To Become Safe room Qualified

Have your shelter designed by a registered engineer that is familiar with the material the structure is manufactured from. This engineer is to be familiar with the design requirements for storm shelters including but not limited to FEMA 320, FEMA 361, NSSA / ICC 500 (2008).

The registered engineer will become the engineer of record for the shelter.

If your shelter has already been designed, you will need to have the design reviewed and updated to satisfy all of the above requirements of ASTM Standards & ADA Requirements

A quality assurance plan, complete drawings and an installation checklist must be part of the design. The installation checklist must be a very thorough step by step document to ensure each step of the installation is properly performed and documented. Realized you can assist your engineer to make this a meaningful document. The checklist must be completed by an individual whom is trained in the installation processes. The individual must sign the documents assuring all the installation steps and criteria were properly performed or satisfied.

After your shelter design, shop drawings and installation checklist are complete you should thoroughly review and confirm this is how you will be building every component of the shelter.

You should then select an NSSA approved third party engineer to do an independent third party review of the design, shop drawings of all components, quality assurance plan and the installation checklist.

Once the third party review is complete the entire packet, must be submitted to the NSSA, to record the shelter type and that it is safe room qualified.

As a NSSA producer member, you are responsible for making sure all aspects of your shelter are manufactured and installed properly. These standard compliance verification and completion of all documents for each shelter, according to QAP, are required to be safe room qualified.
Insurers of Quality in Safe Rooms (Storm Shelters)

**PRODUCER MEMBERS** - are persons, firms, corporations, or partnerships who are engaged in the manufacture or construction of safe rooms (storm shelters) and who certify that the manufacture and installation or construction are in compliance with the ICC/NSSA Standard, FEMA 320 and FEMA 361 Guidelines. Producer Members apply an NSSA seal bearing the Producer Member’s name and a serial number to each safe room (storm shelter) produced. Producer Members may have AUTHORIZED REPRESENTATIVES perform designated functions for which the Producer Member assumes responsibility.

**AUTHORIZED REPRESENTATIVES** – are persons, firms, corporations, or partnerships that are contractually authorized representatives of a Producer Member, who are trained by the Producer Member to perform functions assigned by the Producer Member.

**INSTALLER MEMBERS** - are persons, firms, corporations, or partnerships who install safe rooms (storm shelters) for Producer Members and who bear responsibility for compliance with installation instructions provided by the Producer Member.

**PROFESSIONAL MEMBERS** – licensed design professionals such as architects and engineers who are engaged in the storm shelter industry and who subscribe to the NSSA Bylaws and applicable standards and guidelines.

**THIRD PARTY EVALUATORS** - independent, NSSA-approved, third party, evaluators--architects and engineers--who verify that the Producer Member’s design complies with all aspects of the ICC/NSSA Standard and FEMA 320 and 361 Guidelines, as applicable. Legal considerations dictate that the third-party evaluator can only verify designs and calculations produced by a registered design professional architect or engineer who is the designer of record.

**CHIEF COMPLIANCE OFFICER** - A registered design professional, appointed by NSSA, who is responsible to assure compliance of NSSA Producer Members with the ICC/NSSA Standard and other applicable standards and guidelines and to assure compliance of all NSSA members’ business practices with the NSSA Bylaws. The Chief Compliance Officer is informed of the ICC/NSSA Standard and relevant guidelines and is competent in the field of design of safe rooms (storm shelters) for protection against the effects of tornadoes and hurricanes. The Chief Compliance Officer may be a Producer Member and/or a Professional Member of NSSA.

**Processes for Verifying Standards-Compliance of Safe Rooms (Storm Shelters)**

**General:** Producer Members may present a Quality Assurance Plan (QAP) on or with each set of Construction Documents covering compliance issues. The QAP shall meet requirements of Section 107 of the ICC/NSSA Standard. It shall include the general construction sequence and the type and frequency of construction observations and/or inspections.

The QAP shall be evaluated by an NSSA-approved Third-Party Evaluator before presentation to the authority having jurisdiction (AHJ).
NSSA Compliance Verification Process

**Designer of Record**
For each model, the Designer of Record, who is a licensed design professional:
- Provides engineered drawings and specifications for safe room (storm shelter) to Producer Member. Seals, signs and dates each sheet of drawings.
- Identifies applicable standards and guidelines met or exceeded in design. Include latest editions of ICC/NSSA Standard; FEMA 320 and 361 Guidelines. If differences exist in design criteria, the most stringent shall be met.
  - **Alternate** -- Producer/Contractor specifies which prescriptive design presented in FEMA 320 will be followed. Designer of Record verifies standards-compliance of any design changes or variation from FEMA 320 prescriptive designs

For **above ground** safe rooms (shelters), provide:
- Minimum specifications for foundation or slab design—thickness, reinforcement, overhang; avoidance of pretensioning or post-tensioning strands; anchoring details.
- Assembly and installation instructions including detailed step-by-step installation checklist or a Quality Assurance Plan.

For **below ground** safe room (shelter), provide:
- Specification for site preparation, minimum and maximum slope of grade, slope stabilization
- Design of anchorage, ballasting to prevent buoyancy with saturated soil conditions.
- Step-by-step installation instructions including backfilling, encasement, and compaction or a Quality Assurance Plan. Under-slab-on-grade safe rooms (storm shelters) are included in the standards listed above.
  - Provide installation checklist.
  - Provide list and schedule of needed inspections (may be included in a Quality Assurance Plan).
  - Provides these documents to Producer Member and to NSSA home office.

**Third-Party Evaluator** for standards compliance.
- Evaluates for standards compliance all elements of design
- Reviews and evaluates construction documents and/or detailed Quality Assurance Plan
- Issues statement of scope of third-party evaluation
- Provides evaluation report to Producer Member and to NSSA home office

**Producer Member**
- Provides design drawings and specifications and/or Quality Assurance Plan to authority having jurisdiction when requested
- Follows design drawings and specifications
- Has third party evaluator verify compliance with standards of any change from approved drawings and specifications
- Permits plant or construction site visits by NSSA Chief Compliance Officer and/or inspectors of jurisdictional authorities if required by either. Purpose and focus of visit shall be stated in writing upon arrival
- Provides drawings/specifications and Third Party Evaluator report to NSSA home office if not already sent
- Provides drawings and specifications to owner or installer to obtain building permits as required
- Notifies owner that site must be verified to be outside the floodway to meet FEMA guidelines
- Affixes NSSA Producer Member Seal (Type 1 or Type 2) to each safe room (storm shelter) installed

**Installer** (NSSA Installer Member or Authorized Representative of Producer Member)
- Completes installation checklist.
- Signs Certificate of Installation or separate document that installation instructions were followed. Attach completed installation check list.
- Records GPS Coordinates of installation site; encourages owner to register site with local emergency management agencies
- Records serial number of Producer Member Seal. Affix Type 3 Seal if Type 2 seal has been affixed.

**Inspector**
- Producer/Contractor performs or has Authorized Representative perform scheduled inspections in accordance with the list and schedule of inspections or the Quality Assurance Plan.
- When required by the Authority Having Jurisdiction (AHJ) or by grant authority, the AHJ or a duly appointed inspector performs scheduled inspections and produces an Inspection Report after the final inspection.
- When required by the grant authority, a licensed design professional issues an Inspection Report including a statement of compliance that relevant standards are met.
- When required by the grant authority, the inspector and licensed design professional provide signed copy of inspection report to Producer Member to attach to Certificate of Installation for submittal to authority having jurisdiction (AHJ) or grant administering agency, if any.