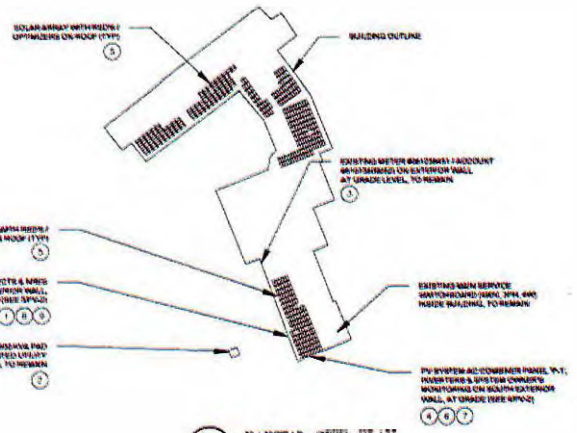
No.	Date

ROOF MOUNTED PV SYSTEM

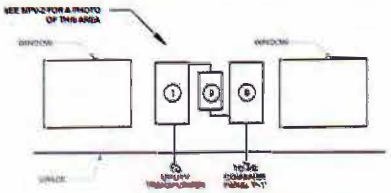
WENDELL L CROSS
ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

THREE-LINE DIAGRAM

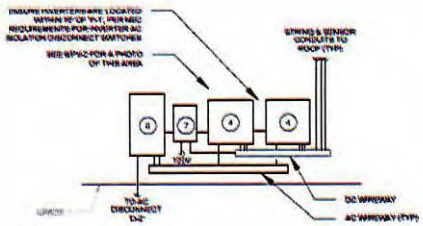
Issue	Sheet
MARCH 13, 2026	PV-1



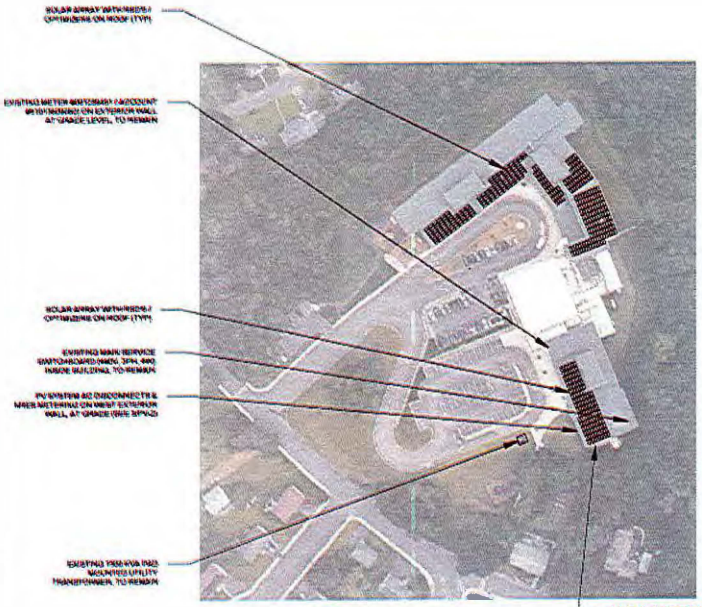
1 PV-2 PARTIAL SITE PLAN
SCALE: N.T.S.



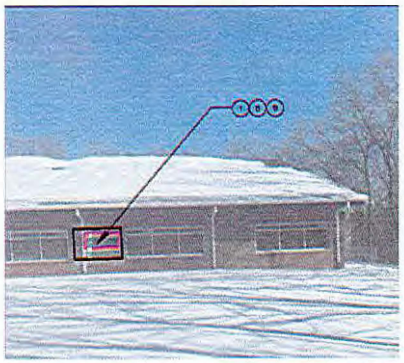
3 PV-2 PROFILE VIEW (WEST EXTERIOR WALL)
SCALE: N.T.S.



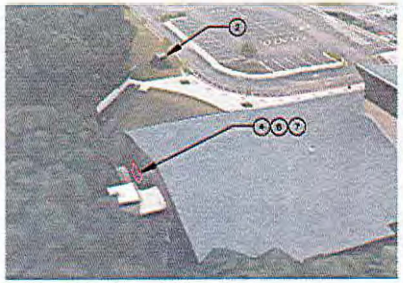
4 PV-2 PROFILE VIEW (SOUTH EXTERIOR WALL)
SCALE: N.T.S.



2 PV-2 AERIAL SITE PHOTO
SCALE: N.T.S.



5 PV-2 WEST EXTERIOR EQUIPMENT AREA PHOTO
SCALE: N.T.S.



6 PV-2 SOUTH EXTERIOR EQUIPMENT AREA PHOTO
SCALE: N.T.S.

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURER'S INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH A PASSING TWO-SIDED FINAL INSPECTION.
2. WORK AREAS SHALL BE BARRED, FENCED, AND OTHERWISE SECURED AS AND TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSIONS OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD MEASUREMENTS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL SAW CUT DIMENSIONS AND ENGINEERING SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS SUBJECT TO A COORDINATION OF SHADING, STRINGING, AND WIND ZONE PLACEMENT ON ITS ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL EQUIPMENT SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLAB SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUB-ARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE ROOFING SYSTEM VIA CONDUIT CHAIRS.

KEY NOTES (6)

1. UTILITY LOCKABLE & ACCESSIBLE PV SYSTEM AC DISCONNECT 'DU' WITH VISIBLE BLADES ON EXTERIOR WALL AT GRADE.
2. EXISTING UTILITY OWNED PAD MOUNTED TRANSFORMER, TO REMAIN.
3. EXISTING UTILITY REVENUE METER (EVERSOURCE) + ASSET OWNER'S METERING ON EXTERIOR WALL AT GRADE, TO REMAIN.
4. INVERTERS 1 AND 2 ON EXTERIOR WALL AT GRADE.
5. ROOF OBSTRUCTION DEVICES (OTHERWISE ON ROOF, UNDER MODULES - ONE MODULE PER SPACER UNLESS OTHERWISE NOTED)
6. PV SYSTEM AC COMBINER PANEL 'PV1' ON EXTERIOR WALL AT GRADE.
7. SYSTEM OWNER'S MONITORING ON EXTERIOR WALL AT GRADE.
8. UTILITY LOCKABLE & ACCESSIBLE PV SYSTEM AC DISCONNECT 'DJ' WITH VISIBLE BLADES ON EXTERIOR WALL AT GRADE.
9. PV SYSTEM PRIMARY METER SOCKET ON EXTERIOR WALL AT GRADE.

Project Info:

ENGINEER:
SG ENGINEERING LLC
35 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:
ALL ELECTRIC LLC
189 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 376.380 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KW AC)
- (501) SEG SOLAR SEG-380-BTA-BG MODULES (380W STC BIFACIAL)
- TILT = 15°

EVERSOURCE METER
0911236451 (EXISTING)

EVERSOURCE ACCOUNT
[redacted] (EXISTING)

NRES ID # SEA-ESNRES-01256

DAS PROJECT #151-0310-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WENDELL L CROSS ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

PROFILE VIEWS & PARTIAL PLANS

Issue:
Date: MARCH 13, 2026
Scale: NTS

PV-2

ROOF AREA GENERAL NOTES

1. E.C. SHALL FURNISH AND INSTALL ALL DC SOURCE CIRCUIT WIRING PER NEC 690 REQUIREMENTS, CONDUIT REQUIREMENTS, AND IN A NEAT AND WORKMAN LIKE MANNER.
2. INTERIOR MODULE TO MODULE, MODULE TO OPTIMIZER AND OPTIMIZER TO OPTIMIZER WIRING SHALL BE SUPPORTED ON MODULE FRAME SUCH THAT IT WILL NOT DROOP INTO THE REACH OF ICE AND SNOW AND IS NOT EXPOSED TO OBVIOUS SOURCES OF DAMAGE INCLUDING ABRASION OR IS FARTHER FROM THERMAL EXPANSION.
3. ALL DC CONNECTIONS, JUMPERS AND HOME RUNS SHALL USE MATCHING DC CONNECTORS TO MAINTAIN UL LISTING.
4. ALL MODULE DC CONNECTORS SHALL BE TUCKED INTO THE MODULE FRAME OF THE MODULE AND CLIPPED TO THE FRAME.
5. DURING INSTALLATION, ALL DC CONNECTORS FOR MODULES, JUMPERS, AND OPTIMIZERS MUST BE KEPT OFF THE ROOF AT ALL TIMES. PRIOR TO BEING CONNECTED TOGETHER, CONNECTORS MUST BE PROTECTED AGAINST WATER INTRUSION AND SECURED OFF THE GROUND (OR APPROVED ALTERNATIVE METHOD). ANY CONNECTOR LEFT UNPROTECTED AND SUBJECT TO WATER INTRUSION SHALL BE REPLACED IMMEDIATELY WITH NEW COMPONENT AT CONTRACTOR'S SOLE EXPENSE.
6. MOUNT OPTIMIZERS TO RACKING SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. BOND DEVICES TO RACKING SYSTEM PER RACKING AND OPTIMIZER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. CONDUIT ROUTING IS SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO VERIFY WIRE LOCATIONS AND SUBMIT TO SOLAR DEVELOPER FOR APPROVAL.
8. EXPANSION FITTINGS SHALL BE ADDED TO CONDUIT RUNS EVERY 100' ON STRAIGHT RUNS AND WHEREVER CONDUIT CROSSES BUILDING EXPANSION JOINTS OR TRANSITIONS BETWEEN BUILDING SECTIONS.
9. NO T-SHAPED FITTINGS WILL BE ALLOWED ANYWHERE ON DC CONDUITS. WHERE BRANCH OUTS ARE REQUIRED A PULLBOX MUST BE USED.
10. ALL EXPOSED EXTERIOR CONDUITS SHALL BE EMT WITH CORROSION RESISTANT COATING.
11. ENSURE THAT THE BOTTOM OF ALL ROOF MOUNTED EQUIPMENT ARE A MINIMUM OF 7/8" ABOVE THE ROOF SURFACE TO AVOID THE NEED FOR ADDITIONAL TEMPERATURE DERATING.
12. FOR FLAT ROOFS, PROVIDE SLIP SHEETS UNDER ALL CONTACT SURFACES AND ALWAYS PER MANUFACTURERS RECOMMENDATIONS.

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH ASSOCIATED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSION OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD INVESTIGATIONS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD-VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRINGING, AND WIND ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLIP SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUBARRAY.
8. CONDUIT PLANNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.

SYMBOL LEGEND

+	BEGINNING OF STRING
-	END OF STRING
X.X	STRING NUMBER - SEE PV-3 FOR ADDITIONAL INFORMATION

RACKING NOTES

1. RACKING NOTES, DRAWINGS AND REQUIREMENTS WILL BE PROVIDED BY SOLAR DEVELOPER AND RACKING MANUFACTURER.

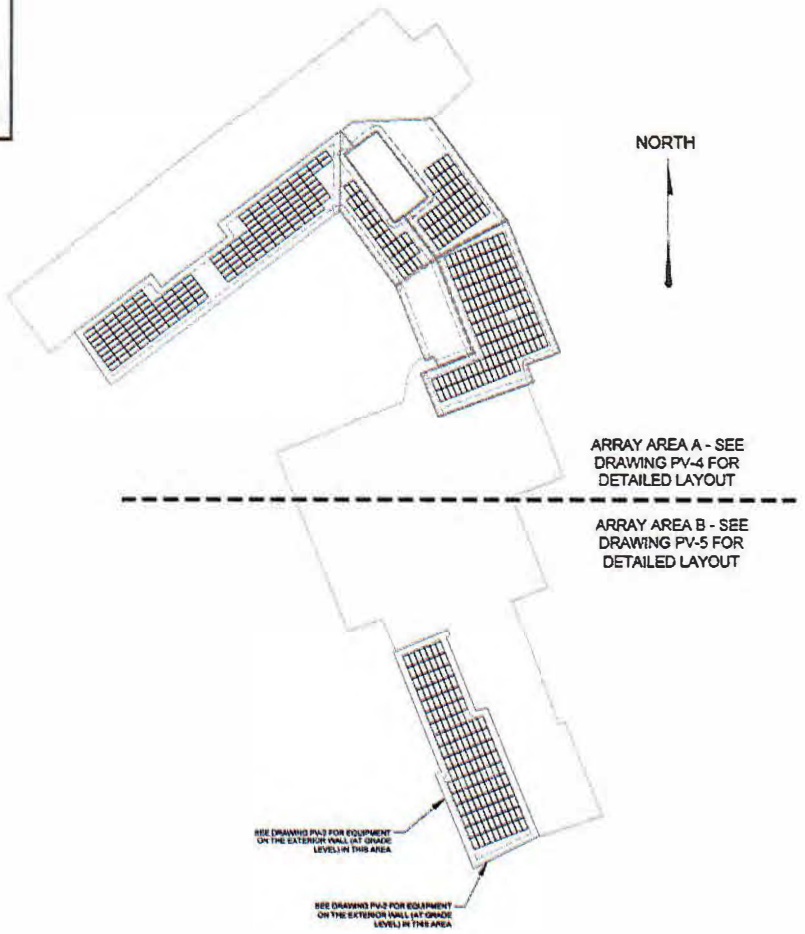
STRING WIRING

String Number	Inverter and MPPT	String ID	Qty of Modules	Qty of Optimizers	Module Type (W DC)	Inverter Type (kW AC)	System DC Size (Array DC)	Conductor Size (AWG) & Type Per String	Voltage Drop (%)
1	1 MPPT 1	1	41	41	590	24.79	24.19	#8	1.80%
1	1 MPPT 2	2	41	41	590	24.79	24.19	#8	1.80%
1	1 MPPT 3	3	41	41	590	24.79	24.19	#8	1.80%
1	1 MPPT 4	4	41	41	590	24.79	24.19	#8	1.80%
1	1 MPPT 5	5	41	41	590	24.79	24.19	#8	1.80%
1	1 MPPT 6	6	41	41	590	24.79	24.19	#8	1.80%
2	2 MPPT 1	1	42	42	590	24.79	24.78	#8	1.84%
2	2 MPPT 2	2	42	42	590	24.79	24.78	#8	1.84%
2	2 MPPT 3	3	42	42	590	24.79	24.78	#8	1.84%
2	2 MPPT 4	4	42	42	590	24.79	24.78	#8	1.84%
2	2 MPPT 5	5	42	42	590	24.79	24.78	#8	1.84%
2	2 MPPT 6	6	42	42	590	24.79	24.78	#8	1.84%
TOTAL			501	501		200.00	295.59		3.67%

STRING CONDUIT REQUIREMENTS

# OF STRINGS PER CONDUIT	MINIMUM CONDUIT SIZE
1 STRING	1"C
2 STRINGS	1-1/4"C
3 STRINGS	1-1/2"C
4-6 STRINGS	2"C
7-10 STRINGS	2-1/2"C
>10 STRINGS	NOT PERMITTED DUE TO DERATING

PROVIDE A #6 AWG EGC IN EACH STRING CONDUIT & BOND PER NEC



1 / PV-3 OVERALL ROOF PLAN
NOT TO SCALE

Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

190 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 295.590 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (501) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)
- TILT = 18°

EVERSOURCE METER
081238451 (EXISTING)

EVERSOURCE ACCOUNT
51013809082 (EXISTING)

NRES ID # SZ4-ESNRES-01256

DAS PROJECT #151-0310-PV

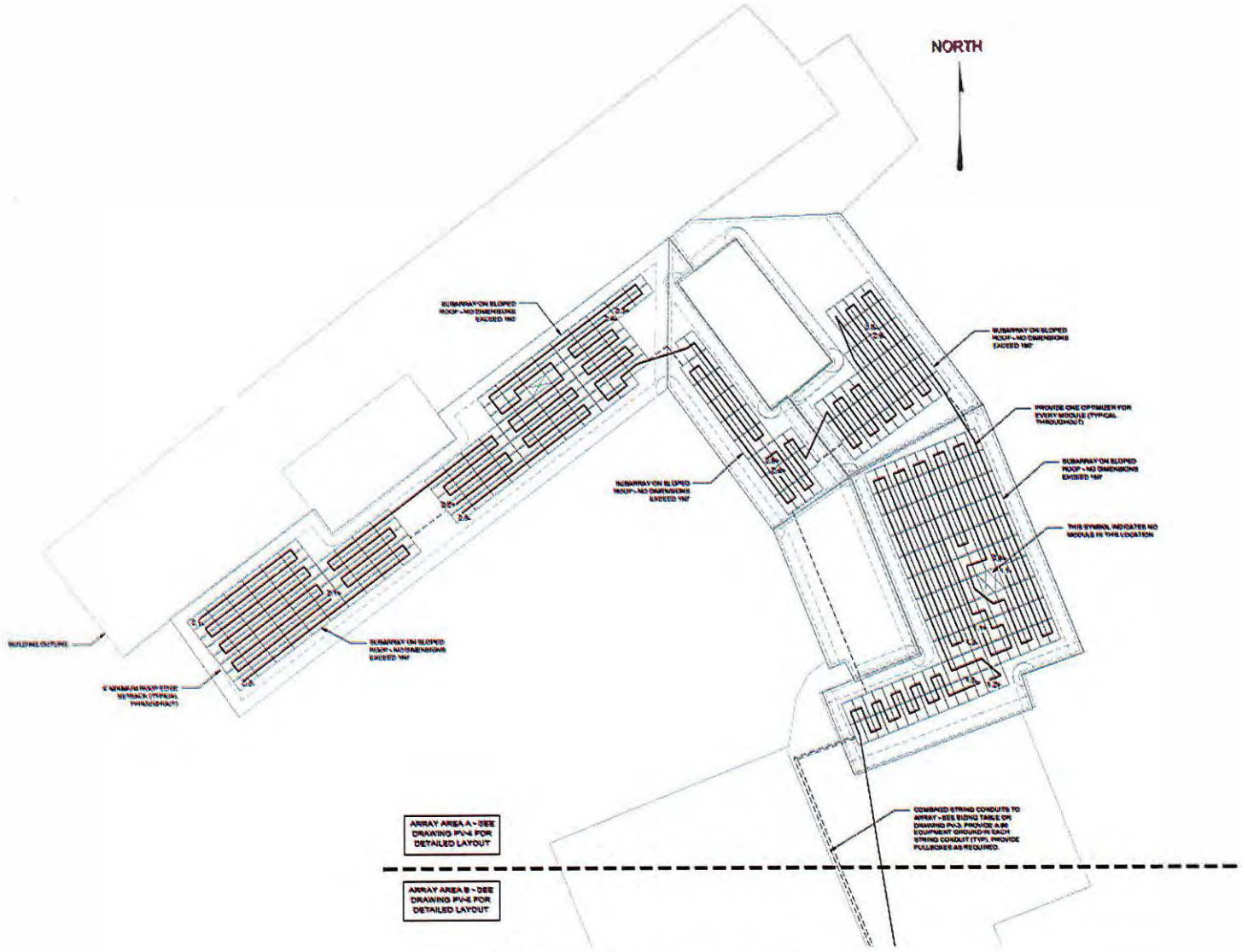
No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WENDELL L CROSS
ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

OVERALL ROOF PLAN

Project	Sheet
Date: MARCH 13, 2026	PV-3
Scale: N.T.S.	



1 PV-4 DETAILED ARRAY LAYOUT – AREA 'A'
SCALE: 1/16" = 1'-0"

Project Info

ENGINEER:

SG ENGINEERING LLC

36 FOXCROFT COURT
SOUTHINGTON, CT
SGIDESIGN.COM
sg@sgidesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 283.590 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (501) SEG SOLAR SEG-580-BTA-BG MODULES (580W STC BIFACIAL)
- TILT = 18°

EVERSOURCE METER
08123451 (EXISTING)

EVERSOURCE ACCOUNT
51013809062 (EXISTING)

NRES ID # 324-ESNRES-01 256

DAS PROJECT #131-0310-PV

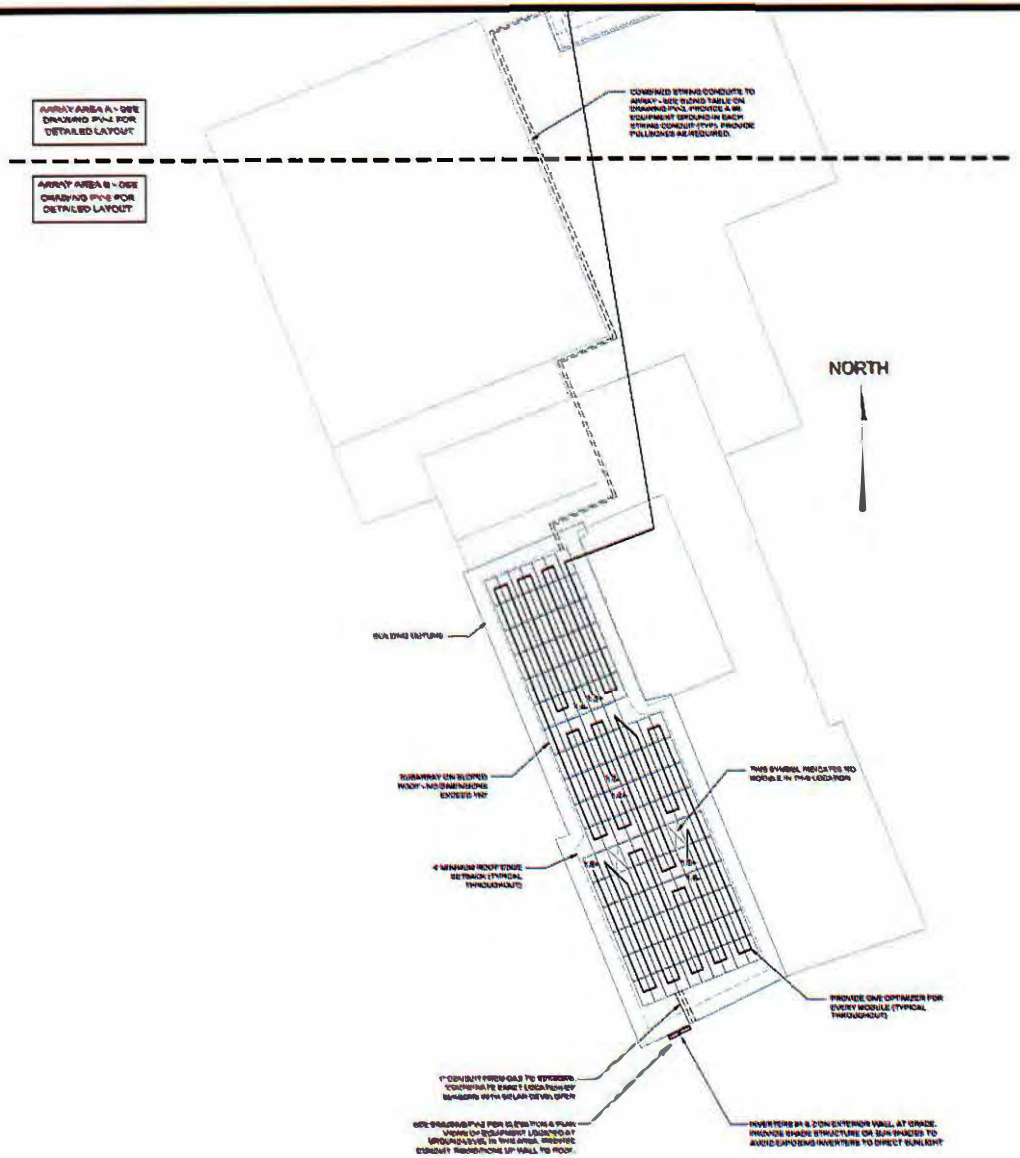
No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WENDELL L CROSS ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

DETAILED ROOF PLAN - AREA 'A'

Project 2600482	Sheet PV-4
Date MARCH 13, 2026	
Scale 1/16" = 1'-0"	



1 PV-5 DETAILED ARRAY LAYOUT - AREA 'B'
SCALE: 1/16" = 1'-0"

Project Info

ENGINEER:
SG ENGINEERING LLC
36 FOXCROFT COURT
SOUTHINGTON, CT
SGFDESIGN.COM
[redacted]

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 255.990 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (591) SEG SOLAR SEG-380-BTB-BG MODULES (390W STC BIFACIAL)
- TILT = 18°

EVERSOURCE METER
08123451 (EXISTING)

EVERSOURCE ACCOUNT
51013009342 (EXISTING)

NRES ID # SZB-ESNRES-01256

DAS PROJECT #131-0310-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

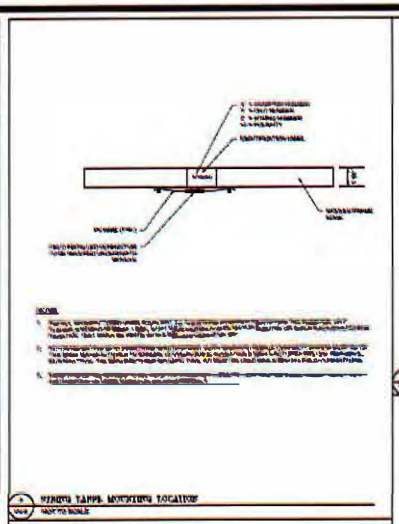
WENDELL L CROSS ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

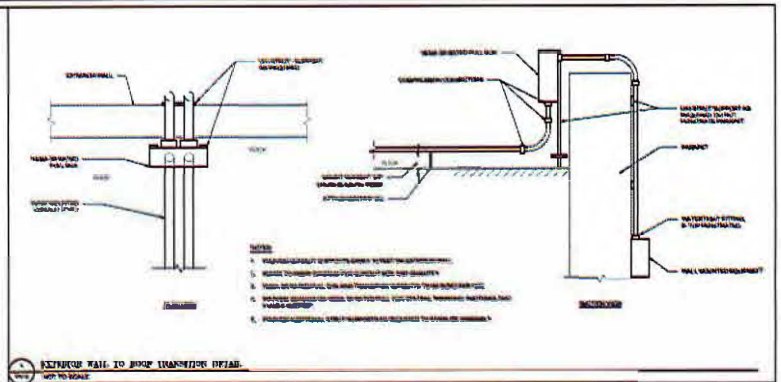
DETAILED ROOF PLAN - AREA 'B'

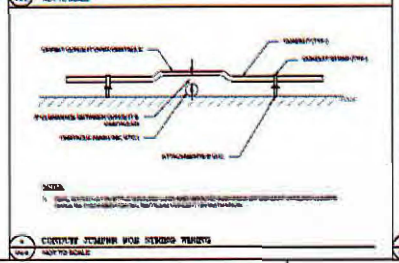
Project 2000462	Sheet PV-5
Date MARCH 13, 2026	
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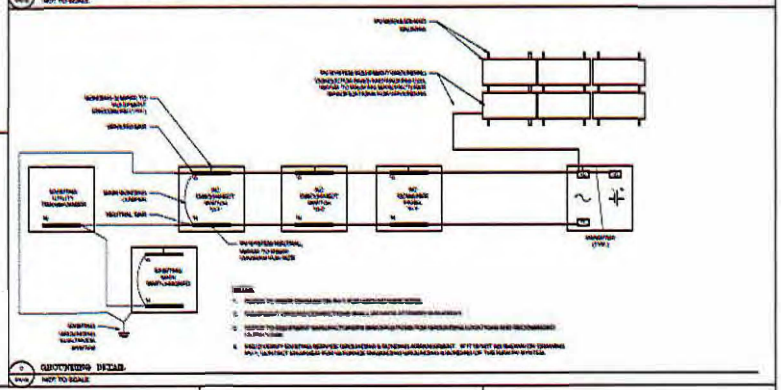
GENERAL NOTES

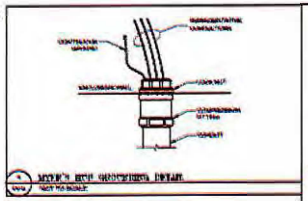
ABBREVIATIONS

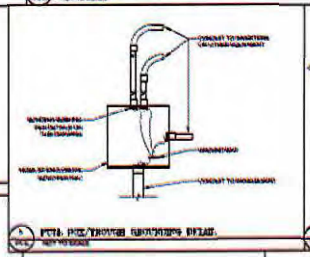


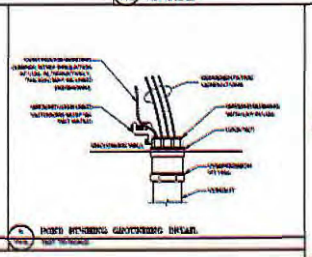


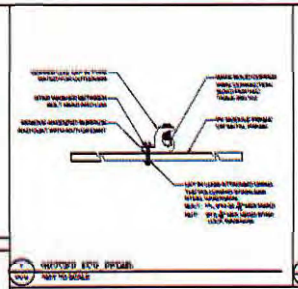




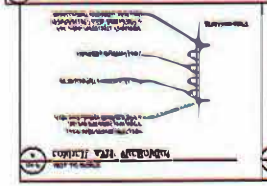


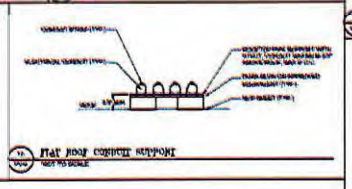


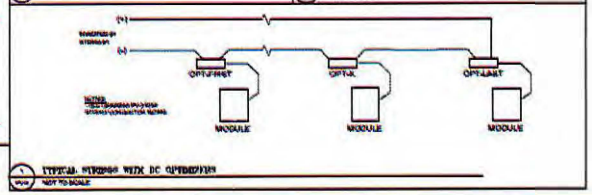












Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGDESIGN.COM
sge@sgdesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 295.590 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (501) SEG SOLAR SEG-590-STA-BG MODULES (590W STC BIFACIAL)
- TILT = 10°

EVERSOURCE METER
#[illegible] (EXISTING)

EVERSOURCE ACCOUNT
#[illegible] (EXISTING)

NRES ID # 524-SENRES-01256

DAS PROJECT #151-0310-PV

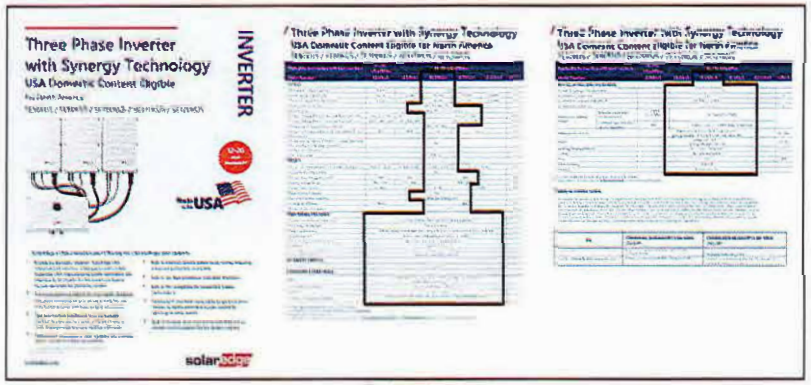
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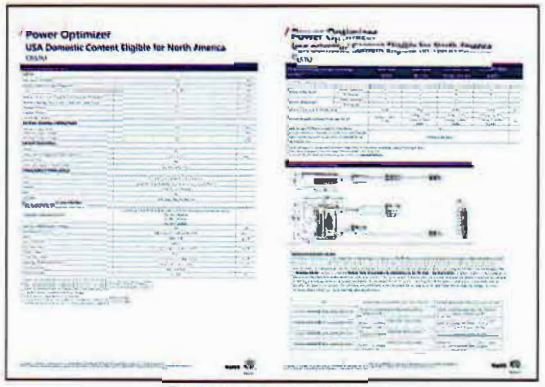
ROOF MOUNTED PV SYSTEM

WENDELL L CROSS
ELEMENTARY SCHOOL
235 MAIN TOM AVE
WATERBURY, CT 06705

NOTES, DETAILS & ABBREVIATIONS

Sheet	Sheet
Date: MARCH 13, 2026	PV-8
Scale: NTS	







EQUIPMENT DATA SHEETS

MARCH 13, 2026

PV-9



SOURCE: http://www.pvlabels.com

SOURCE: http://www.pvlabels.com

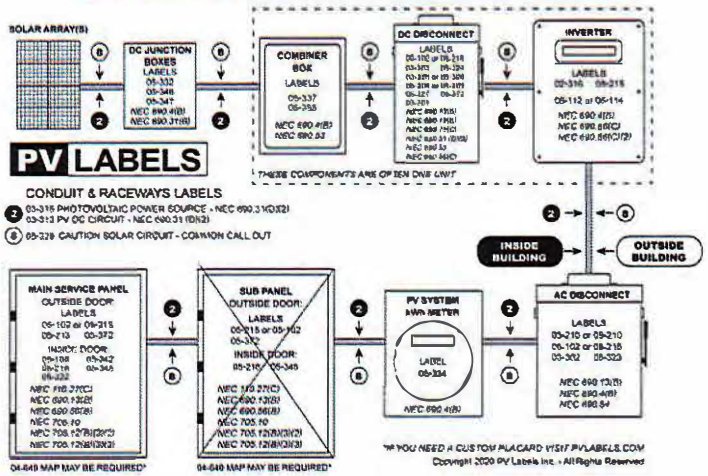
1 PV-10 LABELS



STRING NUMBER LABEL

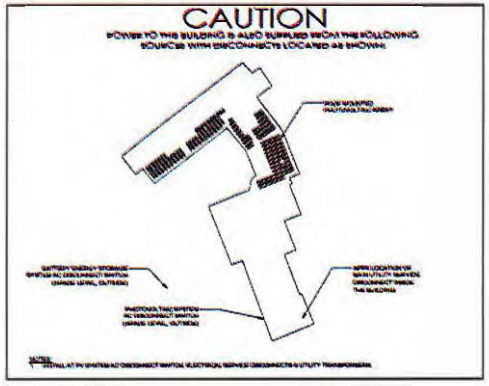
PHOTOVOLTAIC SOLAR SYSTEM MARKING - DC STRINGS

RECOMMENDATIONS BASED ON 2020 NEC, COMMON CALL OUTS AND PACKAGE CONTENTS



SOURCE: http://www.pvlabels.com/

2 PV-10 LABEL LOCATIONS



3 PV-10 POWER SOURCE DIRECTORY

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 235.580 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (521) SEG SOLAR SEG-380-BTA-BG MODULES (380W STC BIFACIAL)
- TILT = 18°

EVERSOURCE METER # 881238431 (EXISTING)

EVERSOURCE ACCOUNT # 31013809082 (EXISTING)

NRES ID # S24-ESNRES-01256

DAS PROJECT #131-0310-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WENDELL L CROSS ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

LABELS & SIGNAGE

Issue	Sheet
Date: MARCH 13, 2026	PV-10
Scale: NTS	

ELECTRICAL SPECIFICATIONS



Project Info:

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
[redacted]

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 285.360 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (501) SEG SOLAR SEG-380-BTA-BG MODULES (380W STC BIFACIAL)
- TILT = 18°

EVERSOURCE METER
681238451 (EXISTING)

EVERSOURCE ACCOUNT
51013809082 (EXISTING)

NRES ID # S24-ESNRES-01256

DAS PROJECT #151-0310-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WENDELL L CROSS
ELEMENTARY SCHOOL
1255 HAMILTON AVE
WATERBURY, CT 06706

SPECIFICATIONS

Drawn	Sheet
Date: MARCH 13, 2026	PV-11
Scale: NTS	

Wendell Cross – 151-0310 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

M.M. Generali – 151-0311 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Sprague School – 151-0312 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Tinker School – 151-0313 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

West Side School – 151-0314 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and

the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

CODE CONFORMITY CERTIFICATION

FORM SCG-3030

Director
Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, Connecticut 06103

Subject: State Project Number: 151-0310 PV

LEA: Waterbury Public Schools

Phase: 1 of 1

Facility Name: Wendell L. Cross Elementary School

Local Health Department Jurisdiction: Waterbury Health Department

Pursuant to Section 10-292 of the Connecticut General Statutes, the final plans for any phase of a school building project as provided in CGS Section 10-291 must be in conformance with state codes, statutes, regulations and to federal laws. The following documents are attached (mark boxes "x", as appropriate):

Attached	N/A	
☐	☒	ICC Code Review Checklist completed by Local Official or Third-party reviewer
☐	☒	Plan Review Record (PRR) by Local Officials or Third-party reviewer
☐	☒	Design Professional's response to PRR with Local Officials acceptance
☐	☒	Approved Code Modifications
☐	☒	Second copy of Code/Egress/Site drawings for OSCG&R file
☒	☐	Final Construction documents for OSCG&R review

We, the undersigned, have reviewed the construction documents (drawings and project manuals) for the above referenced school building project (the Project) dated 3/13/2026. As confirmation of our review in accordance with OSCG&R Guidelines and Plan Review checklists, we have signed and dated the cover page of the project's drawings and manuals. As it relates to my specific jurisdiction, and to the best of my knowledge, information, and belief, the review has determined the project's construction documents appear to be in compliance with the current Connecticut State Building Code, Fire Safety Code, State Fire Prevention Code, Connecticut Department of Public Health Regulations, Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA) of 1990, and OSHA requirements.

Building Official:

Frank Baker _____ Signature: _____ Date: _____
(Print Name):

Fire Marshal:

Tom Fitzgerald _____ Signature: _____ Date: _____
(Print Name):

Section 504 Official:

Mike Konopka _____ Signature: _____ Date: _____
(Print Name):

Health Inspector:

Richard Lee _____ Signature: _____ Date: _____
(Print Name):

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS
FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME:	FACILITY NAME AND ADDRESS:	STATE PROJECT NUMBER:
Waterbury Public Schools	Wendell L. Cross Elementary School 1255 Hamilton Ave, Waterbury, CT 06706	151-0310 PV
		PHASE NUMBER: 1

Estimated date* to begin construction July 6, 2026 Estimated date to complete construction October 1, 2026

* **NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.**

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	6 /18 /2026	/ /
School Building Committee	6 /4 /2026	/ /

We hereby certify that these **final plans and project manual(s)** as prepared for bidding and dated 3/13/2026, and the **professional cost estimate**, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 5/20/2026, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Chairperson's Name (Type or print) | Signature | Date**

For the School Building Committee:

Chairperson's Name (Type or print) | Signature | Date**

** **Signature dates cannot precede the date on the submitted plans.**

For the Project Architect/Engineering Firm:

CSW Energy (Firm Name (Type or print)) | Signature | (845) 551-7881 (Telephone No.)

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Superintendent's Name (Type or print) | Signature | Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER $10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

N:\Website migration\SCG-042 Request for review of plans
FORM SCG-042 Rev. 7/2017 KD

FORM SCG-042 Request for Review of Final Plans

State Project No. 151-0310 PV

Project Name: Wendell L. Cross Elementary School

Name of Contact Person:	Telephone:	Date:
Chris Palmer, CSW Energy	(845) 551-7881	5/29/2026

Certifications of Local Approval:

I certify that I have local jurisdiction over the **State Building Code** and that the plans and project manual dated 3/13/2026 for the above referenced project comply with all applicable building codes.

Local Building Official's Name | Signature | Date

I certify that I have local jurisdiction over the **State Fire Safety Code** and that the plans and project manual dated 3/13/2026 for the above referenced project comply with all applicable fire codes.

Local Fire Marshal's Name | Signature | Date

I certify that I have local jurisdiction over the **State Health Code** and that the plans and project manual dated 3/13/2026 for the above referenced project comply with all applicable health codes.

Local Health Official's Name | Signature | Date

I certify that I have local jurisdiction over **Section 504 of the Rehabilitation Act of 1973**, and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated 3/13/2026 for the above referenced project comply with all applicable accessibility codes.

Local Federal 504 Official's Name | Signature | Date

NOTES:

1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.

2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.

3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
The Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, CT 06103

#3

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

Date: May 29, 2026

To: Elizabeth C Brown
President, Board of Education

Members, Board of Education
Building and School Facilities Members

Dr. Darren Schwartz, Superintendent

Mayor Paul K. Pernerewski, Jr.

From: Nicholas Albini, Chief Operating Officer

Subject: Review of Plans for RFP#8595 Rooftop Solar Photovoltaic Systems

Dear Honorable Members of the Board of Education and Building School Facilities Committee,

This Honorable Board of Education ("BOE") and the Honorable Board of Aldermen previously approved a construction contract between the City of Waterbury and All-Electric Construction & Communication LLC ("All-Electric") to design and install rooftop solar systems at the following five schools: B.W. Tinker Elementary School, M.M. Generali Elementary School, Sprague Elementary School, Wendell L. Cross Elementary School, and West Side Middle School.

This submission today requests that the BOE Building School Facilities Committee and the BOE authorize their respective Chairpersons to sign the CT Department of Administrative Services Office of Grants Administration ("DAS-OGA") form "SCG-042 – Request for Review of Final Plans" for the school rooftop solar projects at five schools, as well as, The Department of Administrative Services (DAS-OSCG&R) form" SCG-3030 – Code Conformity Certification: Tinker, Generali, Sprague, Wendell Cross, and West Side. In support of this request, we include the final plans, building permits, and updated cost estimates for each of these five-school rooftop solar projects. In addition, we have attached the required separate motions for each school rooftop solar project that need to be passed by both the BOE Building Facilities Committee and the BOE for these projects to proceed through the DAS-OGA review process.

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

The goal at this stage of these five-school rooftop solar projects is to receive approval for the Chairperson of the BOE Building Facilities Committee to sign form SCG-042 and the SCG-3030 at their June 4th meeting, and to receive approval for the Chairperson of the BOE to sign form SCG-042 at their June 18th meeting. Following that June 18th meeting, all required DAS-OGA forms and final plans in support of these five-school rooftop solar projects will be signed by the appropriate municipal officials in advance of a final plan review meeting to be scheduled with DAS-OGA. Once the plan review meeting with DAS-OGA occurs, and the final plans are approved by DAS-OGA, the city will receive authorization to begin construction of these five-school rooftop solar projects.

Members of CSW and WDC will be at the June 4th and June 18th meetings to answer any questions.

The City of Waterbury
Department of Inspection
185 South Main Street, 5th floor
(1 Jefferson Square)
Waterbury, CT 06702
Applications & Permits: Monday – Friday 8:00 a.m. to 4:00 p.m.
Building: 203 574 6832 Electrical: 203 574 8382
HVAC / Plumbing: 203 574 6856 Fax: 203 574 6854
Sealer of Weights and Measures: 203 574 8387

BD - Electrical Permit

Permit #: PR20260000908 Date of Issue: 4/30/26

Location of Work: 3196 EAST MAIN ST, Waterbury, CT

This permit is hereby granted to perform the following work:

Install
Other
Install 239 roof mount solar panels 172.872 KW
With installation of new second service off existing
ground mount transformer to P.V. system only

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

All work covered by this permit has been authorized by the owner of this property.
This permit is granted under the condition that the work shall be done in accordance with the laws of the State of Connecticut and the ordinance of the City of Waterbury. If any statements of said application are false, or if any change is made to the plans/specifications without the consent of the Building Inspector or his duly appointed agent, this permit shall be revocable.

Approved plans must be retained on the job and this card must be kept posted until final inspection has been made. Such building shall not be occupied until final inspection has been made, and where applicable, a Certificate of Occupancy/Approval has been issued.

The Following Permit in no way relieves the Architect, Engineer, or Contractor from the responsibility of having their design/construction meet all requirements of the Connecticut Fire Saftey Code (C.F.S.C.) and all applicable standards.

Contacts:

Applicant	Angelica Guild/AEC Solar LLC180 Wampus La.Milford, CT 06460
Contractor	Patrick Lewis/AEC Solar180 Wampus La.Milford, CT 06460
Owner	CITY OF WATERBURY GENERALLI SCHOOL235 GRAND STWATERBURY, CT 06702
Donation Bin Owner	

Issued By: Domenic Mascolo Title: Electrical Inspector
Signature: D. Mascolo

Connecticut Department of Administrative Services
Office of School Construction Grants
Public School Construction Cost Database

Construction Documents Estimate

State Project #	EstNum000459				
LEA	Waterbury Public Schools				
School Name	Margaret M Generali Elemer				
Project Type					
Square Footage of Construction	25,000				
Grades	G1				
Enrollment Projections					
Reimbursement Rate			Cost/Square Feet		Ineligible Costs
Project Cost	$544,000.00	of Project Costs	$21.76	Project Ineligible Costs	$86,544.09
All Soft Cost	$173,928.55			Ineligible Soft Costs	$86,544.09
Construction Cost	$370,071.45	of Construction Cost	$14.80	Ineligible Construction Costs	$0.00
Eligible Construction Costs	$370,071.45	of Eligible Costs	$14.80		

Construction Cost			Cost	Ineligibles
A. SUBSTRUCTURE	A10. Foundations	A1010. Standard Foundations	0.00	0.00
		A1020. Special Foundations	0.00	0.00
		A1030. Slab on Grade	0.00	0.00
	A20. Basements	A2010. Basement Excavation	0.00	0.00
		A2020. Basement Walls	0.00	0.00
B. SHELL	B10. Super Structure	B1010. Floor Construction	0.00	0.00
		B1020. Roof Construction	0.00	0.00
	B20. Exterior Enclosures	B2010. Exterior Walls	0.00	0.00
		B2020. Exterior Windows	0.00	0.00
		B2030. Exterior Doors	0.00	0.00

	B30. Roofing	B3010. Roof Coverings	0.00	0.00
		B3020. Roof Openings	0.00	0.00
C. INTERIORS	C10. Interior Construction	C1010. Partitions	0.00	0.00
		C1020. Interior Doors	0.00	0.00
		C1030. Fittings	0.00	0.00
	C20. Stairs	C2010. Stair Construction	0.00	0.00
		C2020. Stair Finishes	0.00	0.00
	C30. Interior Finishes	C3010. Wall Finishes	0.00	0.00
		C3020. Floor Finishes	0.00	0.00
		C3030. Ceiling Finishes	0.00	0.00
D. SERVICES	D10. Conveying	D1010. Elevators & Lifts	0.00	0.00
		D1020. Escalators & Moving Walks	0.00	0.00
		D1090. Other Conveying Systems	0.00	0.00
	D20. Plumbing	D2010. Plumbing Fixtures	0.00	0.00
		D2020. Domestic Water Distribution	0.00	0.00
		D2030. Sanitary Waste	0.00	0.00
		D2040. Rain Water Drainage	0.00	0.00
		D2090. Other Plumbing Systems	0.00	0.00
	D30. HVAC	D3010. Energy Supply	0.00	0.00
		D3020. Heat Generating Systems	0.00	0.00
		D3030. Cooling Generating Systems	0.00	0.00
		D3040. Distribution Systems	0.00	0.00
		D3050. Terminal & Package Units	0.00	0.00
		D3060. Controls & Instrumentation	0.00	0.00
		D3070. Systems Testing & Balancing	0.00	0.00
		D3090. Other HVAC systems & Equi[pment	0.00	0.00
	D40. Fire Protection	D4010. Sprinklers	0.00	0.00
		D4020. Standpipes	0.00	0.00
		D4030. Fire Protection Specialties	0.00	0.00
		D4090. Other Fire Protection Systems	0.00	0.00
	D50. Electrical	D5010. Electrical Service & Distribution	0.00	0.00
		D5020. Lighting and Branch Wiring	0.00	0.00
		D5030. Communications & Security	0.00	0.00
		D5090. Other Electrical Systems	271405.90	0.00

E. EQUIPMENT & FURNISHINGS	E10. Equipment	E1010. Commercial Equipment	0.00	0.00
		E1020. Institutional Equipment	0.00	0.00
		E1030. Vehicular Equipment (Bldg fixed)	0.00	0.00
		E1090. Other Equipment	0.00	0.00
	E20. Furnishings	E2010. Fixed Furnishings	0.00	0.00
F. SPECIAL CONSTRUCTION AND DEMOLITION	F10. Special Construction	F1010. Special Structures	0.00	0.00
		F1020. Integrated Construction	0.00	0.00
		F1030. Special Construction Systems	0.00	0.00
		F1040. Special Facilities	0.00	0.00
		F1050. Special Controls & Instrumentation	0.00	0.00
	F20. Selective Building Demolition	F2010. Building Elements Demolition	0.00	0.00
	F30. Abatement	F3010. PCB/Asbestos/Lead Abatement	0.00	0.00
X. GENERAL CONDITIONS, OFFICE OVERHEAD, & PROFIT	X10. General Conditions	X1010. General Conditions	54454.05	0.00
	X20. Overhead & Profit	X2020. Office Overhead & Profit	44211.50	0.00
		X2030. Trade Contractor Bond Costs	0.00	0.00
Z. ALLOWANCES	Z10. Design Contingency	Z10. Design Contingency	0.00	0.00
	Z20. Inflation (Escalation) Allowance	Z20. Inflation (Escalation) Allowance	0.00	0.00
	Z30. Construction Contingency	Z30. Construction Contingency	0.00	0.00

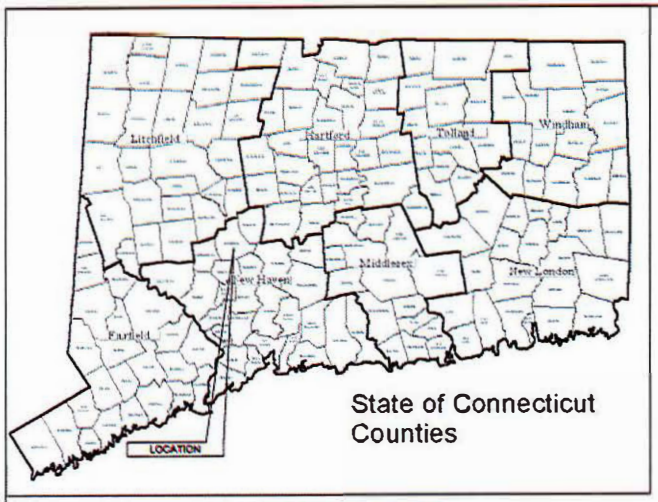
Soft Cost		Cost	Ineligibles
G. SITEWORK (beyond 5 ft from Building)	G1010. Site Clearing	0.00	0.00
	G1020. Site Demolition & Relocation	0.00	0.00
	G1030. Site Earthwork	0.00	0.00
	G1040. Hazardous Waste Remediation	0.00	0.00
	G2010 Roadways	0.00	0.00
	G2020. Parking	0.00	0.00
	G2030. Pedestrian Paving	0.00	0.00
	G2040. Site Development	0.00	0.00
	G2045. Athletic Fields	0.00	0.00
	G2050. Landscaping	0.00	0.00
	G3010. Water Supply	0.00	0.00
	G3020. Sanitary Sewer	0.00	0.00
	G3030. Storm Sewer	0.00	0.00
	G3040. Heating Distribution	0.00	0.00
	G3050. Cooling Distribution	0.00	0.00
	G3060. Fuel Distribution	0.00	0.00

	G3090. Other Site Mechanical Utilities	0.00	0.00
	G4010. Electrical Distribution	0.00	0.00
	G4020. Site Lighting	0.00	0.00
	G4030. Site Communications & Security	0.00	0.00
	G4090. Other Site Electrical Utilities	0.00	0.00
	G9010. Service & Pedestrian	0.00	0.00
	G9020. Bleachers, Concession Stands, etc.	0.00	0.00
	G9090. Other Site Systems	0.00	0.00
Y.SITE GENERAL CONDITIONS, OFFICE OVERHEAD, PROFIT, & ALLOWANCES	Y1010. Site General Conditions	0.00	0.00
	Y2010. Site Overhead & Profit	0.00	0.00
	Y3010. Site Design Contingency	0.00	0.00
	Y4010. Site Inflation (Escalation) Allowance	0.00	0.00
	Y5010. Trade Contractor Bond Costs	0.00	0.00
	Y3020. Site Construction Contingency	0.00	0.00
R. CONSULTANTS	R1010. Architect/Engineer	6914.80	0.00
	R2010. Environmental	0.00	0.00
	R3010. Commissioning	0.00	0.00
	R4010. Geotechnical	0.00	0.00
	R5010. Cost Estimator	0.00	0.00
	R6010. Owners Rep	62000.00	7800.00
	R7010. CM Pre-Construction	0.00	0.00
	R8010. FF&E Coordinator	0.00	0.00
	R9010. Legal	10000.00	0.00
S. FF&E	S1010. FF&E	0.00	0.00
	S2010. Technology	0.00	0.00
	S3010. Playground Equipment	0.00	0.00
	S4010. Playground Surfacing	0.00	0.00
	S5010. Moving	0.00	0.00
T. FEES	T1010. District Bonding Fees	0.00	0.00
	T2010. Insurance Cost	0.00	0.00
	T3010. Town Staff Cost	0.00	0.00
	T4010. Town Permit Fees	1587.26	0.00
	T5010. State Permit Fees	141.44	141.44
	T6010. Testing/Inspection Fees	0.00	0.00
	T7010. Printing & Mailing	0.00	0.00
	T8010. Other Costs	6882.40	0.00
U. CONTINGENCIES	U1010. Owner Contingency	86402.65	78602.65
W. ACQUISITION COSTS W	W1010. Land/Building Purchase	0.00	0.00
	W2010. Swing Space/Portables	0.00	0.00
	W3010. Site Remediation	0.00	0.00

	W4010. Appraisals	0.00	0.00
	W5010. Land Survey	0.00	0.00
	W6010. Other Acquisition Costs	0.00	0.00

Save CD Estimate And Continue | Save CD Estimate And Exit | Submit CD Estimate

ROOFTOP PV ARRAY INSTALLATION AT:



LOCATION MAP
SCALE: N.T.S.



VICINITY MAP
SCALE: N.T.S.

MARGARET M. GENERALI ELEMENTARY SCHOOL

3196 E MAIN ST

WATERBURY, CT 06705

DAS PROJECT #151-0311-PV

APPLICABLE CODES

NATIONAL ELECTRIC CODE - 2020
ARTICLE 230 - SERVICES
ARTICLE 240 - OVERCURRENT PROTECTION
ARTICLE 250 - GROUNDING AND BONDING
ARTICLE 300 - WIRING METHODS
ARTICLE 310 - CONDUCTORS
ARTICLE 690 - SOLAR PHOTOVOLTAIC SYSTEMS
ARTICLE 705 - INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

PV SYSTEM INFORMATION

SYSTEM SIZE (DC):	172.870 kW STC + BIFACIAL GAIN
SYSTEM SIZE (AC):	120.000 kW / 120.000 kVA
INVERTER QUANTITY:	1
INVERTER TYPE:	SOLAREDGE SE120KUS (120 kVAC)
MODULE QUANTITY:	293
MODULE TYPE	SEG SOLAR SEG-590TB-BG (590W STC + BIFACIAL GAIN)
RACKING TYPE:	K2 RACKING
RAPID SHUTDOWN DEVICES:	SOLAREDGE S650 OPTIMIZERS

UTILITY INFORMATION

COMPANY:	EVERSOURCE
ACCOUNT NUMBER:	3103981302 (EXISTING)
METER NUMBERS:	6981338 & 6981329 (EXISTING)
NRES ID NUMBER:	SEG-EVERSOURCE
DAS PROJECT NUMBER:	151-0311-PV

PROJECT SIGNATURES

AHJ	NAME	SIGNATURE	DATE
BUILDING INSPECTOR			
FIRE MARSHAL			
HEALTH INSPECTOR			
ADA 504 COORD			

Stephen Gendreau, P.E.

Digitally signed by Stephen Gendreau, P.E.
Date: 2026.03.04 14:13:35 -05'00'

PREPARED FOR:

ALL ELECTRIC LLC
CONSTRUCTION & COMMUNICATION
allelectricct.com

PREPARED BY:

SG ENGINEERING LLC
sgedesign.com

PROJECT DESCRIPTION

THIS INSTALLATION CONSISTS OF A UTILITY INTERACTIVE SOLAR PHOTOVOLTAIC SYSTEM AT A SCHOOL BUILDING IN WATERBURY, CONNECTICUT. THE PV SYSTEM IS COMPRISED OF MODULES MOUNTED ON THE ROOF OF BUILDING. THE PV SYSTEM ALSO INCLUDES AN INVERTER LOCATED ON THE EXTERIOR WALL OF THE BUILDING. THE AC INVERTER OUTPUT POWER IS FED THROUGH DISCONNECT SWITCHES AND A UTILITY METER TO THE POINT OF CONNECTION AT AN EXISTING UTILITY TRANSFORMER.

DRAWING LIST

N/A	COVER SHEET
PV-1	THREE-LINE DIAGRAM
PV-2	PROFILE VIEWS & PARTIAL PLANS
PV-3	OVERALL ROOF PLAN
PV-4,5,6,7	[NOT USED]
PV-8	NOTES, DETAILS & ABBREVIATIONS
PV-9	EQUIPMENT DATA SHEETS
PV-10	LABELS & SIGNAGE
PV-11	SPECIFICATIONS

DOCUMENTS BY OTHERS

RACKING MANUFACTURER DRAWINGS
STRUCTURAL ENGINEERING CALCULATIONS

REVISIONS:

02-18-2026:	INTERCONNECTION APPLICATION
03-04-2026:	ISSUED FOR CONSTRUCTION

INVERTER RELAY SETTINGS

TABLE I: INVERTERS' VOLTAGE TRIP SETTINGS

TABLE II: INVERTERS' FREQUENCY TRIP SETTINGS

TABLE III: INVERTERS' VOLTAGE RIDE-THROUGH CAPABILITY & OPERATIONAL REQUIREMENTS

TABLE IV: INVERTERS' FREQUENCY RIDE-THROUGH CAPABILITY

TABLE V: GRID SUPPORT UTILITY INTERACTIVE INVERTER FUNCTIONS STATUS

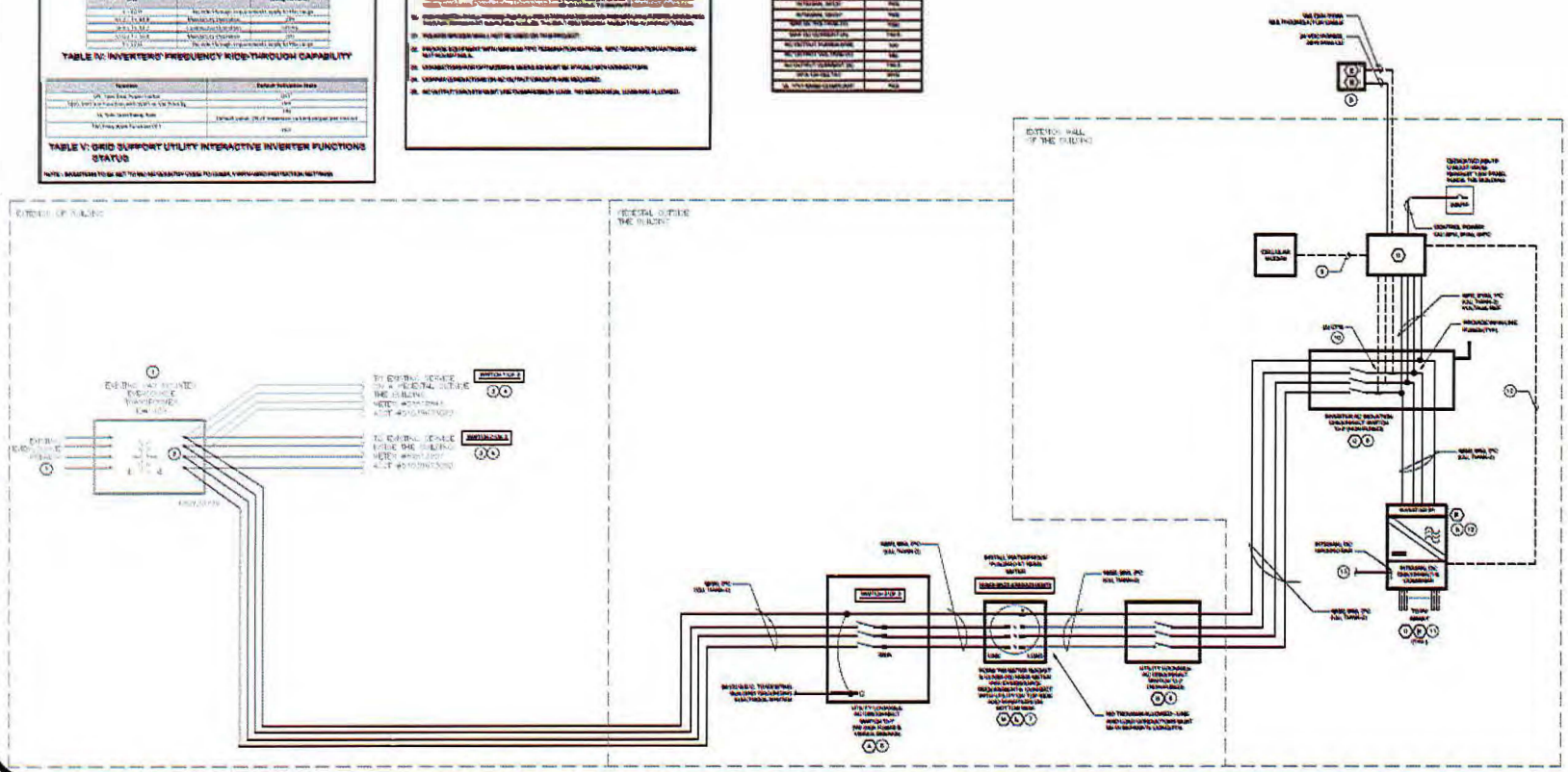
SOLAR PV GENERAL NOTES

KEY NOTES

INVERTER DATA

EQUIPMENT SCHEDULE

A	AC DISCONNECT	EATON OR APPROVED EQUIVALENT		NEW
B	PV SYSTEM AC DISCONNECT	EATON OR APPROVED EQUIVALENT		NEW
C				NEW
D				NEW
E				NEW
F	PV MODULES			NEW
G				NEW
H				NEW
I				NEW
J				NEW
K				NEW
L				NEW
M				NEW
N				NEW



ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sg@sgedesign.com

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 VERMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 172.070 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE12KUS INVERTER (12 KWAC)
- (293) SEG SOLAR SEG-390-BTA-BG MODULES (390W STC BIFACIAL)

EVERSOURCE METERS
03810846 (EXISTING OUTSIDE) &
89513207 (EXISTING INSIDE)

EVERSOURCE ACCOUNT
51039873082 (EXISTING)

NRES ID # SZH-ESNRES-00675

DAS PROJECT #151-0311-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

MARGARET M. GENERALI
ELEMENTARY SCHOOL
3196 E MAIN ST
WATERBURY, CT 06705

THREE-LINE DIAGRAM

DATE: MARCH 4, 2026
SCALE: NTS

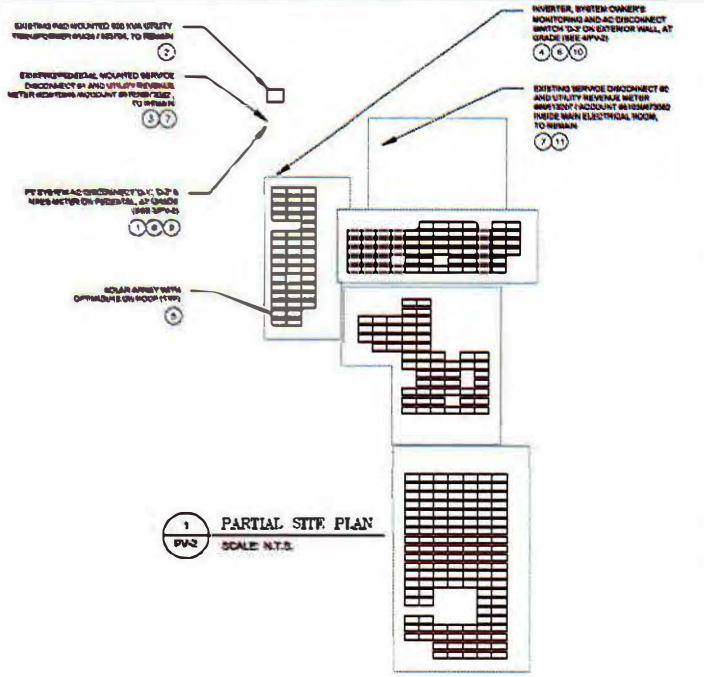
PV-1

KEY NOTES

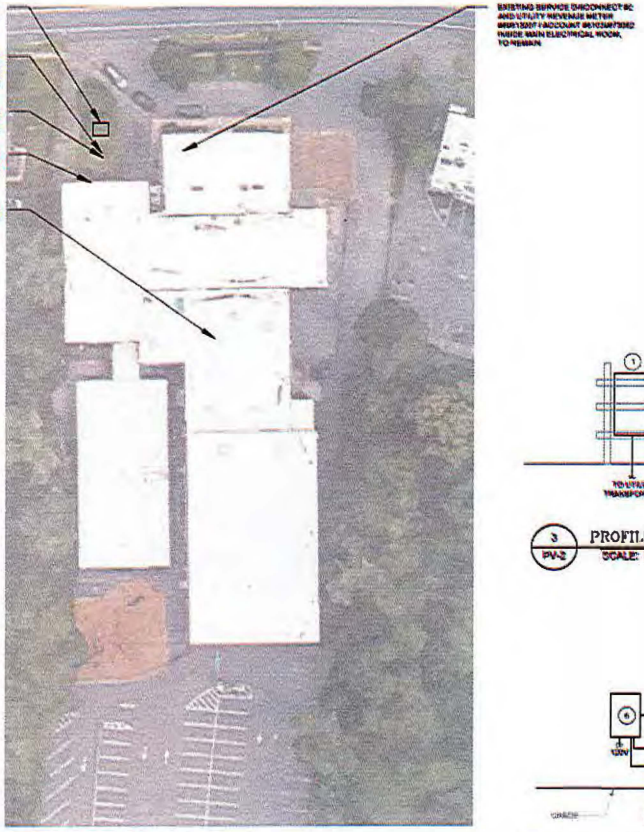
1. UTILITY LOCKABLE ELECTRICALLY PV SYSTEM AC DISCONNECT "DA" WITH VISIBLE BLADES ON PEDESTAL, AT GRADE.
2. EXISTING 500 KVA UTILITY COMPANY PAD MOUNTED TRANSFORMER #1439, TO REMAIN.
3. EXISTING UTILITY REVENUE METER SERVICING ACCOUNT #5103967 3082 ON PEDESTAL, AT GRADE, TO REMAIN.
4. INVERTER 1 ON EXTERIOR WALL, AT GRADE.
5. SMART SWITCHGEAR DEVICES MOUNTED ON ROOF, UNDER MODULES - ONE SWITCHGEAR PER MODULE.
6. SYSTEM OWNER'S MONITORING DEVICE ON EXTERIOR WALL, AT GRADE.
7. EXISTING SERVICE DISCONNECT 1, TO REMAIN.
8. LOCKABLE & ACCESSIBLE PV SYSTEM AC DISCONNECT "DJ" WITH VISIBLE BLADES ON PEDESTAL, AT GRADE.
9. PV SYSTEM NRES METER SOCKET ON PEDESTAL, AT GRADE.
10. INVERTER AC ISOLATION DISCONNECT SWITCH "DJ" ADJACENT TO INVERTER - ON SAME WALL, AT GRADE.
11. EXISTING UTILITY REVENUE METER #8951 3207 / ACCOUNT #5103967 3082 INSIDE ELECTRICAL ROOM, TO REMAIN.

PV SYSTEM WORK NOTES

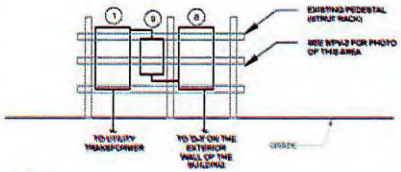
1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH ASSOCIATED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSION OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD MEASUREMENTS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRINGING, AND TYING ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT FABRICATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR RAILS SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUBARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.



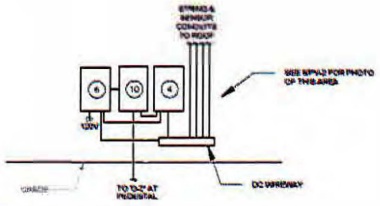
1 PV-2 PARTIAL SITE PLAN
SCALE: N.T.S.



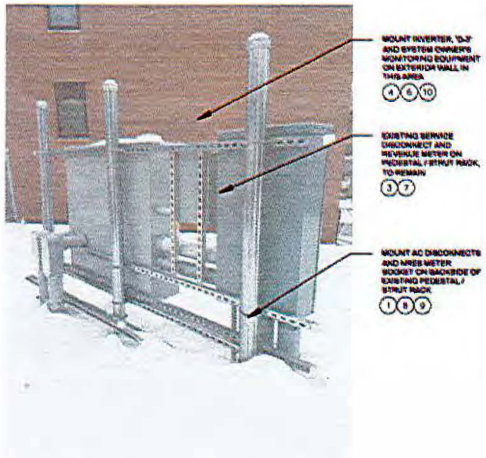
2 PV-2 AERIAL SITE PHOTO
SCALE: N.T.S.



3 PV-2 PROFILE VIEW (PEDESTAL)
SCALE: N.T.S.



4 PV-2 PROFILE VIEW (EXTERIOR WALL)
SCALE: N.T.S.



5 PV-2 EXTERIOR EQUIPMENT AREA PHOTO
SCALE: N.T.S.

Project Info:

ENGINEER:

SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC
120 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 172.870 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTER (120 KWAC)
- (293) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810846 (EXISTING OUTSIDE) &
8951 3207 (EXISTING INSIDE)

EVERSOURCE ACCOUNT
5103967 3082 (EXISTING)

NRES ID # SG-ESNRES-00875

DAS PROJECT #151-0311-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

MARGARET M. GENERALI ELEMENTARY SCHOOL
3196 E MAIN ST
WATERBURY, CT 06705

PROFILE VIEWS & PARTIAL PLANS

Plan	Sheet
Date: MARCH 4, 2026	PV-2
Scale: NTS	

ROOF AREA GENERAL NOTES

1. E.C. SHALL FURNISH AND INSTALL ALL DC SOURCE CIRCUIT WIRING PER NEC 2020 REQUIREMENTS, CONTRACT REQUIREMENTS, AND IN A NEAT AND WORKMAN LIKE MANNER.
2. INTERACTION MODULE TO MODULE, MODULE TO OPTIMIZER AND OPTIMIZER TO OPTIMIZER WIRING SHALL BE SUPPORTED ON MODULE FRAME SUCH THAT IT WILL NOT DROOP INTO THE REACH OF ICE AND SNOW AND IS NOT EXPOSED TO OBVIOUS SOURCES OF DAMAGE INCLUDING ABRASION OR STRAIN FROM THERMAL EXPANSION
3. ALL DC CONNECTORS, JUMPERS AND HOME RUNS SHALL USE MATCHING DC CONNECTORS TO MAINTAIN UL LISTING.
4. ALL MODULE DC CONNECTORS SHALL BE TUCKED INTO THE MODULE FRAME OF THE MODULE AND CLIPPED TO THE FRAME.
5. DURING INSTALLATION, ALL DC CONNECTORS FOR MODULES, JUMPERS, AND OPTIMIZERS MUST BE KEPT OFF THE ROOF AT ALL TIMES. PRIOR TO BEING CONNECTED TOGETHER, CONNECTORS MUST BE PROTECTED AGAINST WATER INTRUSION AND SECURED OFF THE GROUND (OR APPROVED ALTERNATIVE METHOD). ANY CONNECTOR LEFT UNPROTECTED AND SUBJECT TO WATER INTRUSION SHALL BE REPLACED IMMEDIATELY WITH NEW COMPONENT AT CONTRACTOR'S SOLE EXPENSE.
6. MOUNT OPTIMIZERS TO RACKING SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. BOND DEVICES TO RACKING SYSTEM PER RACKING AND OPTIMIZER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. CONDUIT ROUTING IS SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO DETERMINE LOCATIONS AND SUBMIT TO SOLAR DEVELOPER FOR APPROVAL.
8. EXPANSION FITTINGS SHALL BE ADDED TO CONDUIT RUNS EVERY 100' ON STRAIGHT RUNS AND WHENEVER CONDUIT CROSSES BUILDING EXPANSION JOINTS OR TRANSITIONS BETWEEN 2 BUILDING SECTIONS.
9. NO T-SHAPED FITTINGS WILL BE ALLOWED ANYWHERE ON DC CONDUITS. WHERE SHARP CUTS ARE REQUIRED A PULLBOX MUST BE USED.
10. ALL EXPOSED EXTERIOR CONDUITS SHALL BE EMT WITH CORROSION RESISTANT COATING.
11. ENSURE THAT THE BOTTOM OF ALL ROOF MOUNTED CONDUITS ARE A MINIMUM OF ½" ABOVE THE ROOF SURFACE TO AVOID THE NEED FOR ADDITIONAL TEMPERATURE DERATING.
12. PROVIDE SLIP SHEET UNDER ALL CONTACT SURFACES AND ADHERE PER MANUFACTURER'S RECOMMENDATIONS.

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING PREFORMED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURER'S INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH ASSOCIATED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSIONS OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD INVESTIGATIONS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRUCTURE, AND WIND ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLIP SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUBARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.

SYMBOL LEGEND

+	BEGINNING OF STRING
-	END OF STRING
XX	STRING NUMBER - SEE PV-3 FOR ADDITIONAL INFORMATION

RACKING NOTES

1. RACKING NOTES, DRAWINGS AND REQUIREMENTS WILL BE PROVIDED BY SOLAR DEVELOPER AND RACKING MANUFACTURER.

STRING WIRING

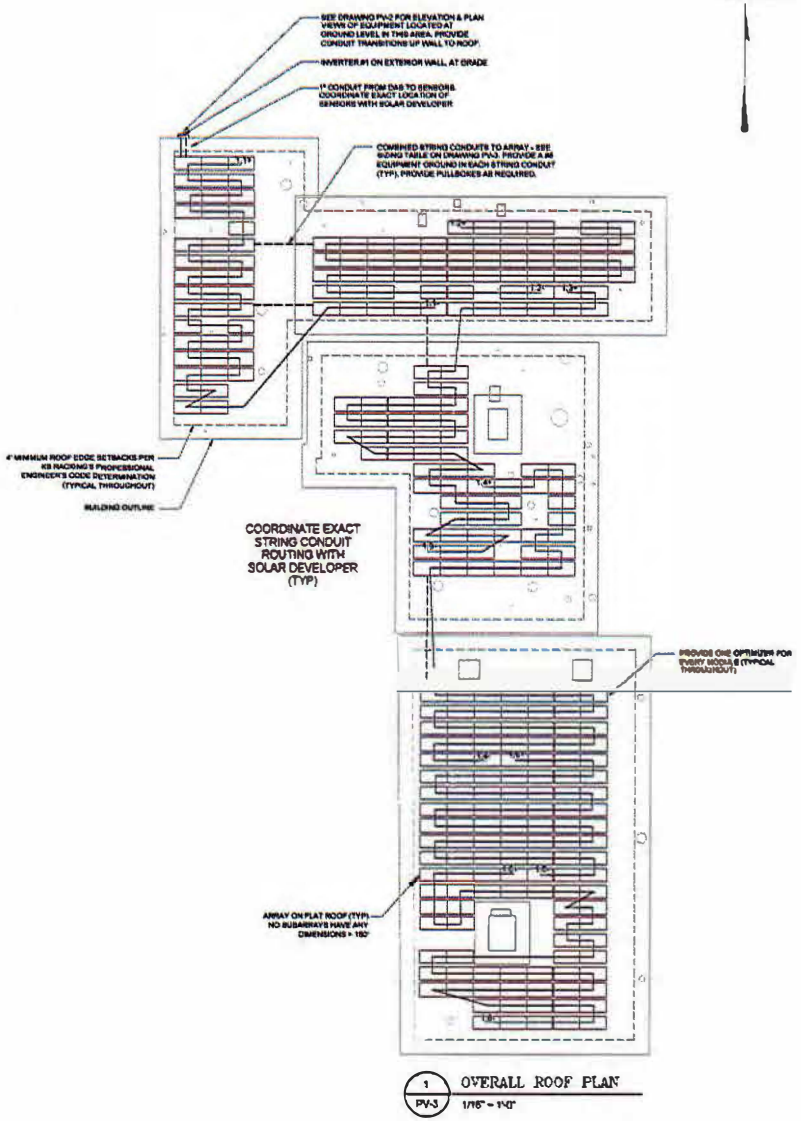
Inverter Number	Inverter Unit	String ID	Qty of Modules	Qty of Optimizers	Module DC (VDC)	Total MAX VDC	Approx. L Wire Length (ft)	Conductor Size (AWG) Type PV	Voltage Drop (%)
1	INVERTER	1	20	20	590	29.52	130	#8	1.07%
1	INVERTER	2	19	19	590	28.01	180	#8	1.06%
1	INV	3	20	20	590	29.52	125	#8	1.07%
1	INV	4	20	20	590	29.52	120	#8	1.14%
1	INVERT	5	20	20	590	29.52	110	#8	1.13%
1	INVERT	6	20	20	590	29.52	105	#8	1.16%
TOTAL			293	293	1757.87				7.63%

STRING CONDUIT REQUIREMENTS:

# OF STRINGS PER CONDUIT	MINIMUM CONDUIT SIZE
1 STRING	¾"
2 STRINGS	1-¼"
3 STRINGS	1-½"
4-6 STRINGS	2"

PROVIDE A #6 AWG EGC IN EACH STRING CONDUIT & BOND PER NEC

NORTH



1 PV-3 OVERALL ROOF PLAN
1/16" = 1'-0"

Project Info

ENGINEER:

SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC
189 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 172.870 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTER (120 KWAC)
- (293) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810946 (EXISTING OUTSIDE) & # 89513207 (EXISTING INSIDE)

EVERSOURCE ACCOUNT
51039673082 (EXISTING)

NRES ID # SZ3-[redacted]NRES-00675

DAS PROJECT #151-0311-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

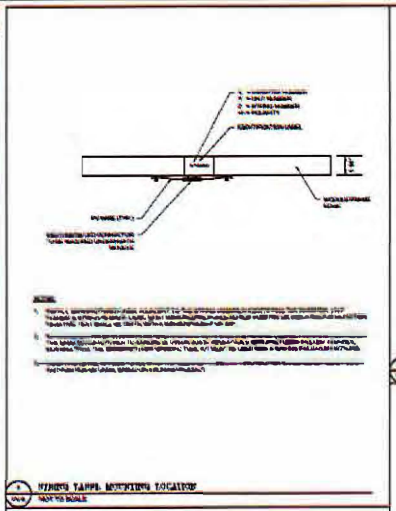
MARGARET M. GENERALI ELEMENTARY SCHOOL
3196 E MAIN ST
WATERBURY, CT 06705

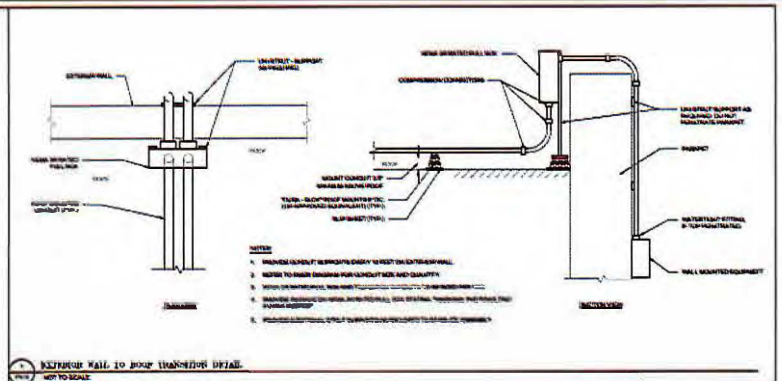
OVERALL ROOF PLAN

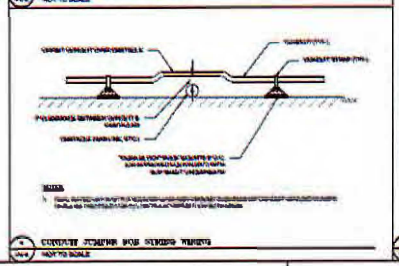
Revision:
Date: MARCH 4, 2024
Scale: N.T.S.
Sheet: PV-3

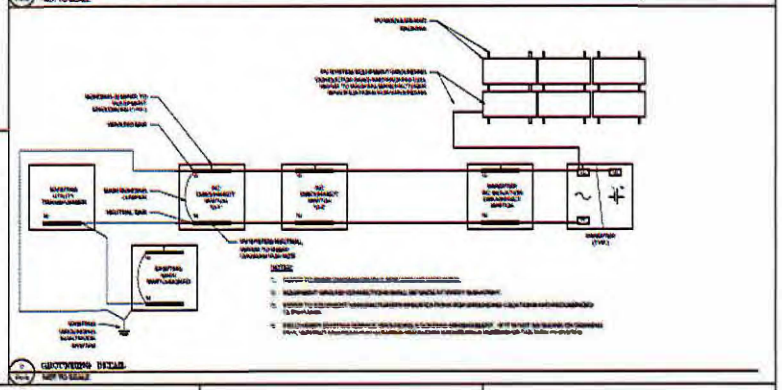
GENERAL NOTES

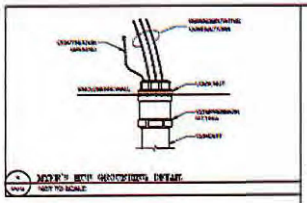
ABBREVIATIONS

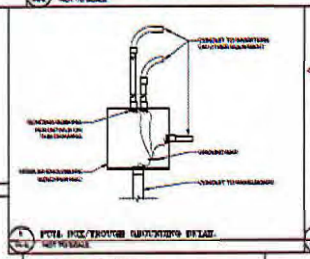


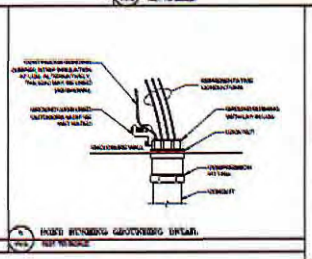


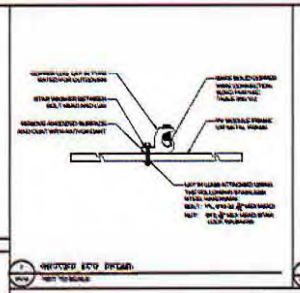




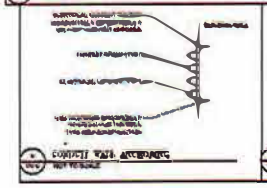


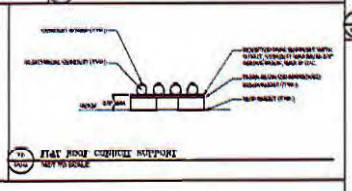


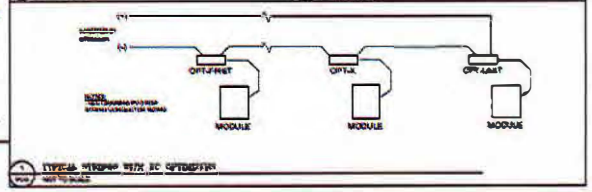












Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 172.670 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTER (120 KWAC)
- (293) SEG SOLAR SEG-590-STH-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
00810946 (EXISTING OUTSIDE) &
89513207 (EXISTING INSIDE)

EVERSOURCE ACCOUNT
31939973482 (EXISTING)

NRES ID # 523-ENRES-00675

DAS PROJECT #151-0311-PV

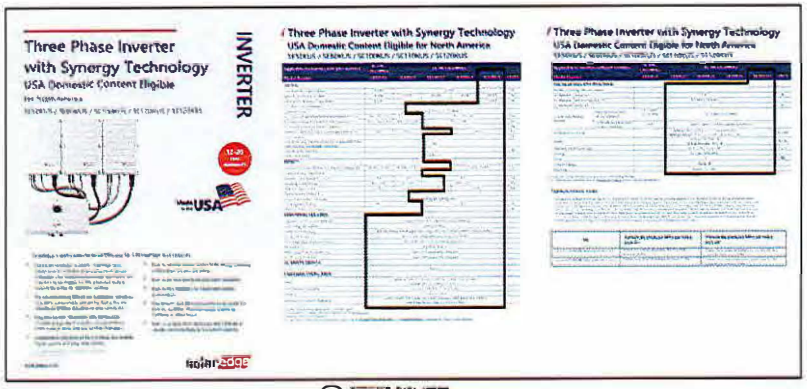
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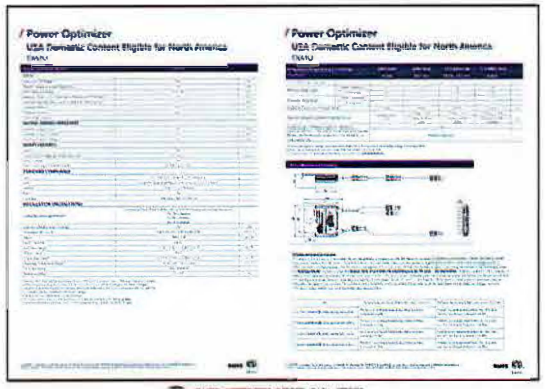
ROOF MOUNTED PV SYSTEM

MARGARET M. GENERALI ELEMENTARY SCHOOL
3190 E MAIN ST
WATERBURY, CT 06705

NOTES, DETAILS & ABBREVIATORS

Date	Sheet
MARCH 4, 2026	PV-8
Scale: NTS	







ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:
ALL ELECTRIC LLC
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 172.870 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTER (120 KWAC)
- (293) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810846 (EXISTING OUTSIDE) &
89513207 (EXISTING INSIDE)

EVERSOURCE ACCOUNT
31035873082 (EXISTING)

NRES ID # SZI-ESNRES-00675

DAS PROJECT #151-0311-PV

No.		Date

ROOF MOUNTED PV SYSTEM

MARGARET M. GENERALI
ELEMENTARY SCHOOL
3196 E MAIN ST
WATERBURY, CT 06705

EQUIPMENT DATA SHEETS

MARCH 4, 2026	PV-9



SOURCE: http://www.pvlabels.com

SOURCE: http://www.pvlabels.com

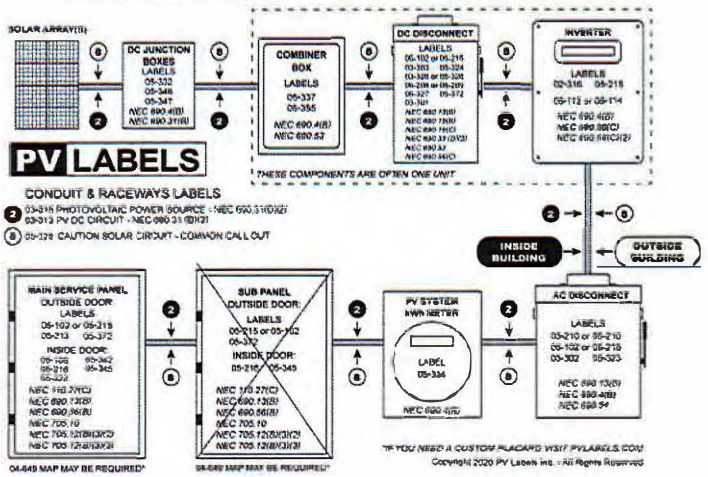
1 PV-10 LABELS



STRING NUMBER LABEL

PHOTOVOLTAIC SOLAR SYSTEM MARKING - DC STRINGS

RECOMMENDATIONS BASED ON 2020 NEC, COMMON CALL OUTS AND PACKAGE CONTENTS



PV LABELS

CONDUIT & RACEWAYS LABELS

2 03-316 PHOTOVOLTAIC POWER SOURCE - NEC 690.31(D)(2)
03-313 PV DC CIRCUIT - NEC 690.31 (D)(2)

8 05-328 CAUTION SOLAR CIRCUIT - COMMON CALL OUT

04-649 MAP MAY BE REQUIRED*

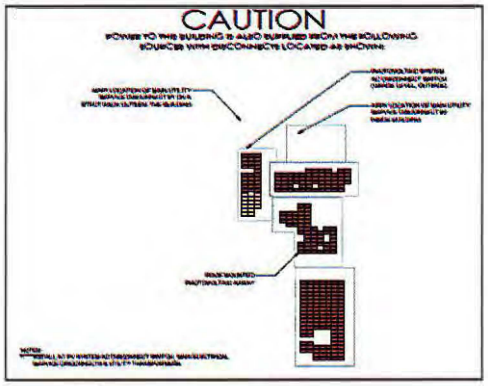
05-649 MAP MAY BE REQUIRED*

*IF YOU NEED A CUSTOM PLACARD VISIT PVLABELS.COM

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SOURCE: http://www.pvlabels.com/

2 PV-10 LABEL LOCATIONS



3 PV-10 POWER SOURCE DIRECTORY

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 172.870 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTER (120 KWAC)
- (293) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
- 03810646 (EXISTING OUTSIDE) &
- 89513207 (EXISTING INSIDE)

EVERSOURCE ACCOUNT
- 91000910002 (EXISTING)

NRES ID # SCA-CSNRES-00675

DAS PROJECT #131-0311-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

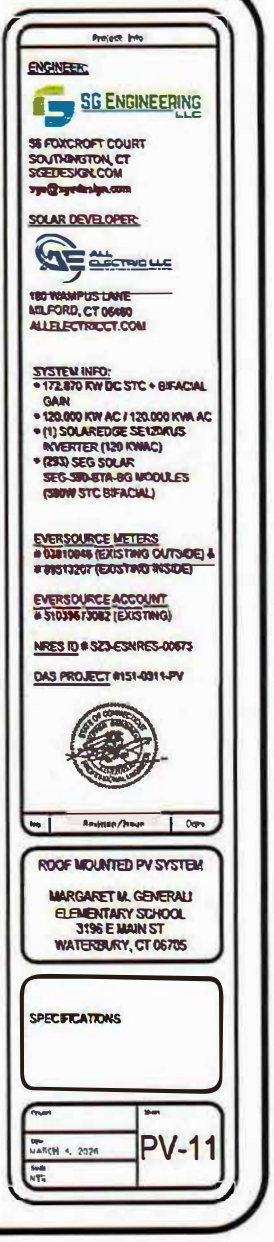
MARGARET M. GENERALI ELEMENTARY SCHOOL
3196 E MAIN ST
WATERBURY, CT 06705

LABELS & SIGNAGE

Date: MARCH 4, 2026
Scale: NTS
Sheet: PV-10

ELECTRICAL SPECIFICATIONS

[redacted]



Wendell Cross – 151-0310 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

M.M. Generali – 151-0311 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Sprague School – 151-0312 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Tinker School – 151-0313 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

West Side School – 151-0314 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and

the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

CODE CONFORMITY CERTIFICATION

FORM SCG-3030

Director
Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, Connecticut 06103

Subject: State Project Number: 151-0311 PV

LEA: Waterbury Public Schools

Phase: 1 of 1

Facility Name: M.M. Generali Elementary School

Local Health Department Jurisdiction: Waterbury Health Department

Pursuant to Section 10-292 of the Connecticut General Statutes, the final plans for any phase of a school building project as provided in CGS Section 10-291 must be in conformance with state codes, statutes, regulations and to federal laws. The following documents are attached (mark boxes "x", as appropriate):

Attached	N/A	
☐	☒	ICC Code Review Checklist completed by Local Official or Third-party reviewer
☐	☒	Plan Review Record (PRR) by Local Officials or Third-party reviewer
☐	☒	Design Professional's response to PRR with Local Officials acceptance
☐	☒	Approved Code Modifications
☐	☒	Second copy of Code/Egress/Site drawings for OSCG&R file
☒	☐	Final Construction documents for OSCG&R review

We, the undersigned, have reviewed the construction documents (drawings and project manuals) for the above referenced school building project (the Project) dated 3/4/2026. As confirmation of our review in accordance with OSCG&R Guidelines and Plan Review checklists, we have signed and dated the cover page of the project's drawings and manuals. As it relates to my specific jurisdiction, and to the best of my knowledge, information, and belief, the review has determined the project's construction documents appear to be in compliance with the current Connecticut State Building Code, Fire Safety Code, State Fire Prevention Code, Connecticut Department of Public Health Regulations, Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA) of 1990, and OSHA requirements.

Building Official:

Frank Baker _____ Signature: _____ Date: _____
(Print Name):

Fire Marshal:

Tom Fitzgerald _____ Signature: _____ Date: _____
(Print Name):

Section 504 Official:

Mike Konopka _____ Signature: _____ Date: _____
(Print Name):

Health Inspector:

Richard Lee _____ Signature: _____ Date: _____
(Print Name):

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS
FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME:	FACILITY NAME AND ADDRESS:	STATE PROJECT NUMBER:
Waterbury Public Schools	M.M Generali Elementary School 3196 E Main St, Waterbury, CT 06705	151-0311 PV
		PHASE NUMBER: 1

Estimated date* to begin construction July 6, 2026 Estimated date to complete construction October 1, 2026

* NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	6 / 18 / 2026	/ /
School Building Committee	6 / 4 / 2026	/ /

We hereby certify that these final plans and project manual(s) as prepared for bidding and dated 3/4/2026, and the professional cost estimate, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 5/20/2026, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Chairperson's Name (Type or print)	Signature	Date **

For the School Building Committee:

Chairperson's Name (Type or print)	Signature	Date **

** Signature dates cannot precede the date on the submitted plans.

For the Project Architect/Engineering Firm:

Firm Name (Type or print)	Signature	Telephone No.
CSW Energy		(845) 551-7881

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Superintendent's Name (Type or print)	Signature	Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER $10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

FORM SCG-042 Request for Review of Final Plans

State Project No. 151-0311 PV

Project Name: M.M Generali Elementary School

Name of Contact Person:	Telephone:	Date:
Chris Palmer, CSW Energy	(845) 551-7881	5/29/2026

Certifications of Local Approval:

I certify that I have local jurisdiction over the **State Building Code** and that the plans and project manual dated 3/4/2026 for the above referenced project comply with all applicable building codes.

Local Building Official's Name | Signature | Date

I certify that I have local jurisdiction over the **State Fire Safety Code** and that the plans and project manual dated 3/4/2026 for the above referenced project comply with all applicable fire codes.

Local Fire Marshal's Name | Signature | Date

I certify that I have local jurisdiction over the **State Health Code** and that the plans and project manual dated 3/4/2026 for the above referenced project comply with all applicable health codes.

Local Health Official's Name | Signature | Date

I certify that I have local jurisdiction over **Section 504 of the Rehabilitation Act of 1973**, and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated 3/4/2026 for the above referenced project comply with all applicable accessibility codes.

Local Federal 504 Official's Name | Signature | Date

NOTES: 1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.

2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.

3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
The Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, CT 06103

#4

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

Date: May 29, 2026

To: Elizabeth C Brown
President, Board of Education

Members, Board of Education
Building and School Facilities Members

Dr. Darren Schwartz, Superintendent

Mayor Paul K. Pernerewski, Jr.

From: Nicholas Albini, Chief Operating Officer

Subject: Review of Plans for RFP#8595 Rooftop Solar Photovoltaic Systems

Dear Honorable Members of the Board of Education and Building School Facilities Committee,

This Honorable Board of Education ("BOE") and the Honorable Board of Aldermen previously approved a construction contract between the City of Waterbury and All-Electric Construction & Communication LLC ("All-Electric") to design and install rooftop solar systems at the following five schools: B.W. Tinker Elementary School, M.M. Generali Elementary School, Sprague Elementary School, Wendell L. Cross Elementary School, and West Side Middle School.

This submission today requests that the BOE Building School Facilities Committee and the BOE authorize their respective Chairpersons to sign the CT Department of Administrative Services Office of Grants Administration ("DAS-OGA") form "SCG-042 – Request for Review of Final Plans" for the school rooftop solar projects at five schools, as well as, The Department of Administrative Services (DAS-OSCG&R) form" SCG-3030 – Code Conformity Certification: Tinker, Generali, Sprague, Wendell Cross, and West Side. In support of this request, we include the final plans, building permits, and updated cost estimates for each of these five-school rooftop solar projects. In addition, we have attached the required separate motions for each school rooftop solar project that need to be passed by both the BOE Building Facilities Committee and the BOE for these projects to proceed through the DAS-OGA review process.

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

The goal at this stage of these five-school rooftop solar projects is to receive approval for the Chairperson of the BOE Building Facilities Committee to sign form SCG-042 and the SCG-3030 at their June 4th meeting, and to receive approval for the Chairperson of the BOE to sign form SCG-042 at their June 18th meeting. Following that June 18th meeting, all required DAS-OGA forms and final plans in support of these five-school rooftop solar projects will be signed by the appropriate municipal officials in advance of a final plan review meeting to be scheduled with DAS-OGA. Once the plan review meeting with DAS-OGA occurs, and the final plans are approved by DAS-OGA, the city will receive authorization to begin construction of these five-school rooftop solar projects.

Members of CSW and WDC will be at the June 4th and June 18th meetings to answer any questions.

The City of Waterbury
Department of Inspection
185 South Main Street, 5th floor
(1 Jefferson Square)
Waterbury, CT 06702
Applications & Permits: Monday – Friday 8:00 a.m. to 4:00 p.m.
Building: 203 574 6832 Electrical: 203 574 8382
HVAC / Plumbing: 203 574 6858 Fax: 203 574 6854
Sealer of Weights and Measures: 203 574 8387

BD - Electrical Permit

Permit #: PR20260000913 Date of Issue: 4/30/26

Location of Work: 1443 THOMASTON AVE, Waterbury, CT

This permit is hereby granted to perform the following work:

Install
Other
Install 277 roof mount solar panels 163.430 KW
With installation of new second service off existing
ground mount transformer to P.V. system only

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

All work covered by this permit has been authorized by the owner of this property.
This permit is granted under the condition that the work shall be done in accordance with the laws of the State of Connecticut and the ordinance of the City of Waterbury. If any statements of said application are false, or if any change is made to the plans/specifications without the consent of the Building Inspector or his duly appointed agent, this permit shall be revocable.

Approved plans must be retained on the job and this card must be kept posted until final inspection has been made.
Such building shall not be occupied until final inspection has been made, and where applicable, a Certificate of Occupancy/Approval has been issued.

The Following Permit in no way relieves the Architect, Engineer, or Contractor from the responsibility of having their design/construction meet all requirements of the Connecticut Fire Saftey Code (C.F.S.C.) and all applicable standards.

Contacts:

Applicant	Angelica Guild/AEC Solar LLC180 Wampus La.Milford, CT 06460
Contractor	Patrick Lewis/AEC Solar180 Wampus La.Milford, CT 06460
Owner	CITY OF WATERBURY SPRAGUE SCHOOL235 GRAND STWATERBURY, CT 06702
Donation Bin Owner	

Issued By: Domenic Mascolo Title: Electrical Inspector

Signature: D. Mascolo

Connecticut Department of Administrative Services
Office of School Construction Grants
Public School Construction Cost Database

Construction Documents Estimate

State Project #	EstNum000460				
LEA	Waterbury Public Schools				
School Name	Sprague School				
Project Type					
Square Footage of Construction	12,827				
Grades	G1				
Enrollment Projections					
Reimbursement Rate			Cost/Square Feet		Ineligible Costs
Project Cost	$525,000.00	of Project Costs	$40.93	Project Ineligible Costs	$88,209.66
All Soft Cost	$174,944.56			Ineligible Soft Costs	$88,209.66
Construction Cost	$350,055.44	of Construction Cost	$27.29	Ineligible Construction Costs	$0.00
Eligible Construction Costs	$350,055.44	of Eligible Costs	$27.29		

Construction Cost			Cost	Ineligibles
A. SUBSTRUCTURE	A10. Foundations	A1010. Standard Foundations	0.00	0.00
		A1020. Special Foundations	0.00	0.00
		A1030. Slab on Grade	0.00	0.00
	A20. Basements	A2010. Basement Excavation	0.00	0.00
		A2020. Basement Walls	0.00	0.00
B. SHELL	B10. Super Structure	B1010. Floor Construction	0.00	0.00
		B1020. Roof Construction	0.00	0.00
	B20. Exterior Enclosures	B2010. Exterior Walls	0.00	0.00
		B2020. Exterior Windows	0.00	0.00
		B2030. Exterior Doors	0.00	0.00

	B30. Roofing	B3010. Roof Coverings	0.00	0.00
		B3020. Roof Openings	0.00	0.00
C. INTERIORS	C10. Interior Construction	C1010. Partitions	0.00	0.00
		C1020. Interior Doors	0.00	0.00
		C1030. Fittings	0.00	0.00
	C20. Stairs	C2010. Stair Construction	0.00	0.00
		C2020. Stair Finishes	0.00	0.00
	C30. Interior Finishes	C3010. Wall Finishes	0.00	0.00
		C3020. Floor Finishes	0.00	0.00
		C3030. Ceiling Finishes	0.00	0.00
D. SERVICES	D10. Conveying	D1010. Elevators & Lifts	0.00	0.00
		D1020. Escalators & Moving Walks	0.00	0.00
		D1090. Other Conveying Systems	0.00	0.00
	D20. Plumbing	D2010. Plumbing Fixtures	0.00	0.00
		D2020. Domestic Water Distribution	0.00	0.00
		D2030. Sanitary Waste	0.00	0.00
		D2040. Rain Water Drainage	0.00	0.00
		D2090. Other Plumbing Systems	0.00	0.00
	D30. HVAC	D3010. Energy Supply	0.00	0.00
		D3020. Heat Generating Systems	0.00	0.00
		D3030. Cooling Generating Systems	0.00	0.00
		D3040. Distribution Systems	0.00	0.00
		D3050. Terminal & Package Units	0.00	0.00
		D3060. Controls & Instrumentation	0.00	0.00
		D3070. Systems Testing & Balancing	0.00	0.00
		D3090. Other HVAC systems & Equi[pment	0.00	0.00
	D40. Fire Protection	D4010. Sprinklers	0.00	0.00
		D4020. Standpipes	0.00	0.00
		D4030. Fire Protection Specialties	0.00	0.00
		D4090. Other Fire Protection Systems	0.00	0.00
	D50. Electrical	D5010. Electrical Service & Distribution	0.00	0.00
		D5020. Lighting and Branch Wiring	0.00	0.00
		D5030. Communications & Security	0.00	0.00
		D5090. Other Electrical Systems	256726.40	0.00

E. EQUIPMENT & FURNISHINGS	E10. Equipment	E1010. Commercial Equipment	0.00	0.00
		E1020. Institutional Equipment	0.00	0.00
		E1030. Vehicular Equipment (Bldg fixed)	0.00	0.00
		E1090. Other Rquipment	0.00	0.00
	E20. Furnishings	E2010. Fixed Furnishings	0.00	0.00
F. SPECIAL CONSTRUCTION AND DEMOLITION	F10. Special Construction	F1010. Special Structures	0.00	0.00
		F1020. Integrated Construction	0.00	0.00
		F1030. Special Construction Systems	0.00	0.00
		F1040. Special Facilities	0.00	0.00
		F1050. Special Controls & Instrumentation	0.00	0.00
	F20. Selective Building Demolition	F2010. Building Elements Demolition	0.00	0.00
	F30. Abatement	F3010. PCB/Asbestos/Lead Abatement	0.00	0.00
X. GENERAL CONDITIONS, OFFICE OVERHEAD, & PROFIT	X10. General Conditions	X1010. General Conditions	51508.80	0.00
	X20. Overhead & Profit	X2020. Office Overhead & Profit	41820.24	0.00
		X2030. Trade Contractor Bond Costs	0.00	0.00
Z. ALLOWANCES	Z10. Design Contingency	Z10. Design Contingency	0.00	0.00
	Z20. Inflation (Escalation) Allowance	Z20. Inflation (Escalation) Allowance	0.00	0.00
	Z30. Construction Contingency	Z30. Construction Contingency	0.00	0.00

Soft Cost		Cost	Ineligibles
G. SITEWORK (beyond 5 ft from Building)	G1010. Site Clearing	0.00	0.00
	G1020. Site Demolition & Relocation	0.00	0.00
	G1030. Site Earthwork	0.00	0.00
	G1040. Hazardous Waste Remediation	0.00	0.00
	G2010 Roadways	0.00	0.00
	G2020. Parking	0.00	0.00
	G2030. Pedestrian Paving	0.00	0.00
	G2040. Site Development	0.00	0.00
	G2045. Athletic Fields	0.00	0.00
	G2050. Landscaping	0.00	0.00
	G3010. Water Supply	0.00	0.00
	G3020. Sanitary Sewer	0.00	0.00
	G3030. Storm Sewer	0.00	0.00
	G3040. Heating Distribution	0.00	0.00
	G3050. Cooling Distribution	0.00	0.00
	G3060. Fuel Distribution	0.00	0.00

	G3090. Other Site Mechanical Utilities	0.00	0.00
	G4010. Electrical Distribution	0.00	0.00
	G4020. Site Lighting	0.00	0.00
	G4030. Site Communications & Security	0.00	0.00
	G4090. Other Site Electrical Utilities	0.00	0.00
	G9010. Service & Pedestrian	0.00	0.00
	G9020. Bleachers, Concession Stands, etc.	0.00	0.00
	G9090. Other Site Systems	0.00	0.00
Y.SITE GENERAL CONDITIONS, OFFICE OVERHEAD, PROFIT, & ALLOWANCES	Y1010. Site General Conditions	0.00	0.00
	Y2010. Site Overhead & Profit	0.00	0.00
	Y3010. Site Design Contingency	0.00	0.00
	Y4010. Site Inflation (Escalation) Allowance	0.00	0.00
	Y5010. Trade Contractor Bond Costs	0.00	0.00
	Y3020. Site Construction Contingency	0.00	0.00
R. CONSULTANTS	R1010. Architect/Engineer	6540.80	0.00
	R2010. Environmental	0.00	0.00
	R3010. Commissoning	0.00	0.00
	R4010. Geotechnical	0.00	0.00
	R5010. Cost Estimator	0.00	0.00
	R6010. Owners Rep	62000.00	6500.00
	R7010. CM Pre-Construction	0.00	0.00
	R8010. FF&E Coordinator	0.00	0.00
	R9010. Legal	10000.00	0.00
S. FF&E	S1010. FF&E	0.00	0.00
	S2010. Technology	0.00	0.00
	S3010. Playground Equipment	0.00	0.00
	S4010. Playground Surfacing	0.00	0.00
	S5010. Moving	0.00	0.00
T. FEES	T1010. District Bonding Fees	0.00	0.00
	T2010. Insurance Cost	0.00	0.00
	T3010. Town Staff Cost	0.00	0.00
	T4010. Town Permit Fees	1498.70	0.00
	T5010. State Permit Fees	136.50	136.50
	T6010. Testing/Inspection Fees	0.00	0.00
	T7010. Printing & Mailing	0.00	0.00
	T8010. Other Costs	6695.40	0.00
U. CONTINGENCIES	U1010. Owner Contingency	88073.16	81573.16
W. ACQUISITION COSTS W	W1010. Land/Building Purchase	0.00	0.00
	W2010. Swing Space/Portables	0.00	0.00
	W3010. Site Remediation	0.00	0.00

	W4010. Appraisals	0.00	0.00
	W5010. Land Survey	0.00	0.00
	W6010. Other Acquisition Costs	0.00	0.00

Save CD Estimate And Continue | Save CD Estimate And Exit | Submit CD Estimate

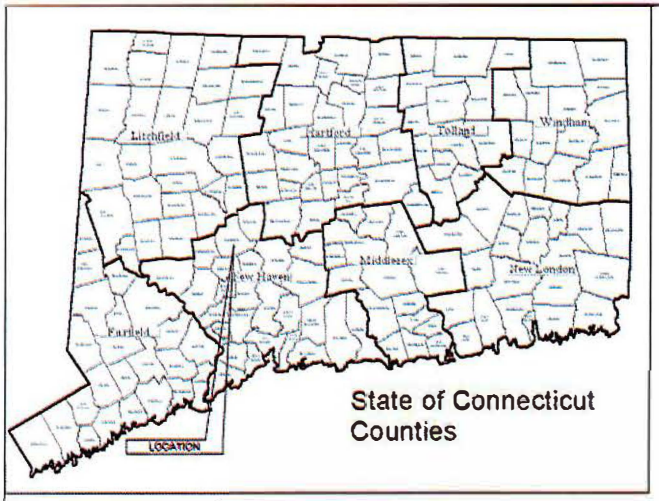
ROOFTOP PV ARRAY INSTALLATION AT:

SPRAGUE ELEMENTARY SCHOOL

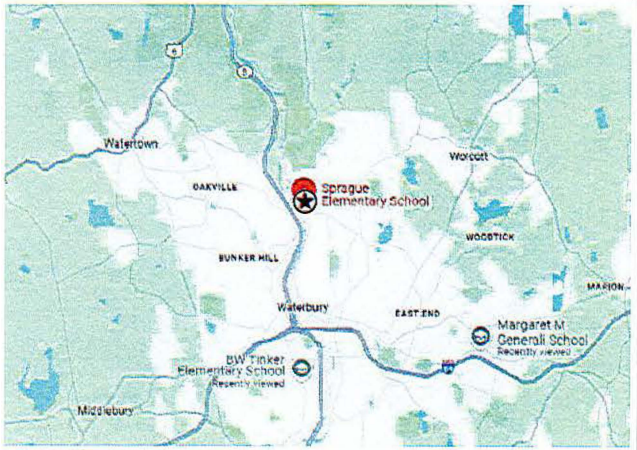
1443 THOMASTON AVE

WATERBURY, CT 06704

DAS PROJECT #151-0312-PV



LOCATION MAP
SCALE: N.T.S.



VICINITY MAP
SCALE: N.T.S.

APPLICABLE CODES

NATIONAL ELECTRIC CODE - 2020
ARTICLE 230 - SERVICES
ARTICLE 240 - OVERCURRENT PROTECTION
ARTICLE 250 - GROUNDING AND BONDING
ARTICLE 300 - WIRING METHODS
ARTICLE 310 - CONDUCTORS
ARTICLE 690 - SOLAR PHOTOVOLTAIC SYSTEMS
ARTICLE 705 - INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

PV SYSTEM INFORMATION

SYSTEM SIZE (DC):	153.430 kW STC + BIFACIAL GAIN
SYSTEM SIZE (AC):	120.000 kW / 120.000 kVA
INVERTER QUANTITY:	1
INVERTER TYPE:	SOLAREDGE SE120KUS (120 KWAC)
MODULE QUANTITY:	277
MODULE TYPE:	SEG SOLAR SEG-555-BTA-BG (555W STC + BIFACIAL GAIN)
RACKING TYPE:	K2 RACKING
RAPID SHUTDOWN DEVICES:	SOLAREDGE S551U OPTIMIZERS

UTILITY INFORMATION

COMPANY:	EVERSOURCE
ACCOUNT NUMBER:	51883[illegible] (EXISTING)
METER NUMBERS:	03810795 (EXISTING, OUTSIDE) 63059 1772 (EXISTING, INSIDE)
NRES ID NUMBER:	523-ESNRES-00677
DAS PROJECT NUMBER:	151-0312-PV

PROJECT SIGNATURES

AHJ	NAME	SIGNATURE	DATE
BUILDING INSPECTOR			
FIRE MARSHAL			
HEALTH INSPECTOR			
ADA 504 COORD			

Stephen Gendreau, P.E.

Digitally signed by Stephen Gendreau, P.E.
Date: 2026.03.09 10:00:11 -04'00'

PROJECT DESCRIPTION

THIS INSTALLATION CONSISTS OF A UTILITY INTERACTIVE SOLAR PHOTOVOLTAIC SYSTEM AT A SCHOOL BUILDING IN WATERBURY, CONNECTICUT. THE PV SYSTEM IS COMPRISED OF MODULES MOUNTED ON THE ROOF OF BUILDING. THE PV SYSTEM ALSO INCLUDES AN INVERTER LOCATED ON THE EXTERIOR WALL OF THE BUILDING. THE AC INVERTER OUTPUT POWER IS FED THROUGH DISCONNECT SWITCHES AND A UTILITY METER TO THE POINT OF CONNECTION AT THE EXISTING UTILITY TRANSFORMER.

DRAWING LIST

N/A	COVER SHEET
PV-1	THREE-LINE DIAGRAM
PV-2	PROFILE VIEWS & PARTIAL PLANS
PV-3	OVERALL ROOF PLAN
PV-4,5,6,7	[NOT USED]
PV-8	NOTES, DETAILS & ABBREVIATIONS
PV-9	EQUIPMENT DATA SHEETS
PV-10	LABELS & SIGNAGE
PV-11	SPECIFICATIONS

DOCUMENTS BY OTHERS

RACKING MANUFACTURER DRAWINGS
STRUCTURAL ENGINEERING CALCULATIONS

REVISIONS:

02-19-2026:	INTERCONNECTION APPLICATION
03-09-2026:	ISSUED FOR CONSTRUCTION

PREPARED FOR:

ALL ELECTRIC LLC
allelectricct.com

PREPARED BY:

SG ENGINEERING LLC
sgedesign.com

STATE OF CONNECTICUT STEPHEN GENDREAU 31777 REGISTERED PROFESSIONAL ENGINEER

INVERTER RELAY SETTINGS

TABLE I: INVERTERS' VOLTAGE TRIP SETTINGS

TABLE II: INVERTERS' FREQUENCY TRIP SETTINGS

TABLE III: INVERTERS' VOLTAGE RIDE-THROUGH CAPABILITY & OPERATIONAL REQUIREMENTS

TABLE IV: INVERTERS' FREQUENCY RIDE-THROUGH CAPABILITY

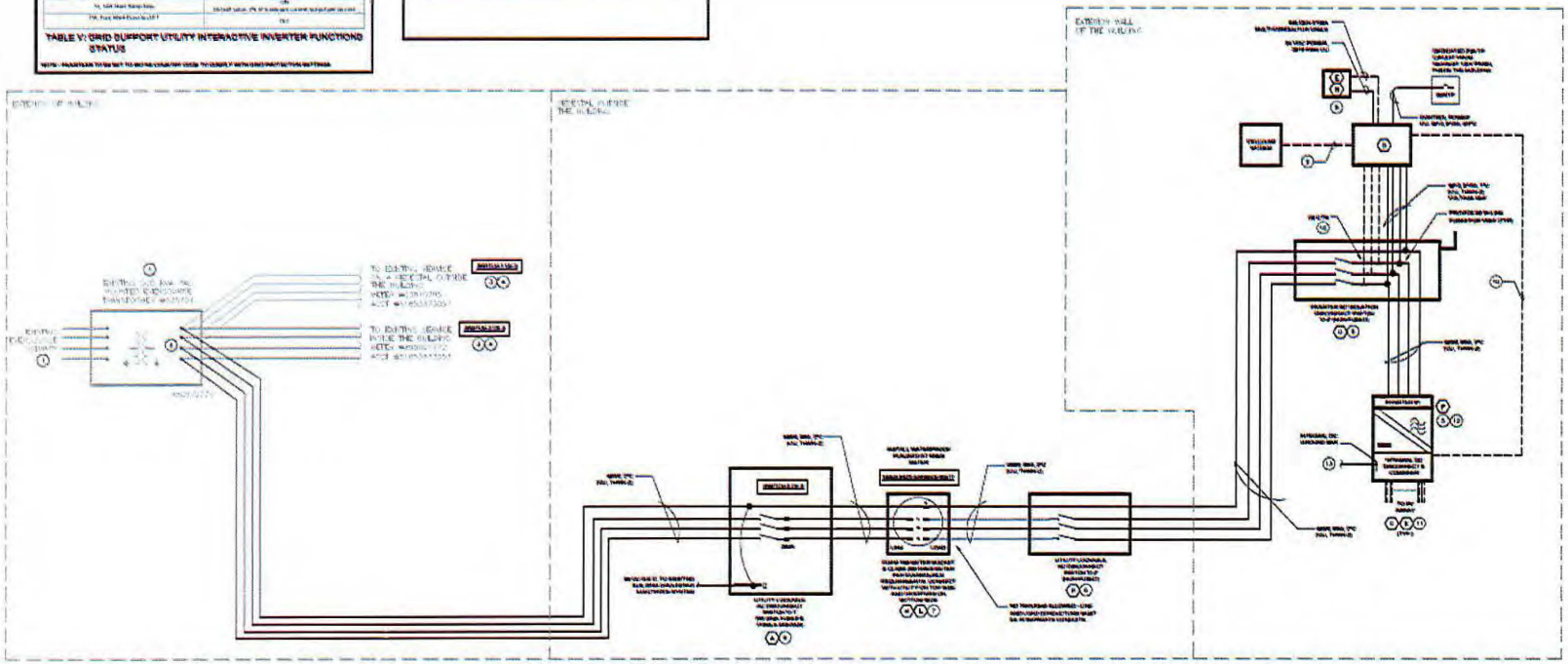
TABLE V: GRID SUPPORT UTILITY INTERACTIVE INVERTER FUNCTIONS STATUS

SOLAR PV GENERAL NOTES

KEY NOTES

INVERTER DATA

EQUIPMENT SCHEDULE



Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 163.430 KW DC STC • BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KWAC)
- (277) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS:

- #03810795 (EXISTING, OUTSIDE)
- #10391772 (EXISTING, INSIDE)

EVERSOURCE ACCOUNT:

- #31853873057 (EXISTING)

NRES ID # SE3-ESNRES-00877

DAS PROJECT #151-0312-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

THREE-LINE DIAGRAM

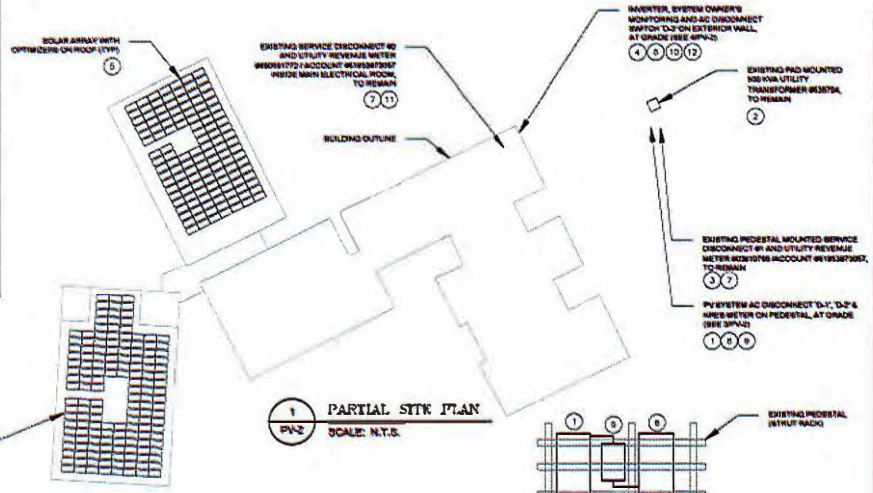
Date: MARCH 9, 2026	Sheet: PV-1
Scale: NTS	

KEY NOTES (6)

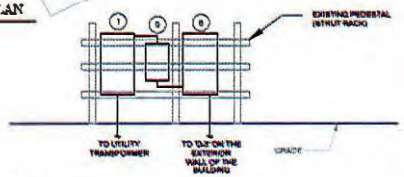
1. UTILITY LOCKABLE & ACCESSIBLE PV SYSTEM AC DISCONNECT D-1, WITH VISIBLE BLADE IN ENCLOSURE, AT GRADE.
2. EXISTING 500 KVA UTILITY TRANSFORMER AND MOUNTING PAD, TO REMAIN.
3. EXISTING UTILITY REVENUE METER AND MECHANICAL OR WEB DISPLAY, AT GRADE, TO REMAIN.
4. INVERTER 1 ON EXTERIOR WALL, AT GRADE.
5. ROOF MOUNTED PHOTOVOLTAIC MODULES - ONE OPTIMIZER PER MODULE.
6. SYSTEM OWNER'S MONITORING SYSTEM ON EXTERIOR WALL, AT GRADE.
7. EXISTING SERVICE DISCONNECT, TO REMAIN.
8. UTILITY LOCKABLE & ACCESSIBLE PV SYSTEM AC DISCONNECT D-2, WITH VISIBLE BLADE IN ENCLOSURE, AT GRADE.
9. PV SYSTEM NRES METER SOCKET ON PEDESTAL, AT GRADE.
10. INVERTER AC ISOLATION DISCONNECT SWITCH D-3, ADJACENT TO INVERTER - ON EXTERIOR WALL, AT GRADE.
11. EXISTING UTILITY REVENUE METER NUMBER 9181, ACCOUNT 61853873057 INSIDE ELECTRICAL ROOM, TO REMAIN.
12. PROVIDE PROTECTIVE BOLLARDS IN FRONT OF EQUIPMENT, IF REQUIRED TO PROTECT EQUIPMENT FROM VEHICULAR DAMAGE. LOCATE BOLLARDS SUCH THAT THEY BE DUMED TO SERVICE CLEARANCE IN FRONT OF EQUIPMENT IS MAINTAINED. SEE SHEET SP-1(A)

PV SYSTEM WORK NOTES

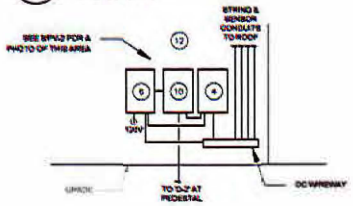
1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS, AS ONLY WITH ASSOCIATED ELECTRICAL WORKS.
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSION OF EXISTING ELEMENTS SHOWN HERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD INVESTIGATIONS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SPACING, STRING NO, AND WIND ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLIP SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUBARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.



1 PV-2 PARTIAL SITE PLAN
SCALE: N.T.S.



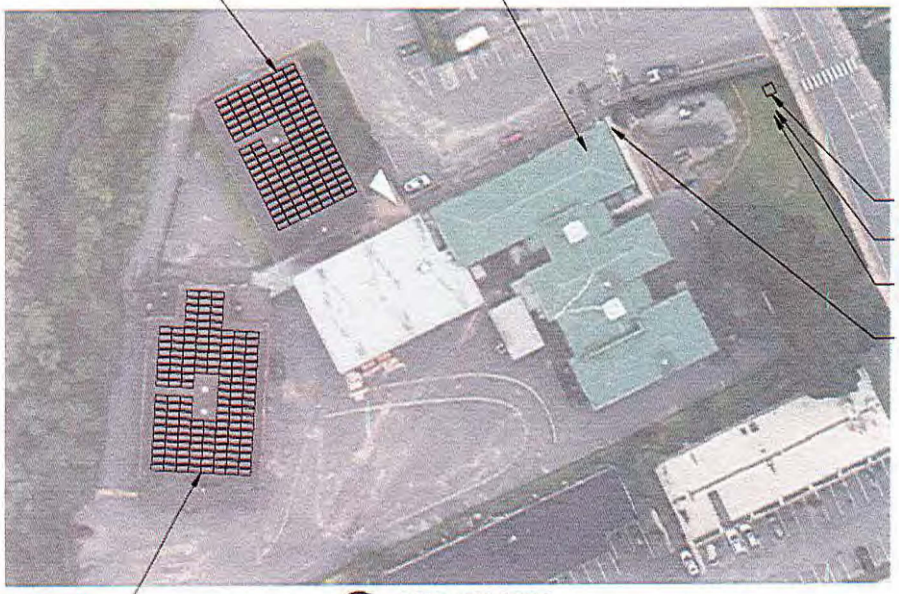
3 PV-2 PROFILE VIEW (PEDESTAL)
SCALE: N.T.S.



4 PV-2 PROFILE VIEW (EXTERIOR WALL)
SCALE: N.T.S.



5 PV-2 EXTERIOR WALL PHOTO
SCALE: N.T.S.



2 PV-2 AERIAL SITE PHOTO
SCALE: N.T.S.

Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 183.430 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KWAC)
- (277) SEG SOLAR SEG-380-BTA-BG MODULES (380W STC BIFACIAL)

EVERSOURCE METERS
03810795 (EXISTING, OUTSIDE)
890391772 (EXISTING, INSIDE)

EVERSOURCE ACCOUNT
61853873057 (EXISTING)

NRES ID # SDMESNRES-03677

DAS PROJECT #151-0312-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

PROFILE VIEWS & PARTIAL PLANS

Issue	Sheet
MARCH 6, 2024	PV-2
NTS	

ROOF AREA GENERAL NOTES

1. FURNISH AND INSTALL ALL DC SOURCE CIRCUIT WIRING PER NEC 2020 REQUIREMENTS, CONTRACT REQUIREMENTS, AND IN A NEAT AND WORKMAN LIKE MANNER.
2. IN FASHION MODULE TO MODULE, MODULE TO OPTIMIZER AND OPTIMIZER TO OPTIMIZER WIRING SHALL BE SUPPORTED ON MODULE FRAME SUCH THAT IT WILL NOT DROOP IN TO THE ROOFTOP ICE AND SNOW AND IS NOT EXPOSED TO OBVIOUS SOURCES OF DAMAGE INCLUDING ABRASION OR STRAIN FROM THERMAL EXPANSION.
3. ALL DC CONNECTIONS, JUMPERS AND HOME RUNS MUST USE MATCHING DC CONNECTORS TO MAINTAIN UL LISTING
4. ALL MODULE DC CONNECTORS SHALL BE TUCKED INTO THE MODULE FRAME OF THE MODULE AND CLIPPED TO THE FRAME
5. DURING INSTALLATION, ALL DC CONNECTORS FOR MODULES, JUMPERS, AND OPTIMIZERS MUST BE KEPT OFF THE ROOF AT ALL TIMES. PRIOR TO BEING CONNECTED TOGETHER, CONNECTORS MUST BE PROTECTED AGAINST WATER INTRUSION AND SECURED OFF THE GROUND (OR APPROVED ALTERNATIVE METHOD). ANY CONNECTOR LEFT UNPROTECTED AND SUBJECT TO WATER INTRUSION SHALL BE REPLACED IMMEDIATELY WITH NEW COMPONENT AT CONTRACTOR'S SOLE EXPENSE.
6. MOUNT OPTIMIZERS TO RACKING SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. BOND DEVICES TO RACKING SYSTEM PER RACKING AND OPTIMIZER MANUFACTURER'S INSTALLATION INSTRUCTIONS
7. CONDUIT ROUTING IS SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO DETERMINE LOCATIONS AND SUBMIT TO SOLAR DEVELOPER FOR APPROVAL.
8. EXPANSION FITTINGS SHALL BE ADDED TO CONDUIT RUNS EVERY 100' ON STRAIGHT RUNS AND WHEREVER CONDUIT CROSSES BUILDING EXPANSION JOINTS OR TRANSITIONS BETWEEN STRUCTURES.
9. NO PLUMBER'S FITTINGS WILL BE ALLOWED ANYWHERE ON DC CONDUITS. WHERE BREAKOUTS ARE REQUIRED A PULLBOX MUST BE USED
10. ALL EXPOSED EXTERIOR CONDUITS SHALL BE PAINT WITH CORROSION RESISTANT COATING
11. ENSURE THAT THE BOTTOM OF ALL ROOF MOUNTED CONDUITS ARE A MINIMUM OF 7/8" ABOVE THE ROOF SURFACE TO AVOID THE NEED FOR ADDITIONAL TEMPERATURE DERATING
12. PROVIDE SLIP SHEETS UNDER ALL CONTACT SURFACES AND ADHERE PER MANUFACTURER'S RECOMMENDATIONS

SYMBOL LEGEND

+	BEGINNING OF STRING
-	END OF STRING
XX	STRING NUMBER - SEE PV4.0 FOR ADDITIONAL INFORMATION

RACKING NOTES

1. RACKING NOTES, DRAWINGS AND REQUIREMENTS WILL BE PROVIDED BY SOLAR DEVELOPER AND RACKING MANUFACTURER.

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH ASSOCIATED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSION OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD INVESTIGATIONS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRINGING, AND WIND ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLIP SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUB-ARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.

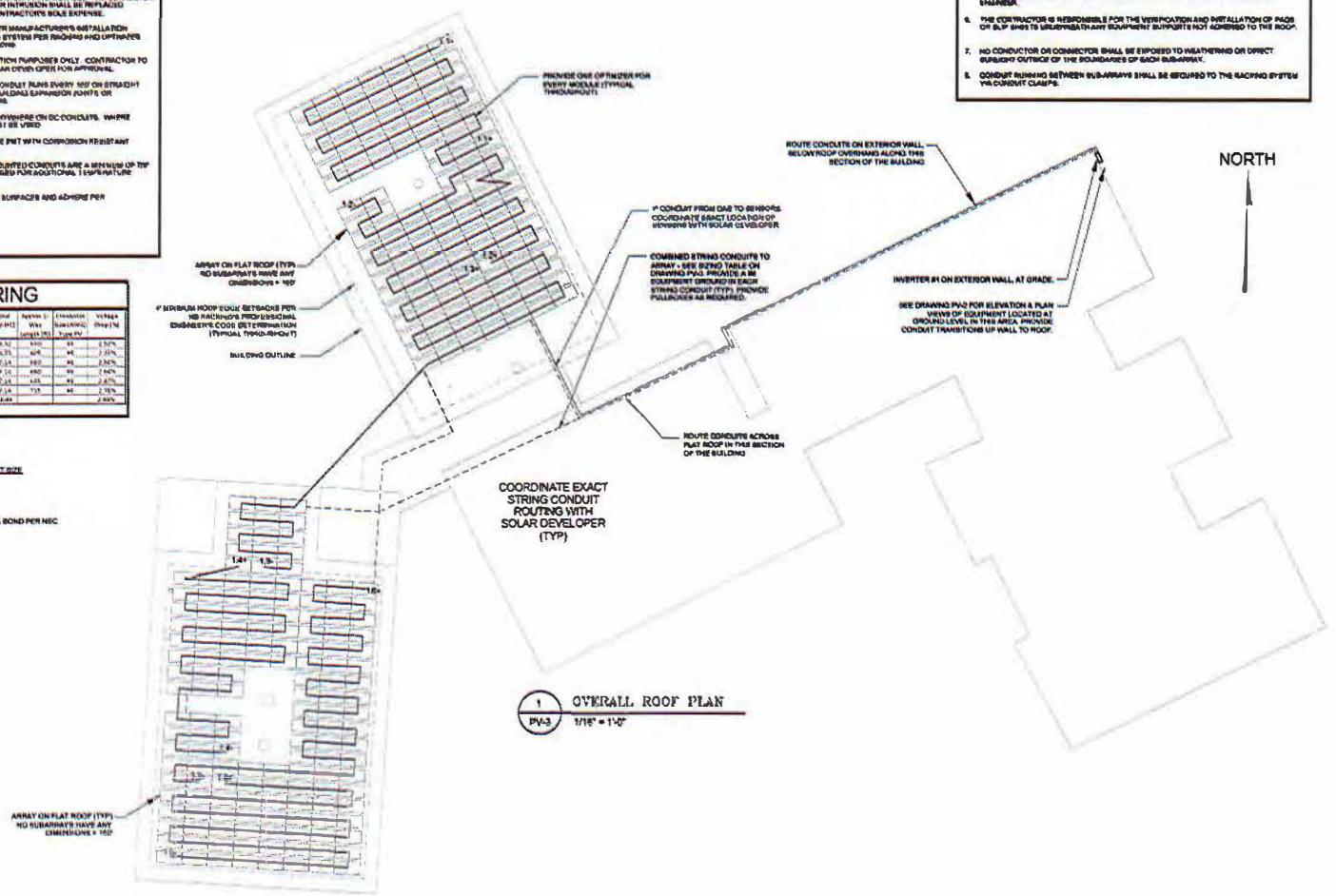
STRING WIRING

Inverter Number	Inverter Size	String Qty	Qty of Modules	Circuit Distance	Modules Per String	Total DC Power	Approx. Length of Wire (one-way)	Conduit Size (Min.)	Conductor Type PV	Voltage Drop (%)
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
1	120/KUS	3	69	69	23	28.52	690	1"	#8	2.32%
TOTAL		30	207	207		256.68				2.32%

STRING CONDUIT REQUIREMENTS:

# OF STRINGS PER CONDUIT	MINIMUM CONDUIT SIZE
1 STRING	1"C
2 STRINGS	1-1/4"C
3 STRINGS	1-1/2"C
4-6 STRINGS	2"C

PROVIDE A #8 AWG EGC IN EACH STRING CONDUIT & BOND PER NEC



1 / PV-3 OVERALL ROOF PLAN
1/16" = 1'-0"

Project Info

ENGINEER:

SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 163.430 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KWAC)
- (277) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810795 (EXISTING, OUTSIDE)
890591772 (EXISTING, INSIDE)

EVERSOURCE ACCOUNT
51853873057 (EXISTING)

NRES ID # SZ3-ESNRES-00577

DAS PROJECT #151-0312-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

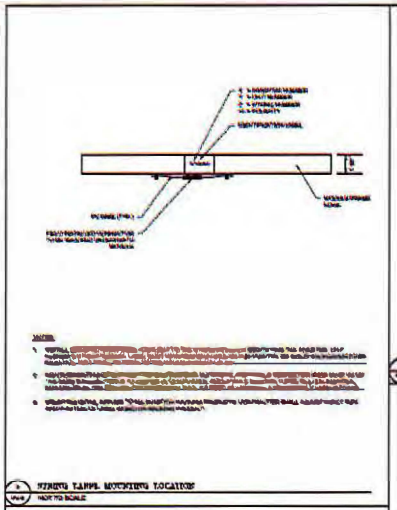
SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

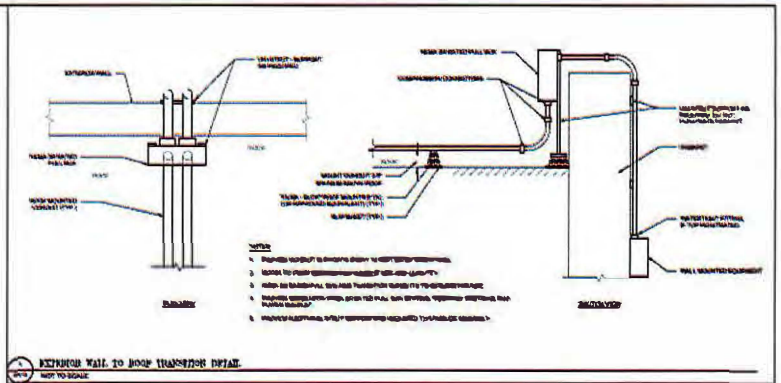
OVERALL ROOF PLAN

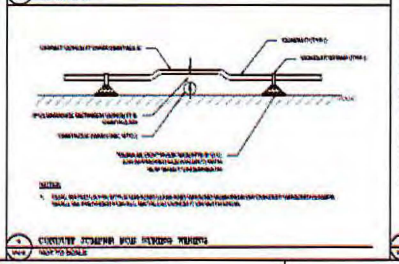
Date: MARCH 3, 2026	PV-3
Scale: NTS	

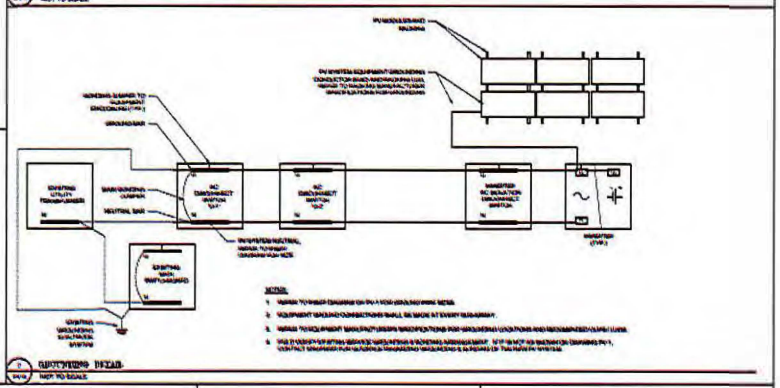
GENERAL NOTES

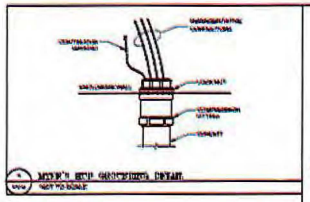
ABBREVIATIONS

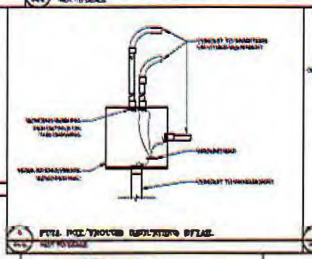


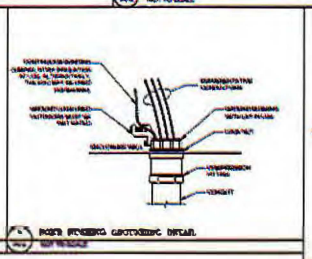


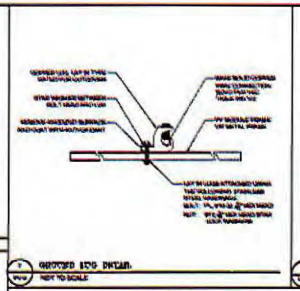




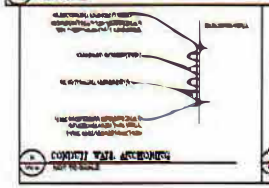


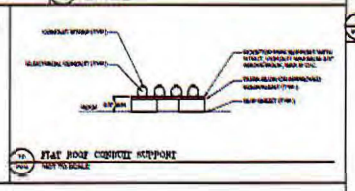


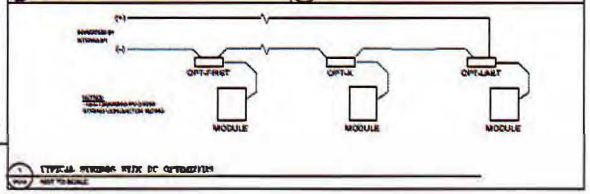












Project Info

ENGINEER:

SG ENGINEERING LLC

56 FORCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 163.430 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KWAC)
- (277) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810795 (EXISTING, OUTSIDE)
890591772 (EXISTING, INSIDE)

EVERSOURCE ACCOUNT
51633873057 (EXISTING)

NRES ID # SZD-ESNRES-00577

DAS PROJECT #131-0212-PV

No.	Revision/Issue	Date

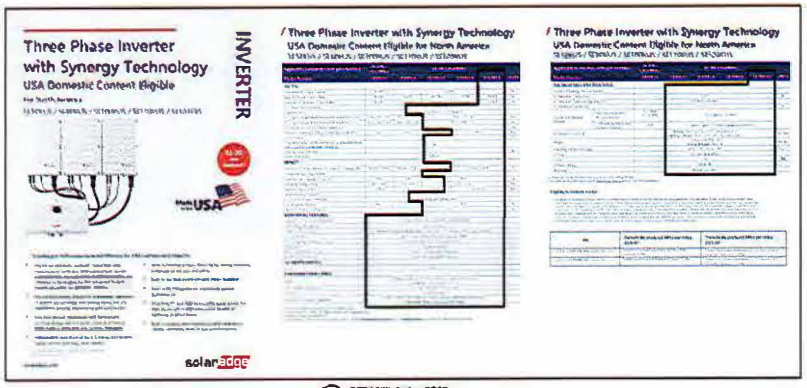
ROOF MOUNTED PV SYSTEM

SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

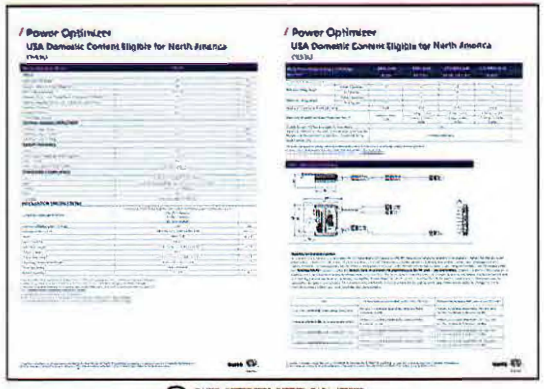
NOTES, DETAILS & ABBREVIATIONS

Date: MARCH 9, 2020

Sheet: PV-8



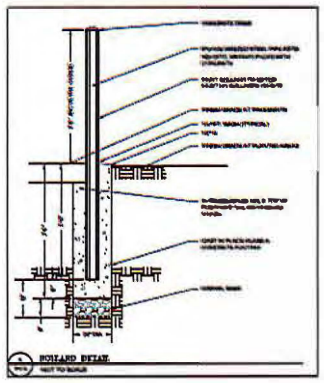
INVERTER DATA SHEET



RAPID SHUTDOWN DEVICE DATA SHEET



MODULE 590W "A" DATA SHEET



BOLLARD DETAIL

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 163.430 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KWAC)
- (277) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810795 (EXISTING, OUTSIDE)
03809177Z (EXISTING, INSIDE)

EVERSOURCE ACCOUNT
51853673057 (EXISTING)

NRES ID # SG-ESNRES-40677

DAS PROJECT #151-0312-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

EQUIPMENT DATA SHEETS

Date: MARCH 9, 2026
Sheet: PV-9



SOURCE: http://www.pvlabels.com/

SOURCE: http://www.pvlabels.com/

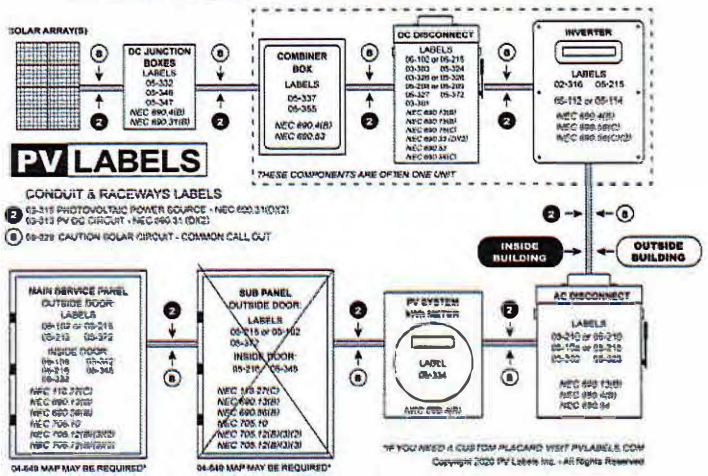
1 PV-10 LABELS



STRING NUMBER LABEL

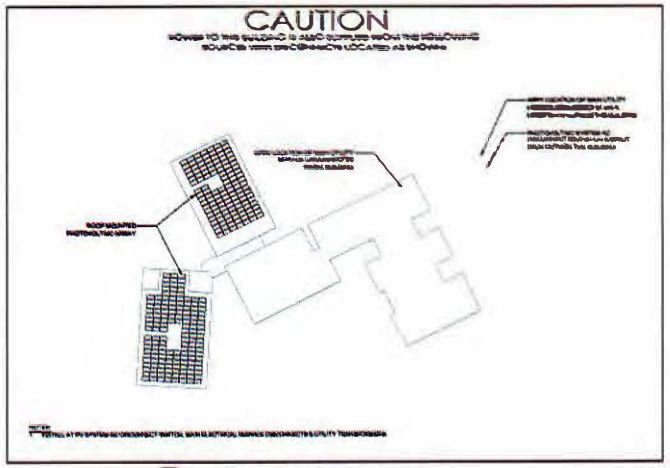
PHOTOVOLTAIC SOLAR SYSTEM MARKING - DC STRINGS

RECOMMENDATIONS BASED ON 2020 NEC, COMMON CALL OUTS AND PACKAGE CONTENTS



SOURCE: http://www.pvlabels.com/

2 PV-10 LABEL LOCATIONS



3 PV-10 POWER SOURCE DIRECTORY

ENGINEER:

SG ENGINEERING LLC

58 FOXCROFT COURT
SOUTHINGTON, CT
SGENGESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 163.430 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KVA AC)
- (277) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810795 (EXISTING, OUTSIDE)
[illegible] (INSIDE)

EVERSOURCE ACCOUNT
[illegible]

NRES ID # SEA-[illegible]

DAS PROJECT #151-0312-PV

ROOF MOUNTED PV SYSTEM

SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

LABELS & SIGNAGE

MARCH 5, 2020

PV-10

ELECTRICAL SPECIFICATIONS

Project Info

ENGINEER:

SG ENGINEERING LLC

95 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
[illegible]

SOLAR DEVELOPER:

ALL ELECTRIC LLC

150 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 163.430 KW DC STC + BIFACIAL GAIN
- 120.000 KW AC / 120.000 KVA AC
- (1) SOLAREDGE SE120KUS INVERTERS (120 KWAC)
- (277) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03810795 (EXISTING, OUTSIDE)
890591772 (EXISTING, INSIDE)

EVERSOURCE ACCOUNT
51853873057 (EXISTING)

NRES ID # SZ3-ESNRES-00677

DAS PROJECT #151-0312-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

SPRAGUE ELEMENTARY SCHOOL
1443 THOMASTON AVE
WATERBURY, CT 06704

SPECIFICATIONS

Project	Sheet
Date: MARCH 9, 2026	PV-11
Scale: NTS	

Wendell Cross – 151-0310 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

M.M. Generali – 151-0311 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Sprague School – 151-0312 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Tinker School – 151-0313 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

West Side School – 151-0314 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and

the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

CODE CONFORMITY CERTIFICATION

FORM SCG-3030

Director
Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, Connecticut 06103

Subject: State Project Number: 151-0312 PV

LEA: Waterbury Public Schools

Phase: 1 of 1

Facility Name: Sprague Elementary School

Local Health Department Jurisdiction: Waterbury Health Department

Pursuant to Section 10-292 of the Connecticut General Statutes, the final plans for any phase of a school building project as provided in CGS Section 10-291 must be in conformance with state codes, statutes, regulations and to federal laws. The following documents are attached (mark boxes "x", as appropriate):

Attached	N/A	
☐	☒	ICC Code Review Checklist completed by Local Official or Third-party reviewer
☐	☒	Plan Review Record (PRR) by Local Officials or Third-party reviewer
☐	☒	Design Professional's response to PRR with Local Officials acceptance
☐	☒	Approved Code Modifications
☐	☒	Second copy of Code/Egress/Site drawings for OSCG&R file
☒	☐	Final Construction documents for OSCG&R review

We, the undersigned, have reviewed the construction documents (drawings and project manuals) for the above referenced school building project (the Project) dated 3/9/2026. As confirmation of our review in accordance with OSCG&R Guidelines and Plan Review checklists, we have signed and dated the cover page of the project's drawings and manuals. As it relates to my specific jurisdiction, and to the best of my knowledge, information, and belief, the review has determined the project's construction documents appear to be in compliance with the current Connecticut State Building Code, Fire Safety Code, State Fire Prevention Code, Connecticut Department of Public Health Regulations, Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA) of 1990, and OSHA requirements.

Building Official:

Frank Baker (Print Name): _____ Signature: _____ Date: _____

Fire Marshal:

Tom Fitzgerald (Print Name): _____ Signature: _____ Date: _____

Section 504 Official:

Mike Konopka (Print Name): _____ Signature: _____ Date: _____

Health Inspector:

Richard Lee (Print Name): _____ Signature: _____ Date: _____

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS
FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME:	FACILITY NAME AND ADDRESS:	STATE PROJECT NUMBER:
Waterbury Public Schools	Sprague Elementary School 1443 Thomaston Ave, Waterbury, CT 06704	151-0312 PV
		PHASE NUMBER: 1

Estimated date* to begin construction July 6, 2026 Estimated date to complete construction October 1, 2026

* NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	6 / 18 / 2026	/ /
School Building Committee	6 / 4 / 2026	/ /

We hereby certify that these **final plans and project manual(s)** as prepared for bidding and dated 3/9/2026, and the **professional cost estimate**, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 5/20/2026, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Chairperson's Name (Type or print)	Signature	Date**

For the School Building Committee:

Chairperson's Name (Type or print)	Signature	Date**

** **Signature dates cannot precede the date on the submitted plans.**

For the Project Architect/Engineering Firm:

Firm Name (Type or print)	Signature	Telephone No.
CSW Energy		(845) 551-7881

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Superintendent's Name (Type or print)	Signature	Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER $10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

FORM SCG-042 Request for Review of Final Plans

State Project No. 151-0312 PV

Project Name: Sprague Elementary School

Name of Contact Person:	Telephone:	Date:
Chris Palmer, CSW Energy	(845) 551-7881	5/29/2026

Certifications of Local Approval:

I certify that I have local jurisdiction over the **State Building Code** and that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable building codes.

Local Building Official's Name | Signature | Date

I certify that I have local jurisdiction over the **State Fire Safety Code** and that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable fire codes.

Local Fire Marshal's Name | Signature | Date

I certify that I have local jurisdiction over the **State Health Code** and that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable health codes.

Local Health Official's Name | Signature | Date

I certify that I have local jurisdiction over **Section 504 of the Rehabilitation Act of 1973**, and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable accessibility codes.

Local Federal 504 Official's Name | Signature | Date

NOTES: 1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.

2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.

3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
The Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, CT 06103

#5

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

Date: May 29, 2026

To: Elizabeth C Brown
President, Board of Education

Members, Board of Education
Building and School Facilities Members

Dr. Darren Schwartz, Superintendent

Mayor Paul K. Pernerewski, Jr.

From: Nicholas Albini, Chief Operating Officer

Subject: Review of Plans for RFP#8595 Rooftop Solar Photovoltaic Systems

Dear Honorable Members of the Board of Education and Building School Facilities Committee,

This Honorable Board of Education ("BOE") and the Honorable Board of Aldermen previously approved a construction contract between the City of Waterbury and All-Electric Construction & Communication LLC ("All-Electric") to design and install rooftop solar systems at the following five schools: B.W. Tinker Elementary School, M.M. Generali Elementary School, Sprague Elementary School, Wendell L. Cross Elementary School, and West Side Middle School.

This submission today requests that the BOE Building School Facilities Committee and the BOE authorize their respective Chairpersons to sign the CT Department of Administrative Services Office of Grants Administration ("DAS-OGA") form "SCG-042 – Request for Review of Final Plans" for the school rooftop solar projects at five schools, as well as, The Department of Administrative Services (DAS-OSCG&R) form" SCG-3030 – Code Conformity Certification: Tinker, Generali, Sprague, Wendell Cross, and West Side. In support of this request, we include the final plans, building permits, and updated cost estimates for each of these five-school rooftop solar projects. In addition, we have attached the required separate motions for each school rooftop solar project that need to be passed by both the BOE Building Facilities Committee and the BOE for these projects to proceed through the DAS-OGA review process.

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

The goal at this stage of these five-school rooftop solar projects is to receive approval for the Chairperson of the BOE Building Facilities Committee to sign form SCG-042 and the SCG-3030 at their June 4th meeting, and to receive approval for the Chairperson of the BOE to sign form SCG-042 at their June 18th meeting. Following that June 18th meeting, all required DAS-OGA forms and final plans in support of these five-school rooftop solar projects will be signed by the appropriate municipal officials in advance of a final plan review meeting to be scheduled with DAS-OGA. Once the plan review meeting with DAS-OGA occurs, and the final plans are approved by DAS-OGA, the city will receive authorization to begin construction of these five-school rooftop solar projects.

Members of CSW and WDC will be at the June 4th and June 18th meetings to answer any questions.

The City of Waterbury
Department of Inspection
185 South Main Street, 5th floor
(1 Jefferson Square)
Waterbury, CT 06702
Applications & Permits: Monday – Friday 8:00 a.m. to 4:00 p.m.
Building: 203 574 6832 Electrical: 203 574 8382
HVAC / Plumbing: 203 574 6858 Fax: 203 574 6854
Sealer of Weights and Measures: 203 574 8387

BD - Electrical Permit

Permit #: PR20260001243 Date of Issue: 5/27/26

Location of Work: 795 HIGHLAND AVE, Waterbury, CT

This permit is hereby granted to perform the following work:

Install
Other
Install 270 roof mount solar panels 159.300 KW

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

All work covered by this permit has been authorized by the owner of this property.
This permit is granted under the condition that the work shall be done in accordance with the laws of the State of Connecticut and the ordinance of the City of Waterbury. If any statements of said application are false, or if any change is made to the plans/specifications without the consent of the Building Inspector or his duly appointed agent, this permit shall be revocable.

Approved plans must be retained on the job and this card must be kept posted until final inspection has been made. Such building shall not be occupied until final inspection has been made, and where applicable, a Certificate of Occupancy/Approval has been issued.

The Following Permit in no way relieves the Architect, Engineer, or Contractor from the responsibility of having their design/construction meet all requirements of the Connecticut Fire Saftey Code (C.F.S.C.) and all applicable standards.

Contacts:

Applicant	Angelica Guild/AEC Solar LLC180 Wampus La.Milford, CT 06460
Contractor	Patrick Lewis/AEC Solar180 Wampus La.Milford, CT 06460
Owner	CITY OF WATERBURY B W TINKER SCHOOL235 GRAND STWATERBURY, CT 06702
Donation Bin Owner	

Issued By: Domenic Mascolo Title: Electrical Inspector
Signature: D. Mascolo

Connecticut Department of Administrative Services
Office of School Construction Grants
Public School Construction Cost Database

Construction Documents Estimate

State Project #	EstNum000461				
LEA	Waterbury Public Schools				
School Name	B.W. Tinker School				
Project Type					
Square Footage of Construction	20,950				
Grades	G1				
Enrollment Projections					
Reimbursement Rate			Cost/Square Feet		Ineligible Costs
Project Cost	$489,000.00	of Project Costs	$23.34	Project Ineligible Costs	$53,576.86
All Soft Cost	$140,650.72			Ineligible Soft Costs	$53,576.86
Construction Cost	$348,349.28	of Construction Cost	$16.63	Ineligible Construction Costs	$0.00
Eligible Construction Costs	$348,349.28	of Eligible Costs	$16.63		

Construction Cost			Cost	Ineligibles
A. SUBSTRUCTURE	A10. Foundations	A1010. Standard Foundations	0.00	0.00
		A1020. Special Foundations	0.00	0.00
		A1030. Slab on Grade	0.00	0.00
	A20. Basements	A2010. Basement Excavation	0.00	0.00
		A2020. Basement Walls	0.00	0.00
B. SHELL	B10. Super Structure	B1010. Floor Construction	0.00	0.00
		B1020. Roof Construction	0.00	0.00
	B20. Exterior Enclosures	B2010. Exterior Walls	0.00	0.00
		B2020. Exterior Windows	0.00	0.00
		B2030. Exterior Doors	0.00	0.00

	B30. Roofing	B3010. Roof Coverings	0.00	0.00
		B3020. Roof Openings	0.00	0.00
C. INTERIORS	C10. Interior Construction	C1010. Partitions	0.00	0.00
		C1020. Interior Doors	0.00	0.00
		C1030. Fittings	0.00	0.00
	C20. Stairs	C2010. Stair Construction	0.00	0.00
		C2020. Stair Finishes	0.00	0.00
	C30. Interior Finishes	C3010. Wall Finishes	0.00	0.00
		C3020. Floor Finishes	0.00	0.00
		C3030. Ceiling Finishes	0.00	0.00
D. SERVICES	D10. Conveying	D1010. Elevators & Lifts	0.00	0.00
		D1020. Escalators & Moving Walks	0.00	0.00
		D1090. Other Conveying Systems	0.00	0.00
	D20. Plumbing	D2010. Plumbing Fixtures	0.00	0.00
		D2020. Domestic Water Distribution	0.00	0.00
		D2030. Sanitary Waste	0.00	0.00
		D2040. Rain Water Drainage	0.00	0.00
		D2090. Other Plumbing Systems	0.00	0.00
	D30. HVAC	D3010. Energy Supply	0.00	0.00
		D3020. Heat Generating Systems	0.00	0.00
		D3030. Cooling Generating Systems	0.00	0.00
		D3040. Distribution Systems	0.00	0.00
		D3050. Terminal & Package Units	0.00	0.00
		D3060. Controls & Instrumentation	0.00	0.00
		D3070. Systems Testing & Balancing	0.00	0.00
		D3090. Other HVAC systems & Equipment	0.00	0.00
	D40. Fire Protection	D4010. Sprinklers	0.00	0.00
		D4020. Standpipes	0.00	0.00
		D4030. Fire Protection Specialties	0.00	0.00
		D4090. Other Fire Protection Systems	0.00	0.00
	D50. Electrical	D5010. Electrical Service & Distribution	0.00	0.00
		D5020. Lighting and Branch Wiring	0.00	0.00
		D5030. Communications & Security	0.00	0.00
		D5090. Other Electrical Systems	256473.00	0.00

E. EQUIPMENT & FURNISHINGS	E10. Equipment	E1010. Commercial Equipment	0.00	0.00
		E1020. Institutional Equipment	0.00	0.00
		E1030. Vehicular Equipment (Bldg fixed)	0.00	0.00
		E1090. Other Equipment	0.00	0.00
	E20. Furnishings	E2010. Fixed Furnishings	0.00	0.00
F. SPECIAL CONSTRUCTION AND DEMOLITION	F10. Special Construction	F1010. Special Structures	0.00	0.00
		F1020. Integrated Construction	0.00	0.00
		F1030. Special Construction Systems	0.00	0.00
		F1040. Special Facilities	0.00	0.00
		F1050. Special Controls & Instrumentation	0.00	0.00
	F20. Selective Building Demolition	F2010. Building Elements Demolition	0.00	0.00
	F30. Abatement	F3010. PCB/Asbestos/Lead Abatement	0.00	0.00
X. GENERAL CONDITIONS, OFFICE OVERHEAD, & PROFIT	X10. General Conditions	X1010. General Conditions	50179.50	0.00
	X20. Overhead & Profit	X2020. Office Overhead & Profit	41696.78	0.00
		X2030. Trade Contractor Bond Costs	0.00	0.00
Z. ALLOWANCES	Z10. Design Contingency	Z10. Design Contingency	0.00	0.00
	Z20. Inflation (Escalation) Allowance	Z20. Inflation (Escalation) Allowance	0.00	0.00
	Z30. Construction Contingency	Z30. Construction Contingency	0.00	0.00

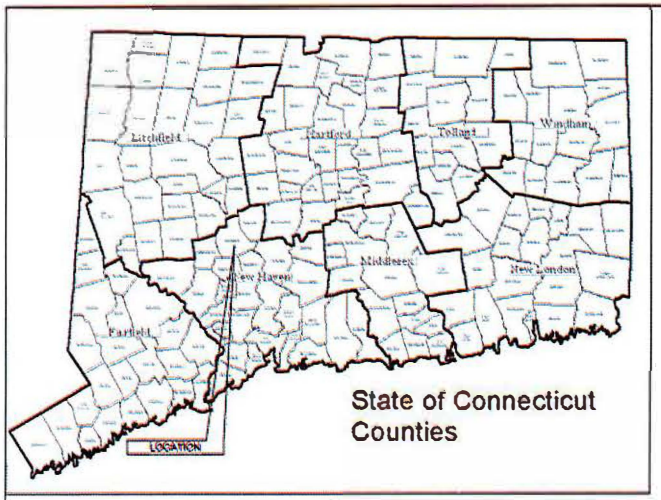
Soft Cost		Cost	Ineligibles
G. SITEWORK (beyond 5 ft from Building)	G1010. Site Clearing	0.00	0.00
	G1020. Site Demolition & Relocation	0.00	0.00
	G1030. Site Earthwork	0.00	0.00
	G1040. Hazardous Waste Remediation	0.00	0.00
	G2010 Roadways	0.00	0.00
	G2020. Parking	0.00	0.00
	G2030. Pedestrian Paving	0.00	0.00
	G2040. Site Development	0.00	0.00
	G2045. Athletic Fields	0.00	0.00
	G2050. Landscaping	0.00	0.00
	G3010. Water Supply	0.00	0.00
	G3020. Sanitary Sewer	0.00	0.00
	G3030. Storm Sewer	0.00	0.00
	G3040. Heating Distribution	0.00	0.00
	G3050. Cooling Distribution	0.00	0.00
	G3060. Fuel Distribution	0.00	0.00

	G3090. Other Site Mechanical Utilities	0.00	0.00
	G4010. Electrical Distribution	0.00	0.00
	G4020. Site Lighting	0.00	0.00
	G4030. Site Communications & Security	0.00	0.00
	G4090. Other Site Electrical Utilities	0.00	0.00
	G9010. Service & Pedestrian	0.00	0.00
	G9020. Bleachers, Concession Stands, etc.	0.00	0.00
	G9090. Other Site Systems	0.00	0.00
Y.SITE GENERAL CONDITIONS, OFFICE OVERHEAD, PROFIT, & ALLOWANCES	Y1010. Site General Conditions	0.00	0.00
	Y2010. Site Overhaad & Profit	0.00	0.00
	Y3010. Site Design Contingency	0.00	0.00
	Y4010. Site Inflation (Escalation) Allowance	0.00	0.00
	Y5010. Trade Contractor Bond Costs	0.00	0.00
	Y3020. Site Construction Contingency	0.00	0.00
R. CONSULTANTS	R1010. Architect/Engineer	6372.00	0.00
	R2010. Environmental	0.00	0.00
	R3010. Commissoning	0.00	0.00
	R4010. Geotechnical	0.00	0.00
	R5010. Cost Estimator	0.00	0.00
	R6010. Owners Rep	62000.00	4300.00
	R7010. CM Pre-Construction	0.00	0.00
	R8010. FF&E Coordinator	0.00	0.00
	R9010. Legal	10000.00	0.00
S. FF&E	S1010. FF&E	0.00	0.00
	S2010. Technology	0.00	0.00
	S3010. Playground Equipment	0.00	0.00
	S4010. Playground Surfacing	0.00	0.00
	S5010. Moving	0.00	0.00
T. FEES	T1010. District Bonding Fees	0.00	0.00
	T2010. Insurance Cost	0.00	0.00
	T3010. Town Staff Cost	0.00	0.00
	T4010. Town Permit Fees	1465.86	0.00
	T5010. State Permit Fees	127.14	127.14
	T6010. Testing/Inspection Fees	0.00	0.00
	T7010. Printing & Mailing	0.00	0.00
	T8010. Other Costs	7236.00	0.00
U. CONTINGENCIES	U1010. Owner Contingency	53449.72	49149.72
W. ACQUISITION COSTS W	W1010. Land/Building Purchase	0.00	0.00
	W2010. Swing Space/Portables	0.00	0.00
	W3010. Site Remediation	0.00	0.00

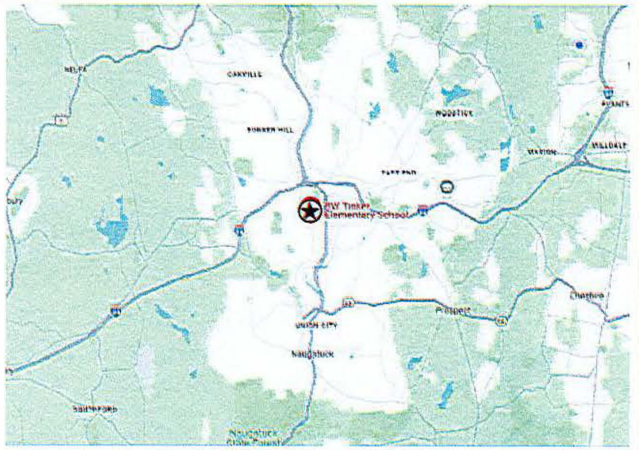
	W4010. Appraisals	0.00	0.00
	W5010. Land Survey	0.00	0.00
	W6010. Other Acquisition Costs	0.00	0.00

Save CD Estimate And Continue | Save CD Estimate And Exit | Submit CD Estimate

ROOFTOP PV ARRAY INSTALLATION AT:



LOCATION MAP
SCALE: N.T.S.



VICINITY MAP
SCALE: N.T.S.

B.W. TINKER ELEMENTARY SCHOOL

809 HIGHLAND AVE

WATERBURY, CT 06708

DAS PROJECT #151-0313-PV

APPLICABLE CODES

NATIONAL ELECTRIC CODE - 2020
ARTICLE 230 - SERVICES
ARTICLE 240 - OVERCURRENT PROTECTION
ARTICLE 250 - GROUNDING AND BONDING
ARTICLE 300 - WIRING METHODS
ARTICLE 310 - CONDUCTORS
ARTICLE 690 - SOLAR PHOTOVOLTAIC SYSTEMS
ARTICLE 705 - INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

PV SYSTEM INFORMATION

SYSTEM SIZE (DC):	189.200 kW STC + EXTERNAL GAIN
SYSTEM SIZE (AC):	160.000 kW / 160.000 kVA
INVERTER QUANTITY:	1
INVERTER TYPE:	SOLAREDGE SE160K-US (160 KW AC)
MODULE QUANTITY:	270
MODULE TYPE:	SEG SOLAR SEG-660-BTB-BB (660W STC + EXTERNAL GAIN)
RACKING TYPE:	K2 RACKING
RAPID SHUTDOWN DEVICES:	SOLAREDGE OPTIMIZERS

UTILITY INFORMATION

COMPANY:	EVERSOURCE
ACCOUNT NUMBER:	3 [illegible] (EXISTING)
METER NUMBERS:	[illegible] (EXISTING, INSIDE) [illegible] (EXISTING, OUTSIDE)
NHEC ID NUMBER:	320-EXISTING
DAS PROJECT NUMBER:	151-0313-PV

PROJECT SIGNATURES

AHJ	NAME	SIGNATURE	DATE
BUILDING INSPECTOR			
FIRE MARSHAL			
HEALTH INSPECTOR			
ADA 504 COORD			

Stephen Gendreau, P.E.
Digitally signed by Stephen Gendreau, P.E.
Date: 2026.05.22 13:55:05 -04'00'

PROJECT DESCRIPTION

THIS INSTALLATION CONSISTS OF A UTILITY INTERACTIVE SOLAR PHOTOVOLTAIC SYSTEM AT A SCHOOL BUILDING IN WATERBURY, CONNECTICUT. THE PV SYSTEM IS COMPRISED OF MODULES MOUNTED ON THE ROOF OF BUILDING. THE PV SYSTEM ALSO INCLUDES INVERTERS LOCATED ON THE ROOF OF THE BUILDING. THE AC INVERTER OUTPUT POWER IS FED THROUGH AN AC COMBINER PANEL, DISCONNECT SWITCHES AND UTILITY METER TO THE POINT OF CONNECTION AT AN EXISTING UTILITY TRANSFORMER.

DRAWING LIST

NIA	COVER SHEET
PV-1	THREE-LINE DIAGRAM
PV-2	PROFILE VIEWS & PARTIAL PLANS
PV-3	OVERALL ROOF PLAN
PV-4.3, 6.7	[NOT USED]
PV-5	NOTES, DETAILS & ABBREVIATIONS
PV-9	EQUIPMENT DATA SHEETS
PV-10	LABELS & SIGNAGE
PV-11	SPECIFICATIONS

DOCUMENTS BY OTHERS

RACKING MANUFACTURER DRAWINGS
STRUCTURAL ENGINEERING CALCULATIONS

REVISIONS:

02-11-2026:	INTERCONNECTION APPLICATION
05-22-2026:	ISSUED FOR CONSTRUCTION

PREPARED FOR:

ALL ELECTRIC LLC
CONSTRUCTION & SPECIALTIES
allelectricct.com

PREPARED BY:

SG ENGINEERING LLC
sgedesign.com

STATE OF CONNECTICUT · POWER GRADE · REGISTERED · PROFESSIONAL ENGINEER

INVERTER RELAY SETTINGS

TABLE I: INVERTERS' VOLTAGE TRIP SETTINGS

TABLE II: INVERTERS' FREQUENCY TRIP SETTINGS

TABLE III: INVERTERS' VOLTAGE RIDE-THROUGH CAPABILITY & OPERATIONAL REQUIREMENTS

TABLE IV: INVERTERS' FREQUENCY RIDE-THROUGH CAPABILITY

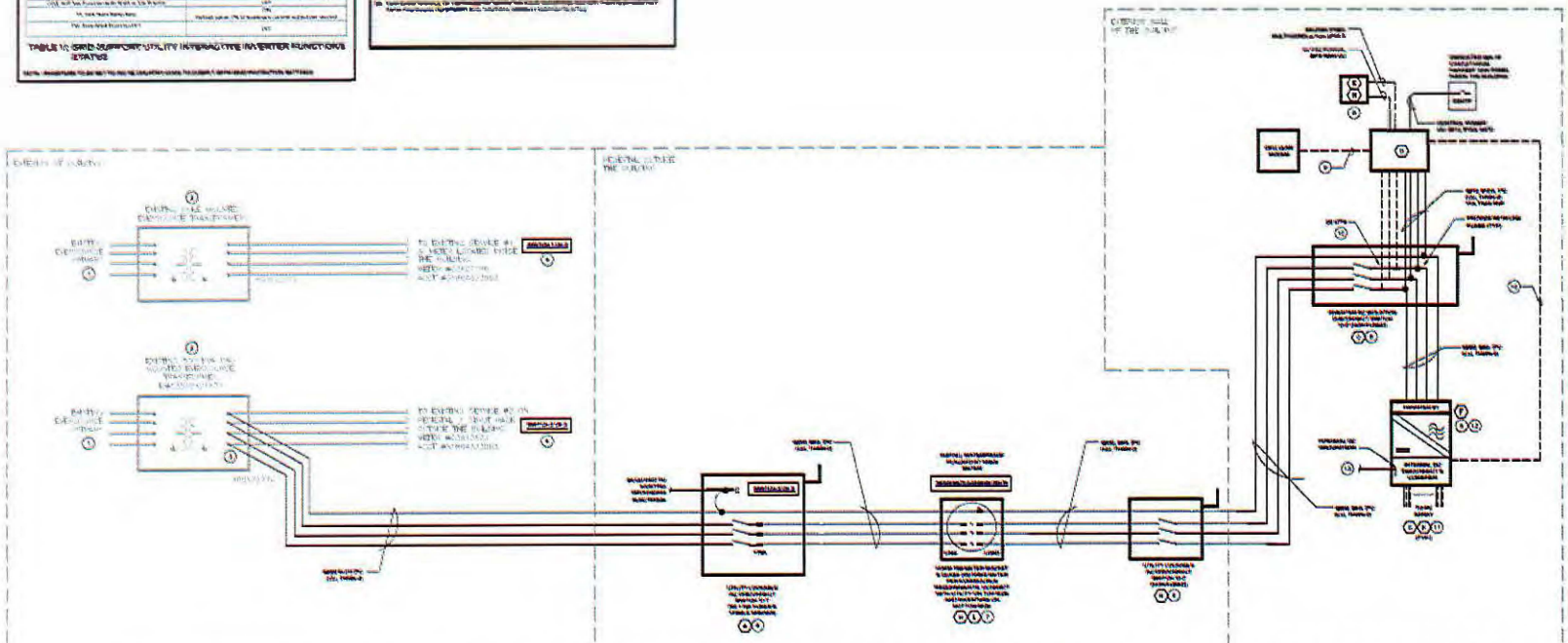
TABLE V: GRID SUPPORT UTILITY INTERACTIVE INVERTER FUNCTIONS (DATA)

SOLAR PV GENERAL NOTES

KEY NOTES

INVERTER DATA

EQUIPMENT SCHEDULE



Project Info

ENGINEER:

SG ENGINEERING LLC

55 FOXCROFT COURT
SOUTHINGTON, CT
SGDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 139.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KWAC)
- (270) SEG SOLAR SEG-390-BTA-BB MODULES (390W STC BIFACIAL)

EVERSOURCE METERS
#:00427446 (EXISTING, INSIDE)
#:00815673 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT
#:31594373083 (EXISTING)

NRES ID # 333-ESNRES-00676

DAS PROJECT #151-0313-PV

No.	Revision/Issue	Date

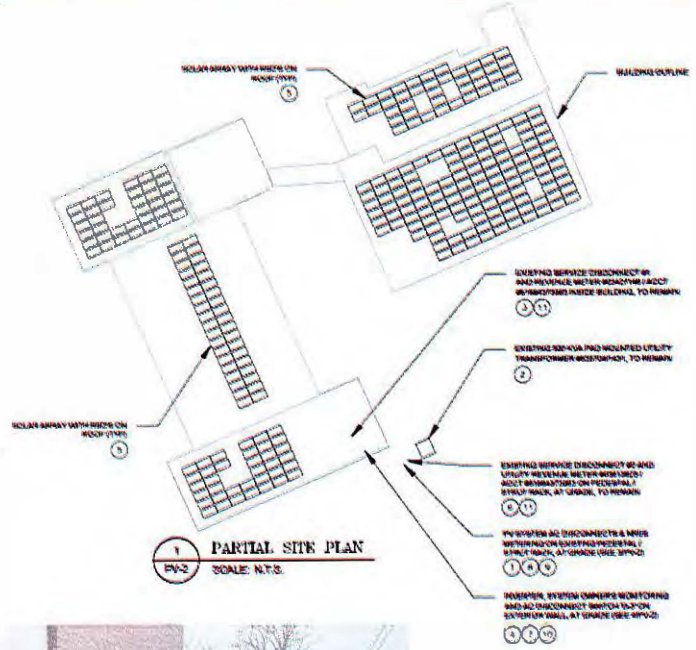
ROOF MOUNTED PV SYSTEM

B.W. TINKER ELEMENTARY SCHOOL
909 HIGHLAND AVE
WATERBURY, CT 06708

THREE-LINE DIAGRAM

Date: MAY 22, 2026
Scale: NTS

PV-1



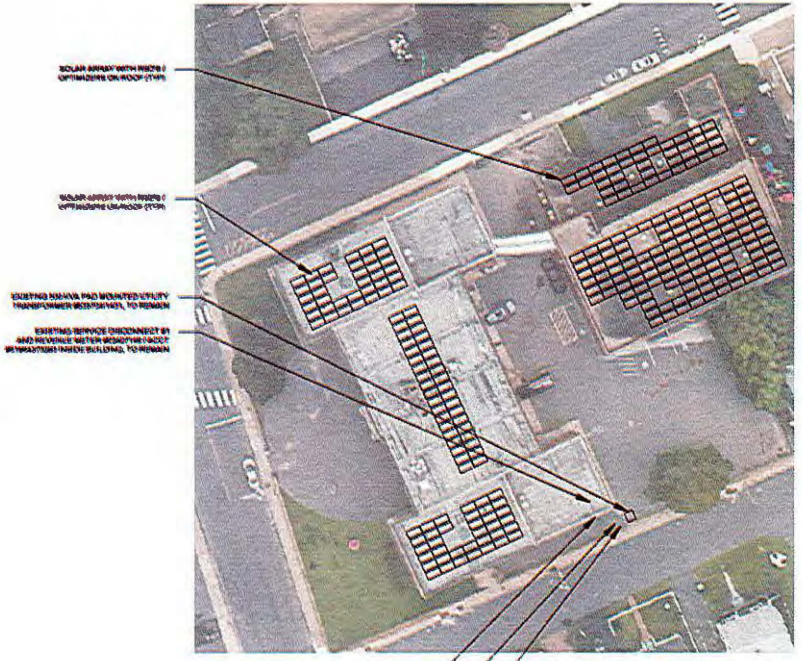
1 PV-2 PARTIAL SITE PLAN
SCALE: N.T.S.

KEY NOTES (4)

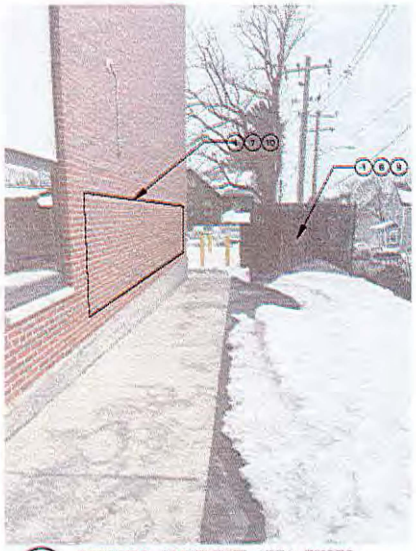
1. [illegible] PV SYSTEM AC DISCONNECT 'D-1' WITH VISIBLE BLADE ON EXTERIOR WALL, AT GRADE.
2. EXISTING UTILITY PAD MOUNTED TRANSFORMER, TO REMAIN.
3. EXISTING UTILITY REVENUE METER [illegible] INSIDE BUILDING WITH SERVICE 40, TO REMAIN.
4. INVERTER 1 ON EXTERIOR WALL, AT GRADE.
5. SOLAR PHOTOVOLTAIC MODULES ON ROOF, UNDER MODULES - SEE SHEET SPV-2 FOR MODULE LAYOUT.
6. EXISTING UTILITY [illegible] TO REMAIN.
7. EXISTING SERVICE DISCONNECT 41 ON EXTERIOR WALL, AT GRADE.
8. UTILITY REVENUE & ACCESS RECEPTACLE & NMB AC DISCONNECT 'D-2' WITH VISIBLE BLADE ON EXTERIOR WALL, AT GRADE.
9. PV SYSTEM NMB METER SOCKET ON EXTERIOR WALL, AT GRADE.
10. INVERTER AC VISUAL DISCONNECT SWITCH 'D-3' ADJACENT TO INVERTER - ON EXTERIOR WALL, AT GRADE.
11. EXISTING SERVICE DISCONNECT, TO REMAIN.

PV SYSTEM WORK NOTES

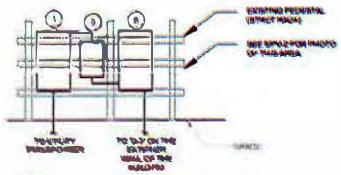
1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURER'S INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH APPROVED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSION OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD INVESTIGATIONS, AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRINGING, AND WIND ZONE PLACEMENT OF THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLIP SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUB-ARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.



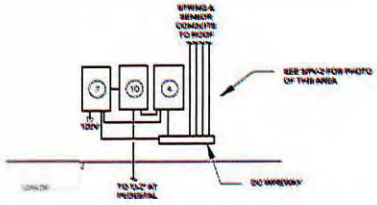
2 PV-2 AERIAL SITE PHOTO
SCALE: N.T.S.



3 PV-2 EXTERIOR EQUIPMENT AREA PHOTO
SCALE: N.T.S.



3 PV-2 PROFILE VIEW (PEDESTAL)
SCALE: N.T.S.



4 PV-2 PROFILE VIEW (EXTERIOR WALL)
SCALE: N.T.S.

Project Info

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
[illegible]@sgedesign.com

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 159.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KWAC)
- (270) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03427146 (EXISTING, INSIDE)
03913623 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT
51864373065 (EXISTING)

NRES ID # SGENSYRES-0857

DAS PROJECT #151-0013-PV

No.	Revision / Issue	Date

ROOF MOUNTED PV SYSTEM
B.W. TINKER ELEMENTARY SCHOOL
809 HIGHLAND AVE
WATERBURY, CT 06708

PROFILE VIEWS & PARTIAL PLANS

Drawn	Sheet
Date: MAY 22, 2026	PV-2
Scale: NTS	

ROOF AREA GENERAL NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING PROVIDED SOLAR PANEL ARRAY ON TOP OF EXISTING ROOFING SYSTEM PER THE MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS, ALONG WITH ASSOCIATED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE WARNED, PROTECTED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSION OF EXISTING ELEMENTS SHOWN WERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD INVESTIGATIONS, AND SHALL BE USED FOR INFORMATIONAL PURPOSES ONLY. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRINGING, AND WIND ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THIS LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF FLOOR OR SLIP SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ADHERED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUB-ARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLAMPS.

SYMBOL LEGEND

+	BEGINNING OF STRING
-	END OF STRING
XX	STRING NUMBER - SEE PV3.2 FOR ADDITIONAL INFORMATION

RACKING NOTES

1. [illegible]

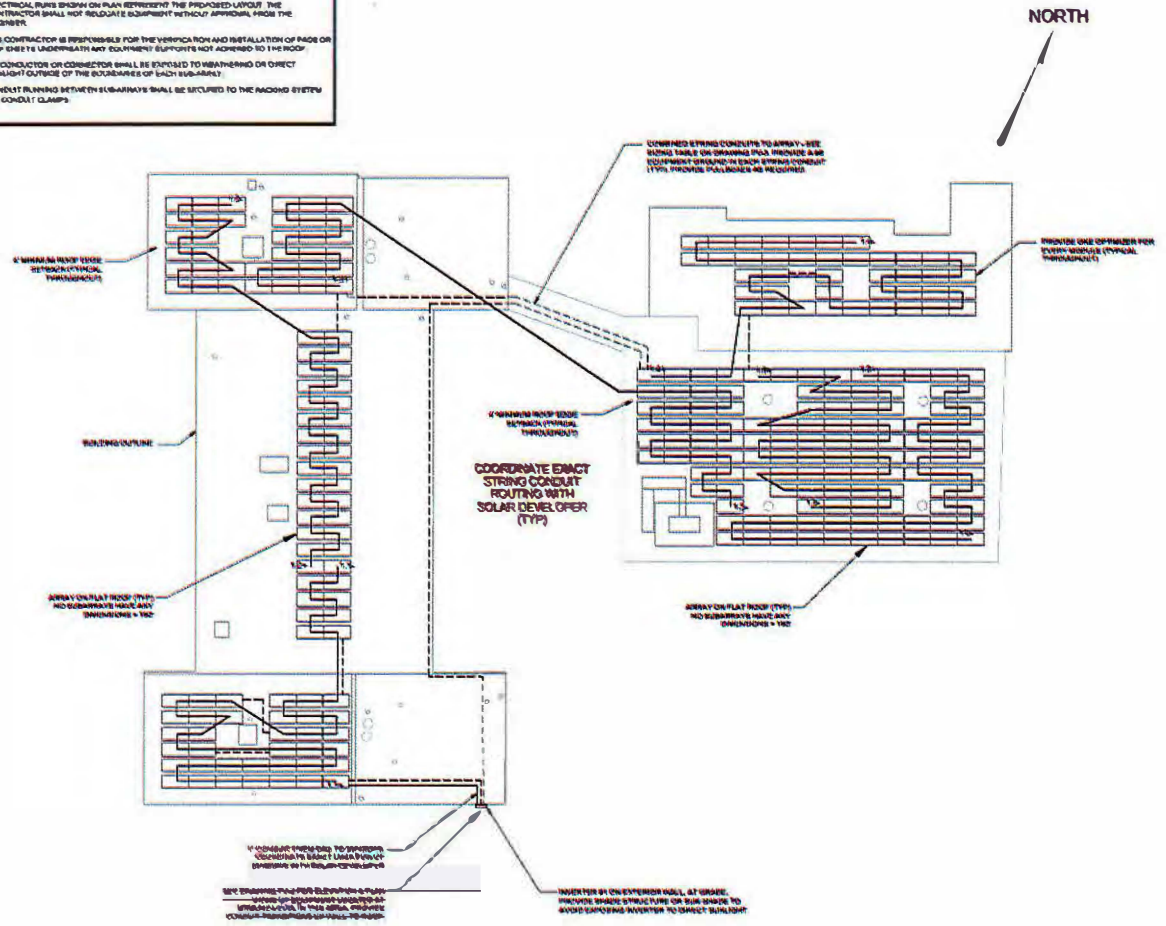
STRING WIRING

STRING NUMBER	MODULE TYPE	STRING ID	QTY OF MODULES	QTY OF OPTIMIZERS	DC WATTS	AC WATTS	INVERTER & MPPT	CONDUCTOR SIZE (AWG)	CONDUIT SIZE (TRADE)
1	[illegible]	1	15	15	5700	20.55	A/B	#8	1 1/2"
2	[illegible]	2	15	15	5700	20.55	A/B	#8	1 1/2"
3	[illegible]	3	15	15	5700	20.55	A/B	#8	1 1/2"
4	[illegible]	4	15	15	5700	20.55	A/B	#8	1 1/2"
5	[illegible]	5	15	15	5700	20.55	A/B	#8	1 1/2"
6	[illegible]	6	15	15	5700	20.55	A/B	#8	1 1/2"
TOTAL			230	230	129.90				2 1/2"

STRING CONDUIT REQUIREMENTS:

# OF STRINGS	MINIMUM CONDUIT SIZE
1 STRING	1"
2 STRINGS	1 1/4"
3-4 STRINGS	1-1/2"
5-6 STRINGS	2"

PROVIDE A #8 AWG EGC IN EACH STRING CONDUIT & BOND PER NEC



1 OVERALL ROOF PLAN
PV3 NOT TO SCALE

Project Info

ENGINEER:

SG ENGINEERING LLC
36 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
[illegible]@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC
189 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 139.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KWAC)
- (270) SEG SOLAR SEG-390-BTA-BG MODULES (390W STC BIFACIAL)

EVERSOURCE METERS
03427146 (EXISTING, INSIDE)
03013623 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT
5188437 3043 (EXISTING)

NRES ID # SZD-ESNRES-00675

DAS PROJECT #751-0313-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

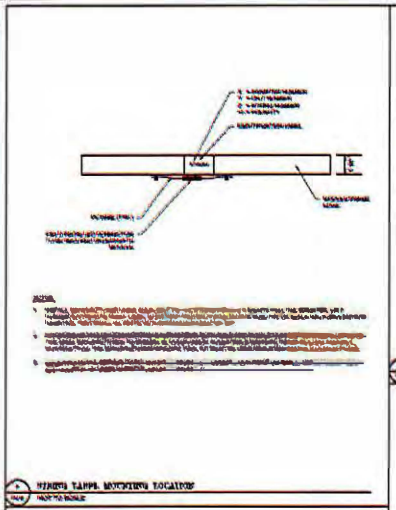
B.W. TINKER ELEMENTARY SCHOOL
609 HIGHLAND AVE
WATERBURY, CT 06708

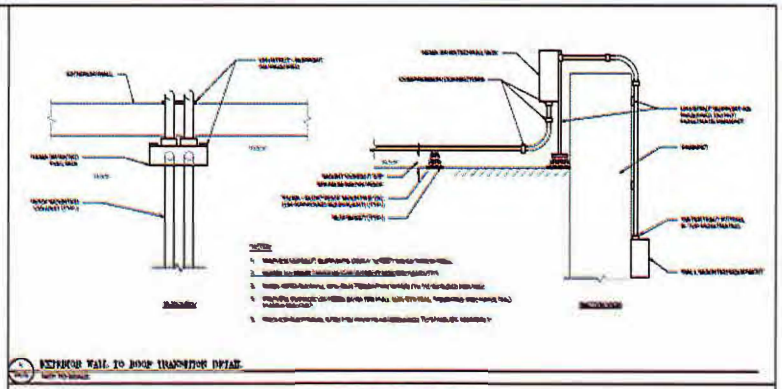
OVERALL ROOF PLAN

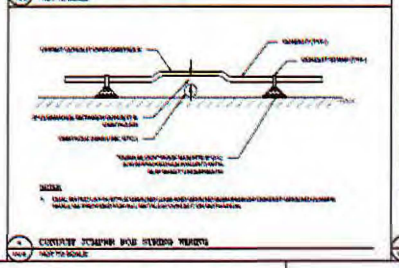
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Scale: N.T.S.
Sheet: PV-3

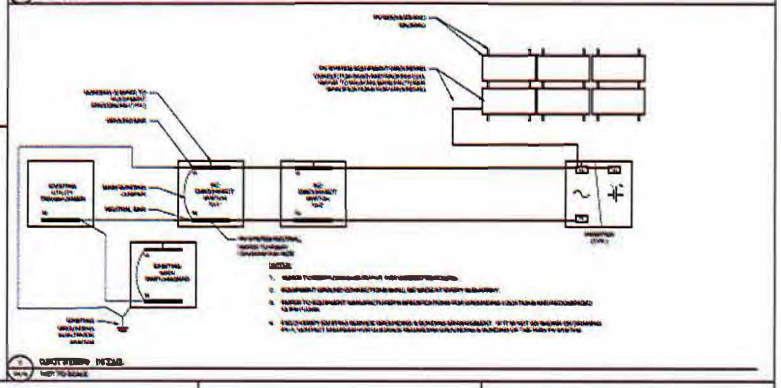
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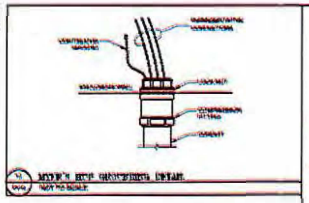
ABBREVIATIONS

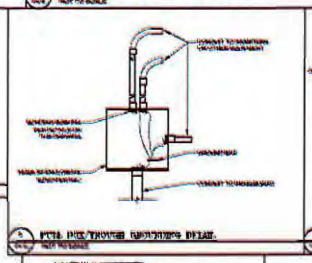


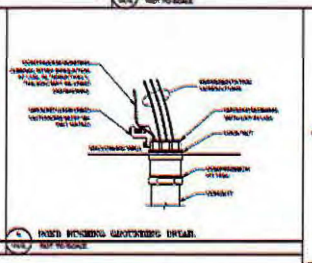


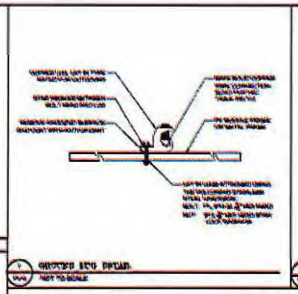




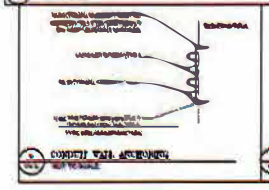


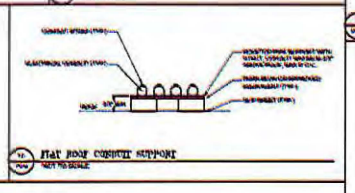


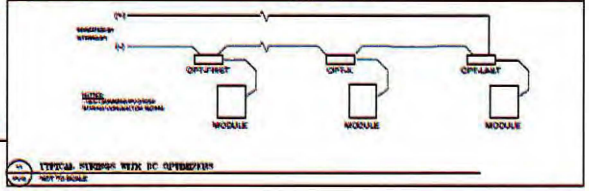












Project Info

ENGINEER:

SG ENGINEERING

56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 159.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KWAC)
- (270) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03427146 (EXISTING, INSIDE)
03813623 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT
#5184313063 (EXISTING)

NRES ID # SZ3-ESNRES-00676

QAS PROJECT #151-0313-PV

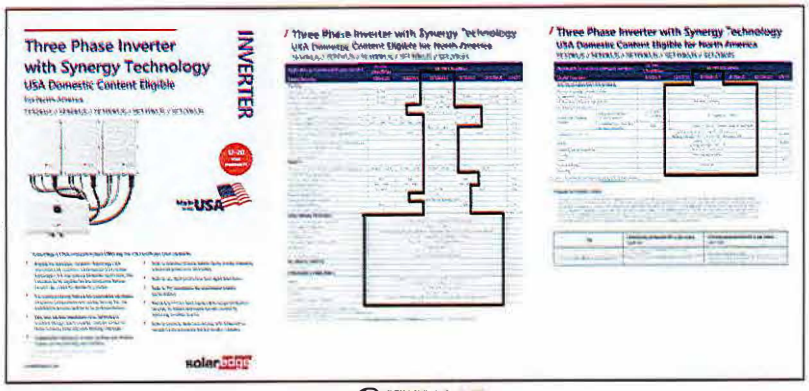
No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

B.W. TINKER ELEMENTARY SCHOOL
309 HIGHLAND AVE
WATERBURY, CT 06708

NOTES, DETAILS & ABBREVIATIONS

Project
Date: MAY 23, 2025
Scale: NTS
Sheet: PV-8



INVERTER DATA SHEET



RAPID SHUTDOWN DEVICE DATA SHEET



MODULE 575W "N" DATA SHEET

Project Info

ENGINEER:

SG ENGINEERING LLC

35 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

120 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 139.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KWAC)
- (270) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
03437146 (EXISTING, INSIDE)
03813423 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT
5186437063 (EXISTING)

NRES ID # SCS-ESNRES-00676

DAS PROJECT #151-0313-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

B.W. TINKER ELEMENTARY SCHOOL
809 HIGHLAND AVE
WATERBURY, CT 06708

EQUIPMENT DATA SHEETS

Date: MAY 22, 2026	Sheet: PV-9
Scale: NTS	



SOURCE: http://www.pvlabels.com

SOURCE: http://www.pvlabels.com

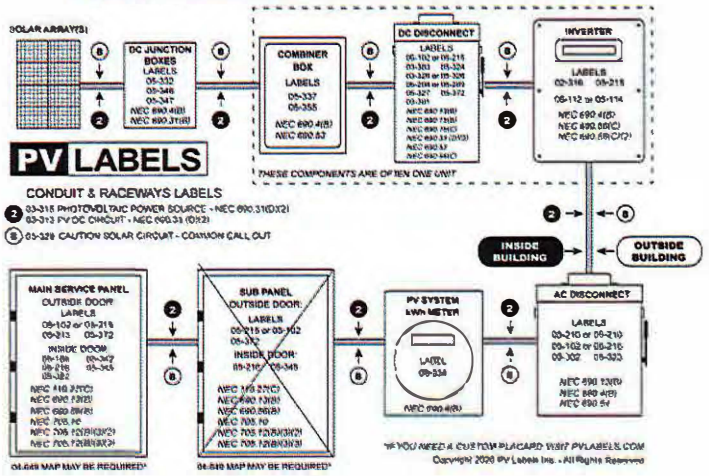
3 PV-10 LABELS



STRING NUMBER LABEL

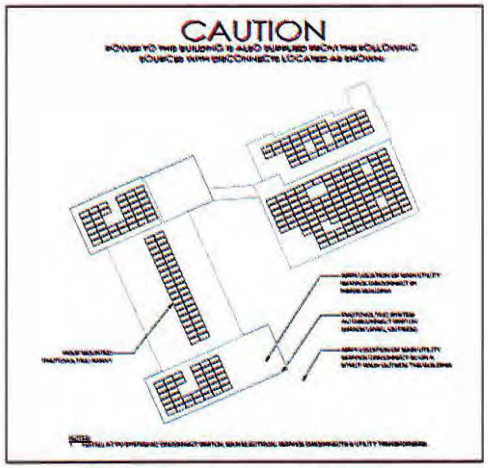
PHOTOVOLTAIC SOLAR SYSTEM MARKING - DC STRINGS

RECOMMENDATIONS BASED ON 2020 NEC, COMMON CALL OUTS AND PACKAGE CONTENTS



SOURCE: http://www.pvlabels.com/

2 PV-10 LABEL LOCATIONS



3 PV-10 POWER SOURCE DIRECTORY

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEOUESION.COM
sge@sgedesign.com

SOLAR DEVELOPER:
ALL ELECTRICT LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 139.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KVAC)
- (270) SEG SOLAR SEG-380-BTA-BG MODULES (380W STC BIFACIAL)

EVERSOURCE METERS
03427148 (EXISTING, INSIDE)
03613527 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT
51664373063 (EXISTING)

NRES ID # SENESNRES-00876

DAS PROJECT #151-0913-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

B.W. TINKER ELEMENTARY SCHOOL
369 HIGHLAND AVE
WATERBURY, CT 06708

LABELS & SIGNAGE

Date: MAY 22, 2020
Scale: NTS

PV-10

ELECTRICAL SPECIFICATIONS



Project Info

ENGINEER:

SG ENGINEERING LLC

36 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
[redacted]

SOLAR DEVELOPER:

ALL ELECTRIC LLC

100 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 158.300 KW DC STC + BIFACIAL GAIN
- 100.000 KW AC / 100.000 KVA AC
- (1) SOLAREDGE SE100KUS INVERTER (100 KWAC)
- (270) SEG SOLAR SEG-590-BTA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS

- 10042714S (EXISTING, INSIDE)
- 03013623 (EXISTING, OUTSIDE)

EVERSOURCE ACCOUNT

- 51 89437 3063 (EXISTING)

NRES ID # SZ3-ESNRES-00676

DAS PROJECT #151-0313-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

B.W. TINKER ELEMENTARY SCHOOL
839 HIGHLAND AVE
WATERBURY, CT 06708

SPECIFICATIONS

Drawn	Sheet
Date: MAY 22, 2024	PV-11
Scale: NTS	

Wendell Cross – 151-0310 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

M.M. Generali – 151-0311 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Sprague School – 151-0312 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Tinker School – 151-0313 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

West Side School – 151-0314 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and

the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

CODE CONFORMITY CERTIFICATION

FORM SCG-3030

Director
Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, Connecticut 06103

Subject: State Project Number: 151-0313 PV

LEA: Waterbury Public Schools

Phase: 1 of 1

Facility Name: Tinker Elementary School

Local Health Department Jurisdiction: Waterbury Health Department

Pursuant to Section 10-292 of the Connecticut General Statutes, the final plans for any phase of a school building project as provided in CGS Section 10-291 must be in conformance with state codes, statutes, regulations and to federal laws. The following documents are attached (mark boxes "x", as appropriate):

Attached	N/A	
☐	☒	ICC Code Review Checklist completed by Local Official or Third-party reviewer
☐	☒	Plan Review Record (PRR) by Local Officials or Third-party reviewer
☐	☒	Design Professional's response to PRR with Local Officials acceptance
☐	☒	Approved Code Modifications
☐	☒	Second copy of Code/Egress/Site drawings for OSCG&R file
☒	☐	Final Construction documents for OSCG&R review

We, the undersigned, have reviewed the construction documents (drawings and project manuals) for the above referenced school building project (the Project) dated 5/22/2026. As confirmation of our review in accordance with OSCG&R Guidelines and Plan Review checklists, we have signed and dated the cover page of the project's drawings and manuals. As it relates to my specific jurisdiction, and to the best of my knowledge, information, and belief, the review has determined the project's construction documents appear to be in compliance with the current Connecticut State Building Code, Fire Safety Code, State Fire Prevention Code, Connecticut Department of Public Health Regulations, Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA) of 1990, and OSHA requirements.

Building Official:

Frank Baker _____ Signature: _____ Date: _____
(Print Name):

Fire Marshal:

Tom Fitzgerald _____ Signature: _____ Date: _____
(Print Name):

Section 504 Official:

Mike Konopka _____ Signature: _____ Date: _____
(Print Name):

Health Inspector:

Richard Lee _____ Signature: _____ Date: _____
(Print Name):

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS

FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME:	FACILITY NAME AND ADDRESS:	STATE PROJECT NUMBER:
Waterbury Public Schools	Tinker Elementary School 809 Highland Ave, Waterbury, CT 06708	151-0313 PV
		PHASE NUMBER: 1

Estimated date* to begin construction July 6, 2026 Estimated date to complete construction October 1, 2026

* NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	6 / 18 / 2026	/ /
School Building Committee	6 / 4 / 2026	/ /

We hereby certify that these final plans and project manual(s) as prepared for bidding and dated 5/22/2026, and the professional cost estimate, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 5/20/2026, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Chairperson's Name (Type or print)	Signature	Date **

For the School Building Committee:

Chairperson's Name (Type or print)	Signature	Date **

** Signature dates cannot precede the date on the submitted plans.

For the Project Architect/Engineering Firm:

Firm Name (Type or print)	Signature	Telephone No.
CSW Energy		(845) 551-7881

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Superintendent's Name (Type or print)	Signature	Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER $10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

FORM SCG-042 Request for Review of Final Plans

State Project No. 151-0313 PV

Project Name: Tinker Elementary School

Name of Contact Person:	Telephone:	Date:
Chris Palmer, CSW Energy	(845) 551-7881	5/29/2026

Certifications of Local Approval:

I certify that I have local jurisdiction over the **State Building Code** and that the plans and project manual dated 5/22/2026 for the above referenced project comply with all applicable building codes.

Local Building Official's Name | Signature | Date

I certify that I have local jurisdiction over the **State Fire Safety Code** and that the plans and project manual dated 5/22/2026 for the above referenced project comply with all applicable fire codes.

Local Fire Marshal's Name | Signature | Date

I certify that I have local jurisdiction over the **State Health Code** and that the plans and project manual dated 5/22/2026 for the above referenced project comply with all applicable health codes.

Local Health Official's Name | Signature | Date

I certify that I have local jurisdiction over **Section 504 of the Rehabilitation Act of 1973**, and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated 5/22/2026 for the above referenced project comply with all applicable accessibility codes.

Local Federal 504 Official's Name | Signature | Date

NOTES:

1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.

2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.

3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
The Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, CT 06103

WATERBURY
PUBLIC SCHOOLS

#6

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

Date: May 29, 2026

To: Elizabeth C Brown
President, Board of Education

Members, Board of Education
Building and School Facilities Members

Dr. Darren Schwartz, Superintendent

Mayor Paul K. Pernerewski, Jr.

From: Nicholas Albini, Chief Operating Officer

Subject: Review of Plans for RFP#8595 Rooftop Solar Photovoltaic Systems

Dear Honorable Members of the Board of Education and Building School Facilities Committee,

This Honorable Board of Education ("BOE") and the Honorable Board of Aldermen previously approved a construction contract between the City of Waterbury and All-Electric Construction & Communication LLC ("All-Electric") to design and install rooftop solar systems at the following five schools: B.W. Tinker Elementary School, M.M. Generali Elementary School, Sprague Elementary School, Wendell L. Cross Elementary School, and West Side Middle School.

This submission today requests that the BOE Building School Facilities Committee and the BOE authorize their respective Chairpersons to sign the CT Department of Administrative Services Office of Grants Administration ("DAS-OGA") form "SCG-042 – Request for Review of Final Plans" for the school rooftop solar projects at five schools, as well as, The Department of Administrative Services (DAS-OSCG&R) form" SCG-3030 – Code Conformity Certification: Tinker, Generali, Sprague, Wendell Cross, and West Side. In support of this request, we include the final plans, building permits, and updated cost estimates for each of these five-school rooftop solar projects. In addition, we have attached the required separate motions for each school rooftop solar project that need to be passed by both the BOE Building Facilities Committee and the BOE for these projects to proceed through the DAS-OGA review process.

WATERBURY
PUBLIC SCHOOLS

Nicholas J. Albini
Chief Operating Officer
nalbini@waterbury.k12.ct.us

The goal at this stage of these five-school rooftop solar projects is to receive approval for the Chairperson of the BOE Building Facilities Committee to sign form SCG-042 and the SCG-3030 at their June 4th meeting, and to receive approval for the Chairperson of the BOE to sign form SCG-042 at their June 18th meeting. Following that June 18th meeting, all required DAS-OGA forms and final plans in support of these five-school rooftop solar projects will be signed by the appropriate municipal officials in advance of a final plan review meeting to be scheduled with DAS-OGA. Once the plan review meeting with DAS-OGA occurs, and the final plans are approved by DAS-OGA, the city will receive authorization to begin construction of these five-school rooftop solar projects.

Members of CSW and WDC will be at the June 4th and June 18th meetings to answer any questions.

The City of Waterbury
Department of Inspection
185 South Main Street, 5th floor
(1 Jefferson Square)
Waterbury, CT 06702
Applications & Permits: Monday – Friday 8:00 a.m. to 4:00 p.m.
Building: 203 574 6832 Electrical: 203 574 8382
HVAC / Plumbing: 203 574 6856 Fax: 203 574 6854
Sealer of Weights and Measures: 203 574 8387

BD - Electrical Permit

Permit #: PR20260000909 Date of Issue: 4/30/26

Location of Work: 483 CHASE PARKWAY, Waterbury, CT

This permit is hereby granted to perform the following work:

Install
Other
Install 492 roof mount solar panels 290.280 KW
With installation of new second service off existing ground mount transformer to P.V. system only

POST THIS CARD SO IT IS VISIBLE FROM THE STREET

All work covered by this permit has been authorized by the owner of this property.
This permit is granted under the condition that the work shall be done in accordance with the laws of the State of Connecticut and the ordinance of the City of Waterbury. If any statements of said application are false, or if any change is made to the plans/specifications without the consent of the Building Inspector or his duly appointed agent, this permit shall be revocable.

Approved plans must be retained on the job and this card must be kept posted until final inspection has been made. Such building shall not be occupied until final inspection has been made, and where applicable, a Certificate of Occupancy/Approval has been issued.

The Following Permit in no way relieves the Architect, Engineer, or Contractor from the responsibility of having their design/construction meet all requirements of the Connecticut Fire Saftey Code (C.F.S.C.) and all applicable standards.

Contacts:

Applicant	Angelica Guild/AEC Solar LLC180 Wampus La.Milford, CT 06460
Contractor	Patrick Lewis/AEC Solar180 Wampus La.Milford, CT 06460
Owner	CITY OF WATERBURY WEST SIDE MIDDLE SCHOOL235 GRAND ST WATERBURY, CT 06702
Donation Bin Owner	

Issued By: Domenic Mascolo Title: Electrical Inspector
Signature: D. Mascolo

Connecticut Department of Administrative Services
Office of School Construction Grants
Public School Construction Cost Database

Construction Documents Estimate

State Project #	EstNum000463				
LEA	Waterbury Public Schools				
School Name	West Side Middle School				
Project Type					
Square Footage of Construction	38,042				
Grades	G1				
Enrollment Projections					
Reimbursement Rate			Cost/Square Feet		Ineligible Costs
Project Cost	$1,014,000.00	of Project Costs	$26.65	Project Ineligible Costs	$301,903.57
All Soft Cost	$399,259.53			Ineligible Soft Costs	$301,903.57
Construction Cost	$614,740.47	of Construction Cost	$16.16	Ineligible Construction Costs	$0.00
Eligible Construction Costs	$614,740.47	of Eligible Costs	$16.16		

Construction Cost			Cost	Ineligibles
A. SUBSTRUCTURE	A10. Foundations	A1010. Standard Foundations	0.00	0.00
		A1020. Special Foundations	0.00	0.00
		A1030. Slab on Grade	0.00	0.00
	A20. Basements	A2010. Basement Excavation	0.00	0.00
		A2020. Basement Walls	0.00	0.00
B. SHELL	B10. Super Structure	B1010. Floor Construction	0.00	0.00
		B1020. Roof Construction	0.00	0.00
	B20. Exterior Enclosures	B2010. Exterior Walls	0.00	0.00
		B2020. Exterior Windows	0.00	0.00
		B2030. Exterior Doors	0.00	0.00

	B30. Roofing	B3010. Roof Coverings	0.00	0.00
		B3020. Roof Openings	0.00	0.00
C. INTERIORS	C10. Interior Construction	C1010. Partitions	0.00	0.00
		C1020. Interior Doors	0.00	0.00
		C1030. Fittings	0.00	0.00
	C20. Stairs	C2010. Stair Construction	0.00	0.00
		C2020. Stair Finishes	0.00	0.00
	C30. Interior Finishes	C3010. Wall Finishes	0.00	0.00
		C3020. Floor Finishes	0.00	0.00
		C3030. Ceiling Finishes	0.00	0.00
D. SERVICES	D10. Conveying	D1010. Elevators & Lifts	0.00	0.00
		D1020. Escalators & Moving Walks	0.00	0.00
		D1090. Other Conveying Systems	0.00	0.00
	D20. Plumbing	D2010. Plumbing Fixtures	0.00	0.00
		D2020. Domestic Water Distribution	0.00	0.00
		D2030. Sanitary Waste	0.00	0.00
		D2040. Rain Water Drainage	0.00	0.00
		D2090. Other Plumbing Systems	0.00	0.00
	D30. HVAC	D3010. Energy Supply	0.00	0.00
		D3020. Heat Generating Systems	0.00	0.00
		D3030. Cooling Generating Systems	0.00	0.00
		D3040. Distribution Systems	0.00	0.00
		D3050. Terminal & Package Units	0.00	0.00
		D3060. Controls & Instrumentation	0.00	0.00
		D3070. Systems Testing & Balancing	0.00	0.00
		D3090. Other HVAC systems & Equipment	0.00	0.00
	D40. Fire Protection	D4010. Sprinklers	0.00	0.00
		D4020. Standpipes	0.00	0.00
		D4030. Fire Protection Specialties	0.00	0.00
		D4090. Other Fire Protection Systems	0.00	0.00
	D50. Electrical	D5010. Electrical Service & Distribution	0.00	0.00
		D5020. Lighting and Branch Wiring	0.00	0.00
		D5030. Communications & Security	0.00	0.00
		D5090. Other Electrical Systems	452836.80	0.00

E. EQUIPMENT & FURNISHINGS	E10. Equipment	E1010. Commercial Equipment	0.00	0.00
		E1020. Institutional Equipment	0.00	0.00
		E1030. Vehicular Equipment (Bldg fixed)	0.00	0.00
		E1090. Other Equipment	0.00	0.00
	E20. Furnishings	E2010. Fixed Furnishings	0.00	0.00
F. SPECIAL CONSTRUCTION AND DEMOLITION	F10. Special Construction	F1010. Special Structures	0.00	0.00
		F1020. Integrated Construction	0.00	0.00
		F1030. Special Construction Systems	0.00	0.00
		F1040. Special Facilities	0.00	0.00
		F1050. Special Controls & Instrumentation	0.00	0.00
	F20. Selective Building Demolition	F2010. Building Elements Demolition	0.00	0.00
	F30. Abatement	F3010. PCB/Asbestos/Lead Abatement	0.00	0.00
X. GENERAL CONDITIONS, OFFICE OVERHEAD, & PROFIT	X10. General Conditions	X1010. General Conditions	88535.40	0.00
	X20. Overhead & Profit	X2020. Office Overhead & Profit	73368.27	0.00
		X2030. Trade Contractor Bond Costs	0.00	0.00
Z. ALLOWANCES	Z10. Design Contingency	Z10. Design Contingency	0.00	0.00
	Z20. Inflation (Escalation) Allowance	Z20. Inflation (Escalation) Allowance	0.00	0.00
	Z30. Construction Contingency	Z30. Construction Contingency	0.00	0.00

Soft Cost		Cost	Ineligibles
G. SITEWORK (beyond 5 ft from Building)	G1010. Site Clearing	0.00	0.00
	G1020. Site Demolition & Relocation	0.00	0.00
	G1030. Site Earthwork	0.00	0.00
	G1040. Hazardous Waste Remediation	0.00	0.00
	G2010 Roadways	0.00	0.00
	G2020. Parking	0.00	0.00
	G2030. Pedestrian Paving	0.00	0.00
	G2040. Site Development	0.00	0.00
	G2045. Athletic Fields	0.00	0.00
	G2050. Landscaping	0.00	0.00
	G3010. Water Supply	0.00	0.00
	G3020. Sanitary Sewer	0.00	0.00
	G3030. Storm Sewer	0.00	0.00
	G3040. Heating Distribution	0.00	0.00
	G3050. Cooling Distribution	0.00	0.00
	G3060. Fuel Distribution	0.00	0.00

	G3090. Other Site Mechanical Utilities	0.00	0.00
	G4010. Electrical Distribution	0.00	0.00
	G4020. Site Lighting	0.00	0.00
	G4030. Site Communications & Security	0.00	0.00
	G4090. Other Site Electrical Utilities	0.00	0.00
	G9010. Service & Pedestrian	0.00	0.00
	G9020. Bleachers, Concession Stands, etc.	0.00	0.00
	G9090. Other Site Systems	0.00	0.00
Y.SITE GENERAL CONDITIONS, OFFICE OVERHEAD, PROFIT, & ALLOWANCES	Y1010. Site General Conditions	0.00	0.00
	Y2010. Site Overhead & Profit	0.00	0.00
	Y3010. Site Design Contingency	0.00	0.00
	Y4010. Site Inflation (Escalation) Allowance	0.00	0.00
	Y5010. Trade Contractor Bond Costs	0.00	0.00
	Y3020. Site Construction Contingency	0.00	0.00
R. CONSULTANTS	R1010. Architect/Engineer	11611.20	0.00
	R2010. Environmental	0.00	0.00
	R3010. Commissioning	0.00	0.00
	R4010. Geotechnical	0.00	0.00
	R5010. Cost Estimator	0.00	0.00
	R6010. Owners Rep	62000.00	17500.00
	R7010. CM Pre-Construction	0.00	0.00
	R8010. FF&E Coordinator	0.00	0.00
	R9010. Legal	10000.00	0.00
S. FF&E	S1010. FF&E	0.00	0.00
	S2010. Technology	0.00	0.00
	S3010. Playground Equipment	0.00	0.00
	S4010. Playground Surfacing	0.00	0.00
	S5010. Moving	0.00	0.00
T. FEES	T1010. District Bonding Fees	0.00	0.00
	T2010. Insurance Cost	0.00	0.00
	T3010. Town Staff Cost	0.00	0.00
	T4010. Town Permit Fees	2639.16	0.00
	T5010. State Permit Fees	263.64	263.64
	T6010. Testing/Inspection Fees	0.00	0.00
	T7010. Printing & Mailing	0.00	0.00
	T8010. Other Costs	11105.60	0.00
U. CONTINGENCIES	U1010. Owner Contingency	301639.93	284139.93
W. ACQUISITION COSTS W	W1010. Land/Building Purchase	0.00	0.00
	W2010. Swing Space/Portables	0.00	0.00
	W3010. Site Remediation	0.00	0.00

	W4010. Appraisals	0.00	0.00
	W5010. Land Survey	0.00	0.00
	W6010. Other Acquisition Costs	0.00	0.00

Save CD Estimate And Continue | Save CD Estimate And Exit | Submit CD Estimate

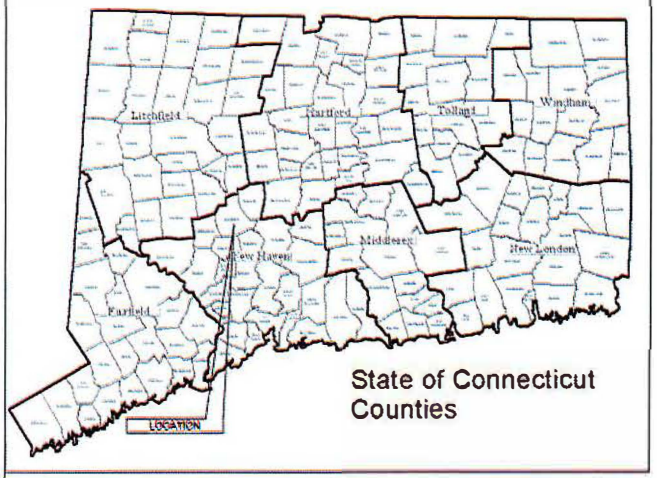
ROOFTOP PV ARRAY INSTALLATION AT:

WEST SIDE MIDDLE SCHOOL

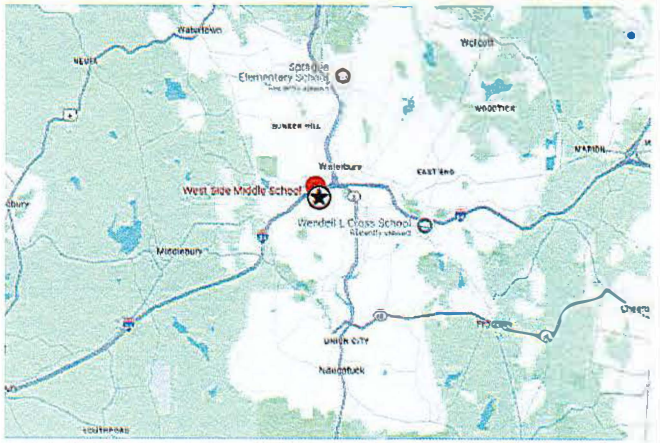
483 CHASE PKWY

WATERBURY, CT 06708

DAS PROJECT #151-0314-PV



LOCATION MAP
SCALE: N.T.S.



VICINITY MAP
SCALE: N.T.S.

APPLICABLE CODES

NATIONAL ELECTRIC CODE - 2020
ARTICLE 230 - SERVICES
ARTICLE 240 - OVERCURRENT PROTECTION
ARTICLE 250 - GROUNDING AND BONDING
ARTICLE 300 - WIRING METHODS
ARTICLE 310 - CONDUCTORS
ARTICLE 690 - SOLAR PHOTOVOLTAIC SYSTEMS
ARTICLE 705 - INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

PV SYSTEM INFORMATION

SYSTEM SIZE (DC):	230,280 kW STC + BIFACIAL GAIN
SYSTEM SIZE (AC):	200,000 kW / 200,000 kVA
INVERTER QUANTITY:	2
INVERTER TYPE:	SOLAREDGE SE100K-US (100 kVAC)
MODULE QUANTITY:	492
MODULE TYPE:	REC SOLAR REC-460-PE-RX (460W STC + BIFACIAL GAIN)
RACKING TYPE:	K2 RACKING
RAPID SHUTDOWN DEVICES:	SOLAREDGE S1001J (OPTIMIZER)

UTILITY INFORMATION

COMPANY:	EVERSOURCE
ACCOUNT NUMBER:	3700470034 (EXISTING)
METER NUMBERS:	7700252 & 7700270 (EXISTING)
NMEC ID NUMBER:	NEW-EXEMPT-70429
DAS PROJECT NUMBER:	151-0314-PV

PROJECT SIGNATURES

AHJ	NAME	SIGNATURE	DATE
BUILDING INSPECTOR			
FIRE MARSHAL			
HEALTH INSPECTOR			
ADA BOI COORD			

Stephen Gendreau, P.E.

Digitally signed by Stephen Gendreau, P.E.
Date: 2026.03.09 12:08:15 -04'00'

PROJECT DESCRIPTION

THIS INSTALLATION CONSISTS OF A UTILITY INTERACTIVE SOLAR PHOTOVOLTAIC SYSTEM AT A SCHOOL BUILDING IN WATERBURY, CONNECTICUT. THE PV SYSTEM IS COMPRISED OF MODULES MOUNTED ON THE ROOF OF BUILDING. THE PV SYSTEM ALSO INCLUDES INVERTERS LOCATED ON THE EXTERIOR WALL OF THE BUILDING. THE AC INVERTER OUTPUT POWER IS FED THROUGH AN AC COMBINER PANEL, DISCONNECT SWITCHES AND UTILITY METER TO THE POINT OF CONNECTION AT AN EXISTING UTILITY TRANSFORMER.

DRAWING LIST

N/A	COVER SHEET
PV-1	THREE-LINE DIAGRAM
PV-2	PROFILE VIEWS & PARTIAL PLANS
PV-3	OVERALL ROOF PLAN
PV-4,5,6 & 7	(NOT USED)
PV-8	NOTES, DETAILS & ABBREVIATIONS
PV-9	EQUIPMENT DATA SHEETS
PV-10	LABELS & SIGNAGE
PV-11	SPECIFICATIONS

DOCUMENTS BY OTHERS

RACKING MANUFACTURER DRAWINGS
STRUCTURAL ENGINEERING CALCULATIONS

REVISIONS:

03-06-2026:	INTERCONNECTION APPLICATION
03-09-2026:	ISSUED FOR CONSTRUCTION

PREPARED FOR:

ALL ELECTRIC LLC
CONSTRUCTION & SERVICE

allelectricct.com

PREPARED BY:

SG ENGINEERING LLC

sgedesign.com

INVERTER RELAY SETTINGS

TABLE I: INVERTERS' VOLTAGE TRIP SETTINGS

TABLE II: INVERTERS' FREQUENCY TRIP SETTINGS

TABLE III: INVERTERS' VOLTAGE RIDE-THROUGH CAPABILITY & OPERATIONAL REQUIREMENTS

TABLE IV: INVERTERS' FREQUENCY RIDE-THROUGH CAPABILITY

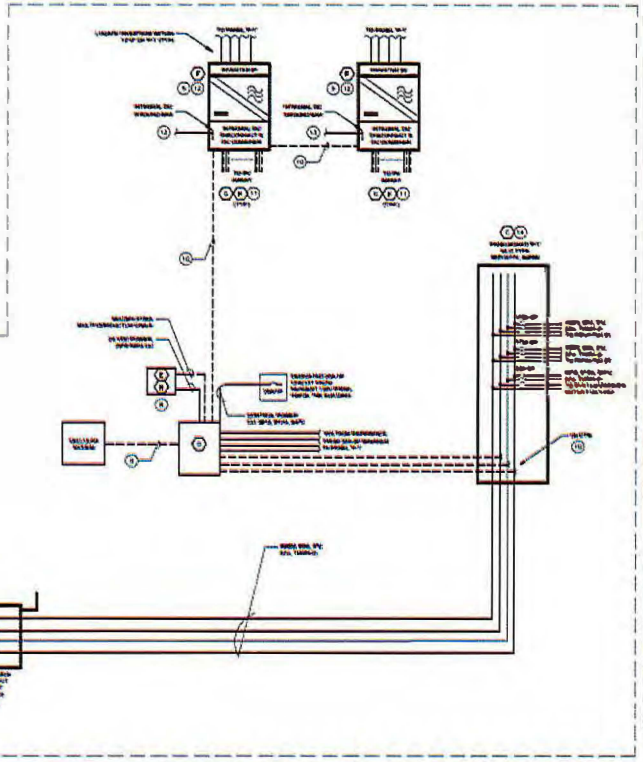
TABLE V: GRID SUPPORT UTILITY INTERACTIVE INVERTER FUNCTIONS STATUS

SOLAR PV GENERAL NOTES

KEY NOTES

INVERTER DATA

EQUIPMENT SCHEDULE



ENGINEER:

SG ENGINEERING LLC

36 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 230.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (682) SEG SOLAR SEG-380-BTA-BG MODULES (380W STC BIFACIAL)

EVERSOURCE METERS
07800292 & 890527312
(EXISTING)

EVERSOURCE ACCOUNT
510004673034 (EXISTING)

NRES ID # SZH-CESNRES-00823

DAS PROJECT #151-0314-PV

No.	Revision/Issue	Date

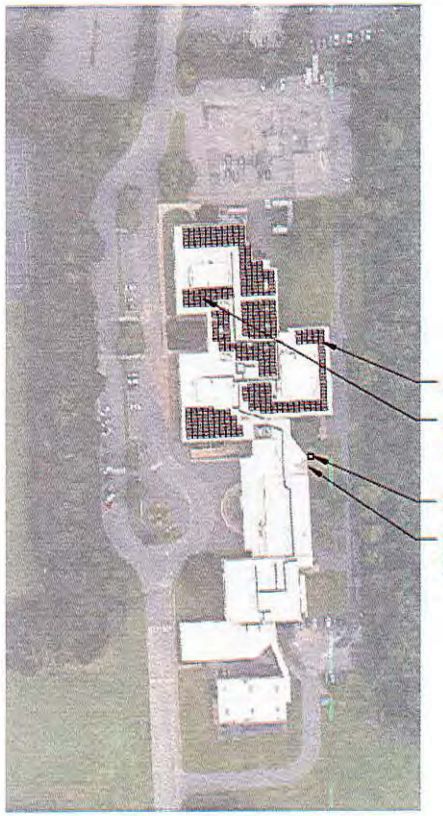
ROOF MOUNTED PV SYSTEM

WEST SIDE MIDDLE SCHOOL
483 CHASE PKWY
WATERBURY, CT 06708

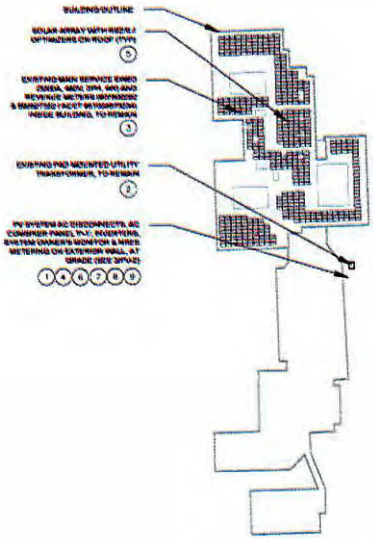
THREE-LINE DIAGRAM

DATE: MARCH 9, 2026
SCALE: NTS

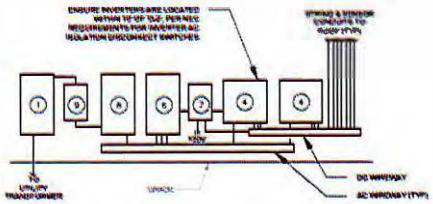
PV-1



2 PV-2 AERIAL SITE PHOTO
SCALE: N.T.S.



1 PV-2 PARTIAL SITE PLAN
SCALE: N.T.S.



3 PV-2 PROFILE VIEW (EXTERIOR WALL)
SCALE: N.T.S.

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING ENTIRETY SOLAR PANEL ARRAY ON TOP OF EXISTING SLOPING PITCH PER THE MANUFACTURER'S INSTALLATION SPECIFICATION & ALONG WITH ASSOCIATED ELECTRICAL WIRING.
2. WORK AREAS SHALL BE MARKED, POINTED, AND OTHERWISE SECURED SO AS TO PREVENT PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. [illegible] OF EXISTING ELEMENTS WHICH HAVE BEEN DAMAGED THROUGH A DEMOLITION OF EXISTING BUILDING AND FOR INSTRUCTIONAL AND SAFETY PURPOSES SHALL BE REPAIRED BY THE CONTRACTOR.
4. SHOP LAYOUT'S BEING ON A COMBINATION OF SKETCHES, STANDARD AND DETAILED PLANS WITH THE SHOP, THE CONTRACTOR SHALL NOT DEVIATE FROM THE LAYOUT SHOWN WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT PROVIDE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND INSTALLATION OF PADS ON SLAB BASES, AS REQUIRED FOR EQUIPMENT SUPPORTS NOT INDICATED TO THE SLAB.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT EXCEPT AT THE BEGINNING OF EACH SUB-ARRAY.
8. CONDUIT RUNNING BETWEEN SUB-ARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA OVERHEAD CLAMPS.

KEY NOTES

1. UTILITY ACCESSIBLE & ACCESSIBLE PV SYSTEM AC DISCONNECT SWITCH WHERE BREAKS ON EXTERIOR WALL, AT GRADE.
2. EXISTING UTILITY COMPANY PAD MOUNTED TRANSFORMER, TO REMAIN.
3. EXISTING UTILITY REVENUE METERS ASSOCIATED & MINUTED I-ACET INTEGRATION INSIDE BUILDING, TO REMAIN.
4. INVERTERS 1 AND 2 ON EXTERIOR WALL, AT GRADE.
5. SOLAR PV MODULES ON ROOF, UNDER MODULES - ONE MODULE PER EXTERIOR UNLESS OTHERWISE NOTED
6. PV SYSTEM AC DISCONNECTS, PVI ON EXTERIOR WALL, AT GRADE.
7. SYSTEM OWNER'S METER ON EXTERIOR WALL, AT GRADE.
8. UTILITY ACCESSIBLE & ACCESSIBLE PV SYSTEM AC DISCONNECT SWITCH WHERE BREAKS ON EXTERIOR WALL, AT GRADE.
9. PV SYSTEM NRES METER MODULE ON EXTERIOR WALL, AT GRADE.

Project Info

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:
ALL ELECTRIC LLC
185 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 290.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (682) SEG SOLAR SEG-580-BTA-BG MODULES (580W STC BIFACIAL)

EVERSOURCE METERS
07800292 & 880527332
(EXISTING)

EVERSOURCE ACCOUNT
3100467 3634 (EXISTING)

NRES ID # SEG-ESNRES-00823

DAS PROJECT #131-0316-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM
WEST SIDE MIDDLE SCHOOL
463 CHASE PKWY
WATERBURY, CT 06708

PROFILE VIEWS & PARTIAL PLANS

Project
Date: MARCH 9, 2026
Scale: NTS
Sheet: PV-2

ROOF AREA GENERAL NOTES

1. [illegible]
2. [illegible]
3. ALL DC WIRING, CONDUIT, JUNCTION AND COMBINER BOXES SHALL BE MARKED TO WARN PERSONNEL OF HAZARDS.
4. ALL MODULE DC CONNECTORS SHALL BE TWINED INTO THE MODULE FRAME OF THE MODULE AND CLIPPED TO THE FRAME.
5. [illegible]
6. [illegible]
7. CONDUIT ROUTING IS SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO DETERMINE LOCATIONS AND SUBMIT TO SOLAR DEVELOPER FOR APPROVAL.
8. EXPANSION FITTINGS SHALL BE ADDED TO CONDUIT RUNS EVERY 100' OR 6 EXPANSION JOINTS OR THROUGHOUT ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
9. [illegible]
10. ALL EXPOSED EXTERIOR CONDUITS SHALL BE PAINT WITH CORROSION RESISTANT COATING.
11. ENSURE THAT THE SECTION OF ALL ROOF MOUNTED CONDUITS ARE A MINIMUM OF 7/8" ABOVE THE ROOF SURFACE TO AVOID THE NEED FOR ADDITIONAL "E" EXPANSION JOINTS.
12. PROVIDE CLIP SHEETS UNDER ALL CONDUIT SUPPORTS AND ADHERE PER MANUFACTURER'S RECOMMENDATIONS.

STRING WIRING

STRING NUMBER	MODULE TYPE	STRING QTY	QTY OF MODULES	QTY OF DISCONNECTS	MAXIMUM VOC (VDC)	MAXIMUM VMP (VDC)	PAYMENT 1 KWH	COMBINER SUB-HARNESS	VOLTAGE DROP (%)
1	[illegible]	1	41	41	1041	29.15	810	69	2.83%
2	[illegible]	1	41	41	1041	29.15	820	69	2.70%
3	[illegible]	1	41	41	1041	29.15	815	69	2.76%
4	[illegible]	1	41	41	1041	29.15	840	69	2.39%
5	[illegible]	1	41	41	1041	29.15	785	69	3.52%
6	[illegible]	1	41	41	1041	29.15	825	69	2.64%
7	[illegible]	1	41	41	1041	29.15	823	69	2.67%
8	[illegible]	1	41	41	1041	29.15	850	69	2.32%
9	[illegible]	1	41	41	1041	29.15	840	69	2.39%
10	[illegible]	1	41	41	1041	29.15	845	69	2.35%
11	[illegible]	1	41	41	1041	29.15	825	69	2.64%
12	[illegible]	1	41	41	1041	29.15	815	69	2.76%
TOTAL			492	492	12492.00				2.95%

STRING CONDUIT REQUIREMENTS:

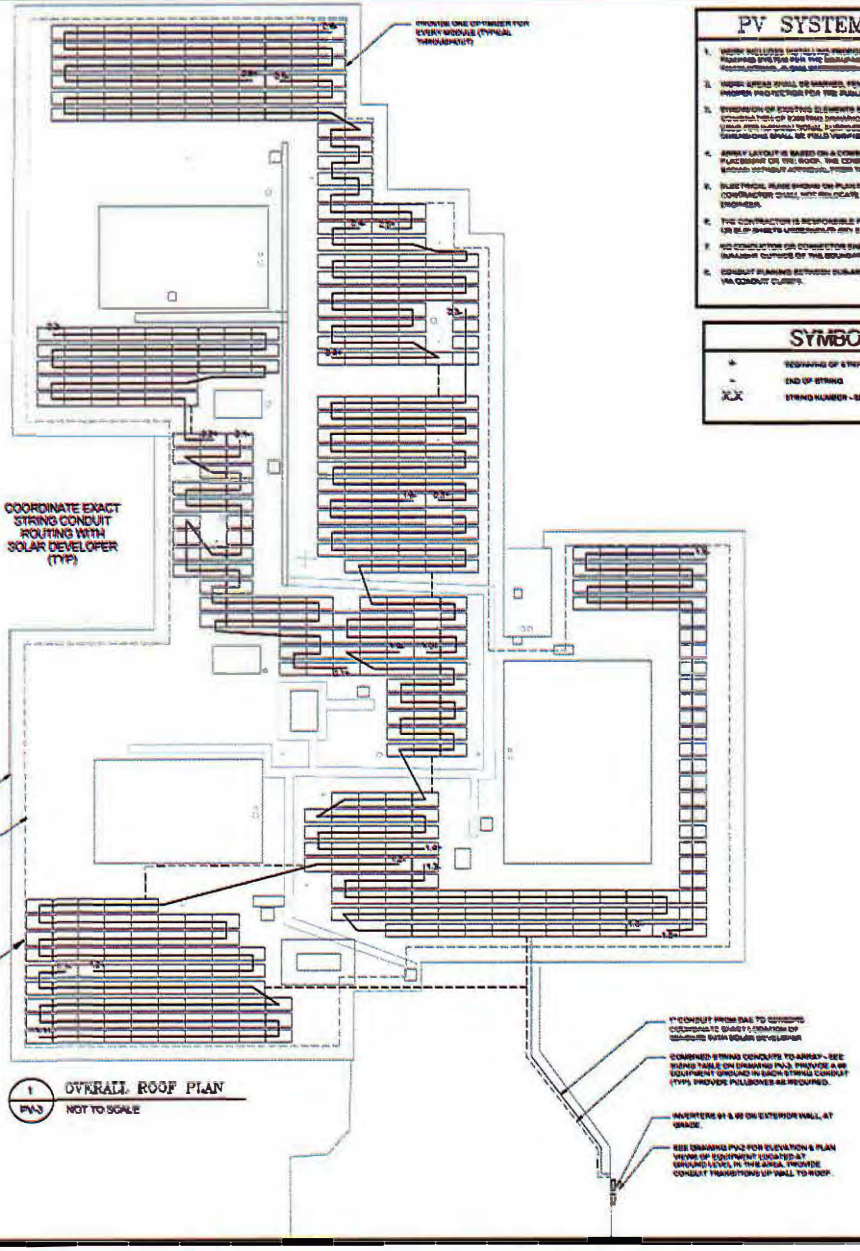
# OF STRINGS PER CONDUIT	MINIMUM CONDUIT SIZE
1 STRING	1"C
2 STRINGS	1-1/2"C
3 STRINGS	1-1/2"C
4-8 STRINGS	2"C
9-10 STRINGS	2-1/2"C
>10 STRINGS	NOT PERMITTED DUE TO DERATING

PROVIDE A #8 AWG EGC IN EACH STRING CONDUIT & BOND PER NEC

RACKING NOTES

1. RACKING NOTES, DRAWINGS AND REQUIREMENTS WILL BE PROVIDED BY SOLAR DEVELOPER AND RACKING MANUFACTURER.

NORTH



1 / PV-3 OVERALL ROOF PLAN
NOT TO SCALE

PV SYSTEM WORK NOTES

1. WORK INCLUDES INSTALLING PROPOSED SOLAR PANEL ARRAY ON TOP OF EXISTING RAISED SYSTEM PER THE MANUFACTURED INSTALLATION PROCEDURES AND [illegible]
2. WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC AND AS REQUIRED BY THE BUILDING INSPECTOR.
3. DIMENSIONS OF EXISTING ELEMENTS SHOWN HERE DETERMINED THROUGH A COMBINATION OF EXISTING DRAWINGS AND FIELD MEASUREMENTS, AND SHOULD BE USED FOR APPROXIMATIONS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4. ARRAY LAYOUT IS BASED ON A COMBINATION OF SHADING, STRINGING, AND WIND ZONE PLACEMENT ON THE ROOF. THE CONTRACTOR SHALL NOT DEVIATE FROM THIS LAYOUT WITHOUT APPROVAL FROM THE ENGINEER.
5. ELECTRICAL RUNS SHOWN ON PLAN REPRESENT THE PROPOSED LAYOUT. THE CONTRACTOR SHALL NOT RELOCATE EQUIPMENT WITHOUT APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND INSTALLATION OF PADS OR SLAB SHEETS UNDERNEATH ANY EQUIPMENT SUPPORTS NOT ANCHORED TO THE ROOF.
7. NO CONDUCTOR OR CONNECTOR SHALL BE EXPOSED TO WEATHERING OR DIRECT SUNLIGHT OUTSIDE OF THE BOUNDARIES OF EACH SUB-ARRAY.
8. CONDUIT PLANNING BETWEEN SUBARRAYS SHALL BE SECURED TO THE RACKING SYSTEM VIA CONDUIT CLIPS.

SYMBOL LEGEND

+	BEGINNING OF STRING
-	END OF STRING
XX	STRING NUMBER - SEE PV-3 FOR ADDITIONAL INFORMATION

Project Info

ENGINEER:

SG ENGINEERING LLC

55 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
rjp@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

100 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 280.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (492) SEG SOLAR SEG-530-BTA-BG MODULES (530W STC BIFACIAL)

EVERSOURCE METERS
07[illegible] & [illegible]
(EXISTING)

EVERSOURCE ACCOUNT
51004973934 (EXISTING)

WRES ID # 523-ESNRES-00823

DAS PROJECT #151-0314-PV

No.		Date
	[illegible]	

ROOF MOUNTED PV SYSTEM

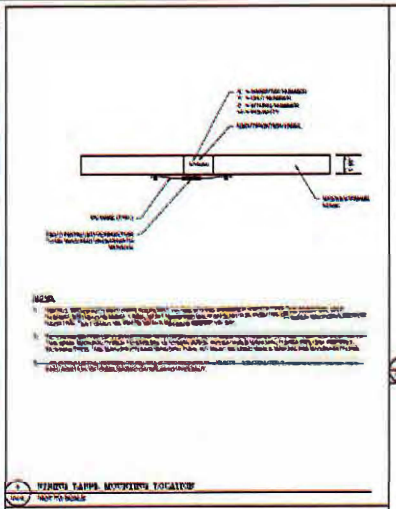
WEST SIDE MIDDLE SCHOOL
483 CHASE PKWY
WATERBURY, CT 06708

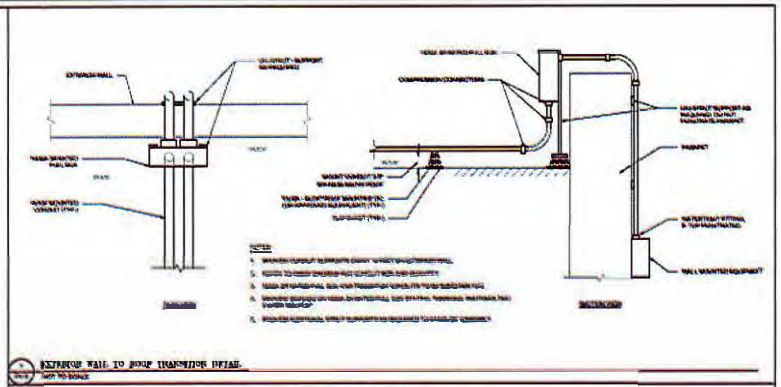
OVERALL ROOF PLAN

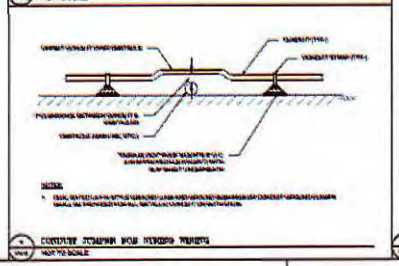
DATE: MARCH 4, 2024	PV-3
SCALE: N.T.S.	

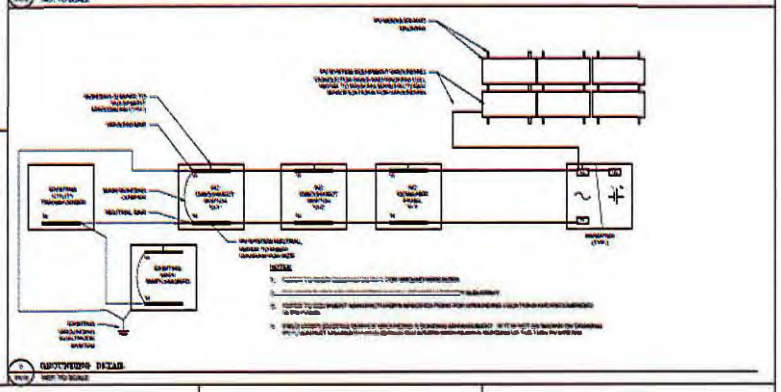
GENERAL NOTES

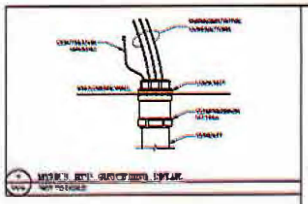
ABBREVIATIONS

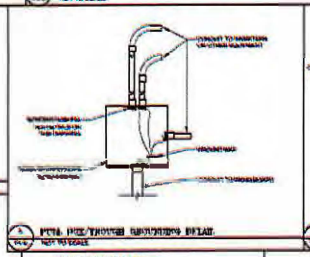


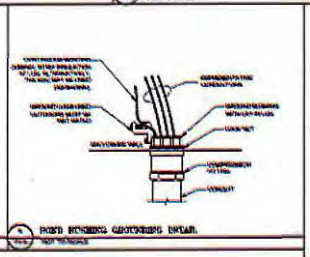


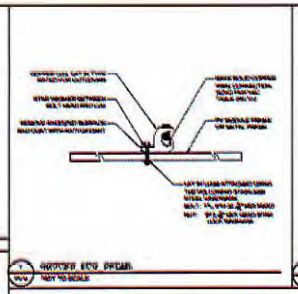




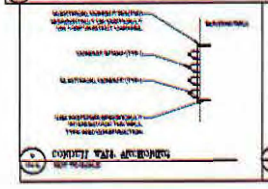


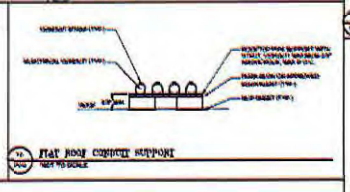


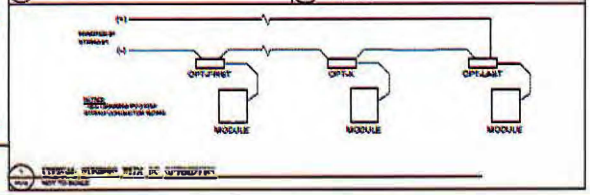












Project Info

ENGINEER:

SG ENGINEERING LLC

55 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:

- 280.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (560) QEG SOLAR SEG-500-BTB-BG MODULES (500W STC BIFACIAL)

EVERSOURCE METERS
01004673 & 00007032
(EXISTING)

EVERSOURCE ACCOUNT
31004673004 (EXISTING)

NRES ID # SID-ESNRES-00823

DAS PROJECT #151-0314-PV

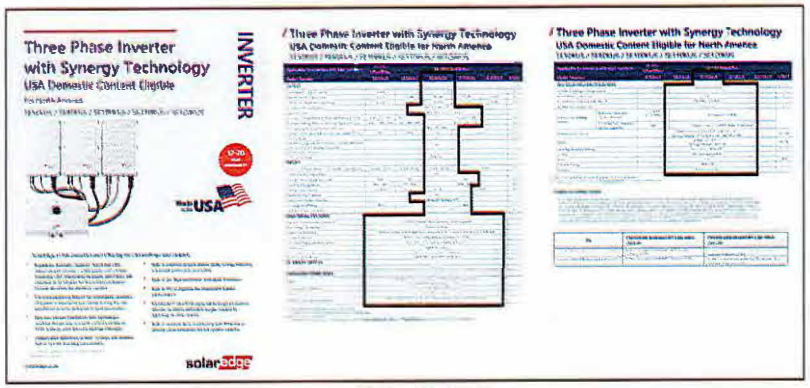
No.		Date

ROOF MOUNTED PV SYSTEM

WEST SIDE MIDDLE SCHOOL
483 CHASE PKWY
WATERBURY, CT 06706

NOTES, DETAILS & ABBREVIATIONS

Sheet	Sheet
Date: MARCH 9, 2026	PV-8
Scale: NTS	



EXTERIOR DATA SHEET
NOT TO SCALE



RAPID SHUTDOWN DEVICE DATA SHEET
NOT TO SCALE



MODULE SEG "G1" DATA SHEET
NOT TO SCALE

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGDESIGN.COM

SOLAR DEVELOPER:
ALL ELECTRIC LLC
102 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 290.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (402) SEG SOLAR SEG-590 STA-BG MODULES (590W STC BIFACIAL)

EVERSOURCE METERS
07900280 & 08087332
(EXISTING)

EVERSOURCE ACCOUNT
01004873034 (EXISTING)

NRES ID # 523-ESNRES-00471

DAS PROJECT #151-0314-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WEST SIDE MIDDLE SCHOOL
463 CHASE PKWY
WATERBURY, CT 06708

EQUIPMENT DATA SHEETS

Date: MARCH 6, 2026
Drawn By: NTV

PV-9



SOURCE: http://www.pvlabels.com/

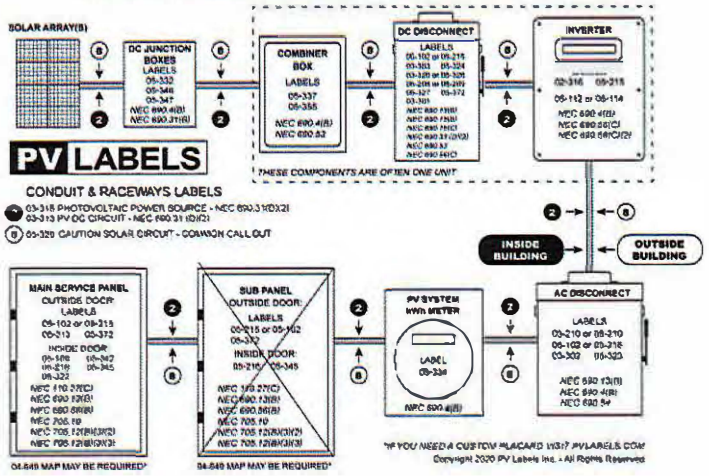
1 PV-10 LABELS



STRING NUMBER LABEL

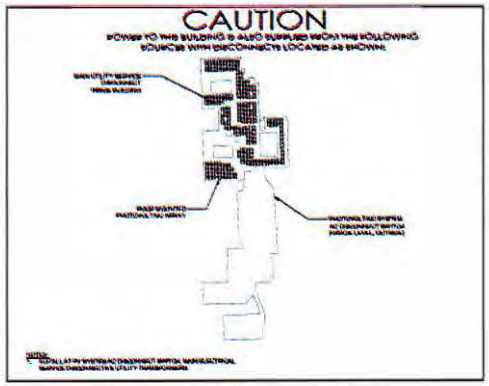
PHOTOVOLTAIC SOLAR SYSTEM MARKING - DC STRINGS

RECOMMENDATIONS BASED ON 2020 NEC, COMMON CALL OUTS AND PACKAGE CONTENTS



SOURCE: http://www.pvlabels.com/

2 PV-10 LABEL LOCATIONS



3 PV-10 POWER SOURCE DIRECTORY

Project Info

ENGINEER:
SG ENGINEERING LLC
56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM

SOLAR DEVELOPER:
ALL ELECTRIC LLC
180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 290.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (692) SEG SOLAR SEG-580-BTA-BG MODULES (580W STC BIFACIAL)

EVERSOURCE METERS
07800292 & 690527332 (EXISTING)

EVERSOURCE ACCOUNT
51004673034 (EXISTING)

NRES ID # SZ3-ESNRES-00823

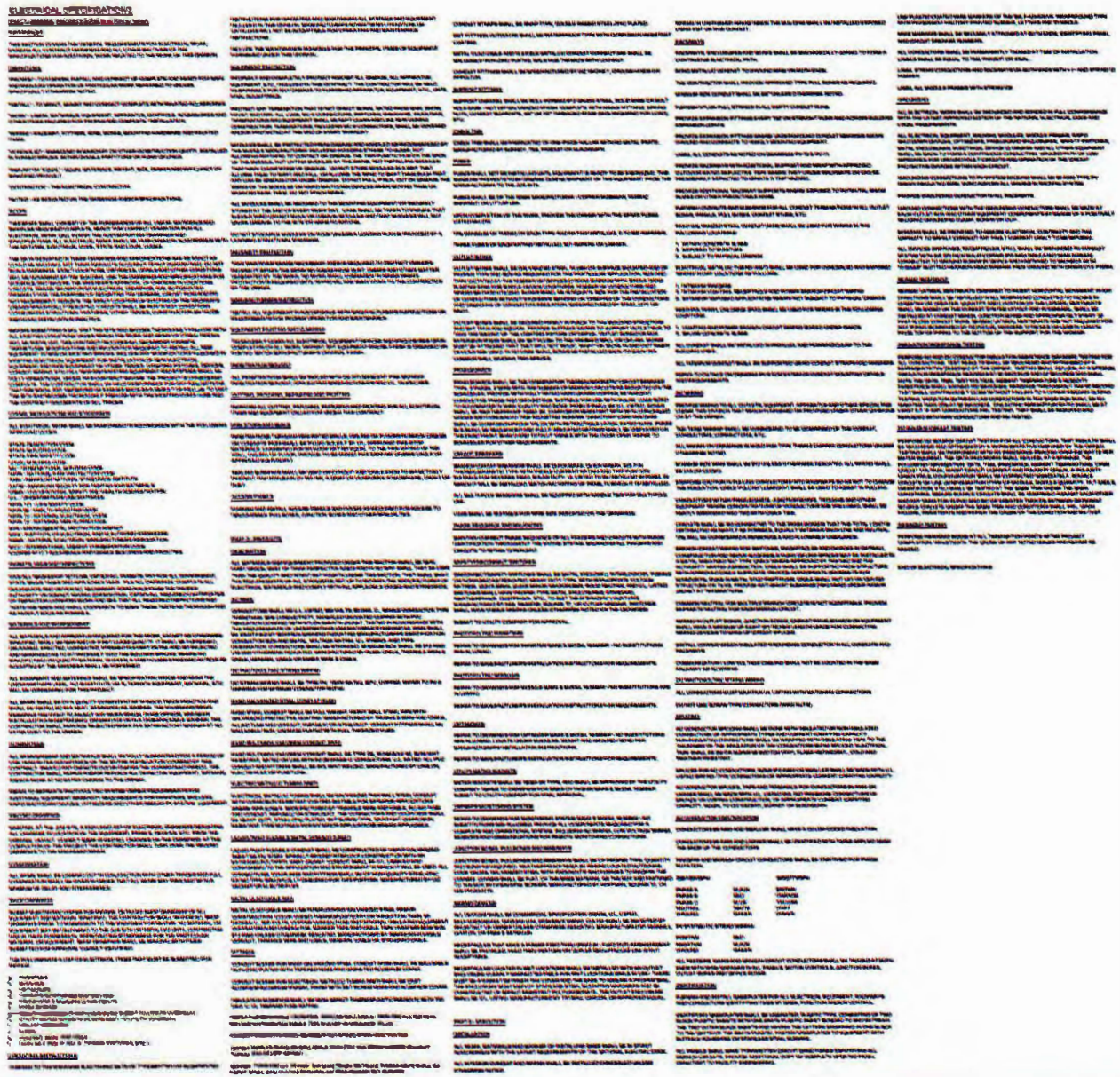
DAS PROJECT #151-0316-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM
WEST SIDE MIDDLE SCHOOL
483 CHASE PKWY
WATERBURY, CT 06708

LABELS & SIGNAGE

Drawn
Date MARCH 2, 2021
Scale NTS
Sheet PV-10



Project Info

ENGINEER:

SG ENGINEERING LLC

56 FOXCROFT COURT
SOUTHINGTON, CT
SGEDESIGN.COM
sge@sgedesign.com

SOLAR DEVELOPER:

ALL ELECTRIC LLC

180 WAMPUS LANE
MILFORD, CT 06460
ALLELECTRICCT.COM

SYSTEM INFO:
- 210.280 KW DC STC + BIFACIAL GAIN
- 200.000 KW AC / 200.000 KVA AC
- (2) SOLAREDGE SE100KUS INVERTERS (100 KWAC)
- (482) SEG SOLAR SEG-390-BTA-BG MODULES (390W STC BIFACIAL)

EVERSOURCE METERS
07000282 & 69052732
(EXISTING)

EVERSOURCE ACCOUNT
51004673034 (EXISTING)

NRES ID # SZ3-ESNRES-00623

DAS PROJECT #151-0314-PV

No.	Revision/Issue	Date

ROOF MOUNTED PV SYSTEM

WEST SIDE MIDDLE SCHOOL
483 CHASE PKWY
WATERBURY, CT 06708

SPECIFICATIONS

Issued: MARCH 9, 2021

Sheet: PV-11

Scale: NTS

Wendell Cross – 151-0310 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0310 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Wendell Cross School.

M.M. Generali – 151-0311 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0311 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at M.M. Generali School.

Sprague School – 151-0312 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0312 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Sprague School.

Tinker School – 151-0313 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0313 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at Tinker School.

West Side School – 151-0314 PV

BOE Motion

Move that the Board of Education authorize the Chair of the Waterbury Board of Education and

the Superintendent of Waterbury Public Schools to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

Building Committee Motion

Move that the Building Committee authorize the Chair of the Building Committee to sign Form SCG-042-REQUEST FOR REVIEW OF FINAL PLANS for CT Department of Administrative Services (DAS) Project Number 151-0314 PV, so that Waterbury Public Schools may submit the Final Plans and professional cost estimate to the CT DAS Office of Grants Administration for their approval prior to commencement of construction of the rooftop solar photovoltaic project at West Side School.

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

CODE CONFORMITY CERTIFICATION

FORM SCG-3030

Director
Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, Connecticut 06103

Subject: State Project Number: 151-0314 PV

LEA: Waterbury Public Schools

Phase: 1 of 1

Facility Name: West Side Middle School

Local Health Department Jurisdiction: Waterbury Health Department

Pursuant to Section 10-292 of the Connecticut General Statutes, the final plans for any phase of a school building project as provided in CGS Section 10-291 must be in conformance with state codes, statutes, regulations and to federal laws. The following documents are attached (mark boxes "x", as appropriate):

Attached	N/A	
☐	☒	ICC Code Review Checklist completed by Local Official or Third-party reviewer
☐	☒	Plan Review Record (PRR) by Local Officials or Third-party reviewer
☐	☒	Design Professional's response to PRR with Local Officials acceptance
☐	☒	Approved Code Modifications
☐	☒	Second copy of Code/Egress/Site drawings for OSCG&R file
☒	☐	Final Construction documents for OSCG&R review

We, the undersigned, have reviewed the construction documents (drawings and project manuals) for the above referenced school building project (the Project) dated 3/9/2026. As confirmation of our review in accordance with OSCG&R Guidelines and Plan Review checklists, we have signed and dated the cover page of the project's drawings and manuals. As it relates to my specific jurisdiction, and to the best of my knowledge, information, and belief, the review has determined the project's construction documents appear to be in compliance with the current Connecticut State Building Code, Fire Safety Code, State Fire Prevention Code, Connecticut Department of Public Health Regulations, Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA) of 1990, and OSHA requirements.

Building Official:

Frank Baker _____ Signature: _____ Date: _____
(Print Name):

Fire Marshal:

Tom Fitzgerald _____ Signature: _____ Date: _____
(Print Name):

Section 504 Official:

Mike Konopka _____ Signature: _____ Date: _____
(Print Name):

Health Inspector:

Richard Lee _____ Signature: _____ Date: _____
(Print Name):

DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS
FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME:	FACILITY NAME AND ADDRESS:	STATE PROJECT NUMBER:
Waterbury Public Schools	West Side Middle School 483 Chase Pkwy, Waterbury, CT 06708	151-0314 PV
		PHASE NUMBER: 1

Estimated date* to begin construction July 6, 2026 Estimated date to complete construction October 1, 2026

*** NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.**

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	6 / 18 / 2026	/ /
School Building Committee	6 / 4 / 2026	/ /

We hereby certify that these **final plans and project manual(s)** as prepared for bidding and dated 3/9/2026, and the **professional cost estimate**, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 5/27/2026, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Chairperson's Name (Type or print) | Signature | Date**

For the School Building Committee:

Chairperson's Name (Type or print) | Signature | Date**

**** Signature dates cannot precede the date on the submitted plans.**

For the Project Architect/Engineering Firm:

CSW Energy (Firm Name (Type or print)) | Signature | (845) 551-7881 (Telephone No.)

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Superintendent's Name (Type or print) | Signature | Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER $10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

FORM SCG-042 Request for Review of Final Plans

State Project No. 151-0314 PV

Project Name: West Side Middle School

Name of Contact Person:	Telephone:	Date:
Chris Palmer, CSW Energy	(845) 551-7881	5/29/2026

Certifications of Local Approval:

I certify that I have local jurisdiction over the **State Building Code** and that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable building codes.

Local Building Official's Name | Signature | Date

I certify that I have local jurisdiction over the **State Fire Safety Code** and that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable fire codes.

Local Fire Marshal's Name | Signature | Date

I certify that I have local jurisdiction over the **State Health Code** and that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable health codes.

Local Health Official's Name | Signature | Date

I certify that I have local jurisdiction over **Section 504 of the Rehabilitation Act of 1973**, and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated 3/9/2026 for the above referenced project comply with all applicable accessibility codes.

Local Federal 504 Official's Name | Signature | Date

NOTES:

1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE

2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.

3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
The Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, CT 06103