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**CSI plant certification shall not be construed as conferring or creating any claim, right, or remedy in customers/clients of the CSI member/producer, the general public, or any other third party nor creating any duty by CSI or the member/producer to customers/clients of the member/producer, the general public, or any other party.**

**The CSI plant certification program is not intended to and does not certify or warrant products of a CSI member/producer in any manner whatsoever.**

The Cast Stone Institute has a commitment to establish a standard of quality that will be recognized and respected by the general public. Cast Stone Institute producer members must be able to attain that standard on a consistent basis.

The plant inspector should determine each of the following items. Each section will be graded according to percentage of compliance. All mandatory items must be in place and the average percentage of compliance for all sections must exceed 80% to qualify for producer membership. Continuing members should exceed 90% compliance with these items, plus 100% of the mandatory items.

**Company Name:** \_\_\_\_\_

**Inspection Date:** \_\_\_\_\_

**Name of Inspector:** \_\_\_\_\_

**Categories:**

- M** - Mandatory 100%
- P** - Primary 90%

Successful CSI Plant Certification will take place only if the plant obtains the following:

1. 100% of all the Mandatory items.
2. 90% of the Primary items.

**Personnel:**

The following are identified and maintained:

	Person	Yes	No	
A. Sales/Estimating		<input type="checkbox"/>	<input type="checkbox"/>	M
B. Drafting	_____	<input type="checkbox"/>	<input type="checkbox"/>	M
C. Production	_____	<input type="checkbox"/>	<input type="checkbox"/>	M
D. Quality Control	_____	<input type="checkbox"/>	<input type="checkbox"/>	M
E. Testing Technician	_____	<input type="checkbox"/>	<input type="checkbox"/>	M
- Current Certificate of Completion		<input type="checkbox"/>	<input type="checkbox"/>	M
F. Delivery and Project Coordination	_____	<input type="checkbox"/>	<input type="checkbox"/>	M
	_____			

**Current Member Criteria**

Each Producer Member must submit testing records to the Institute office between March 1st and March 15th, and also between September 1st and September 15th of each year in order to maintain plant certification.

This submission to include:

1. The last 60 days of 500 CF test data for both compressive strength and absorption, tested in accordance with ASTM C1194 and ASTM C 1195.
2. A current (within the last six months) Independent Lab test, meeting the physical requirements set forth in ASTM C1364 for both compressive strength and absorption, tested in accordance with ASTM C1194 and ASTM C1195.

If multiple deficiencies are found in the submitted data, the member will be placed on a quality audit list and required to submit monthly samples to the testing laboratory contracted with the Cast Stone Institute for a period of six months, and the results will be sent to the Institute office for review. The expense of this testing will be the responsibility of the Producer.

**New Member Criteria:**

In order to qualify Producer Membership, the following records must be submitted to the Institute office along with membership application.

1. Current Independent Lab test (within the last 6 months) indicating applicants ability to manufacture product that meets the physical requirements set forth in ASTM C1364, when tested in accordance with ASTM C1194 and ASTM C1195.
2. The last six months 500 CF test data for both compressive strength and absorption, tested in accordance with ASTM C1194 and ASTM C1195.
3. A current (within the last year) passing Freeze/Thaw test, tested in accordance with ASTM C666.

**Current Records:** (less than (1) one year old)

	Yes	No	
Approved Mix Design Requirements that meets or exceeds ASTM C1364.	<input type="checkbox"/>	<input type="checkbox"/>	M
Approved Shop Drawings.	<input type="checkbox"/>	<input type="checkbox"/>	M
Mill/Test Reports-Reinforcing, Cement, Aggregates.	<input type="checkbox"/>	<input type="checkbox"/>	M
Cast Stone S.D.S.	<input type="checkbox"/>	<input type="checkbox"/>	M
Scales are checked and calibrated annually by a state licensed scale company (see state certification papers).	<input type="checkbox"/>	<input type="checkbox"/>	M
ASTM Certificates for All Materials:			
A. Cement (Meets C-150)	<input type="checkbox"/>	<input type="checkbox"/>	M
B. Steel/Rebar/Other Applicable Reinforcing (Meets A-615)	<input type="checkbox"/>	<input type="checkbox"/>	M
C. Aggregates (Meets ASTM-C33 except for gradation with monthly sieve analysis reports)	<input type="checkbox"/>	<input type="checkbox"/>	M
D. Retain Monthly Sieve Reports for Last 24 Months	<input type="checkbox"/>	<input type="checkbox"/>	M
E. Admixture (C-494, if mix design requires the use of a water reducing, retarding, or accelerating admixture)	<input type="checkbox"/>	<input type="checkbox"/>	M
F. Color Pigments (ASTM C979)	<input type="checkbox"/>	<input type="checkbox"/>	M
G. Water (Potable)	<input type="checkbox"/>	<input type="checkbox"/>	P

### Test Reports and Data Requirements:

	Yes	No	
PSI Minimum 6,500 (Independent lab tests at least every (6) months).	<input type="checkbox"/>	<input type="checkbox"/>	M
Water Absorption less than 6% (Independent lab tests at least every (6) months).	<input type="checkbox"/>	<input type="checkbox"/>	M
Freeze-Thaw Test Report (C-666-97) indicating compliance- within last 24 months.	<input type="checkbox"/>	<input type="checkbox"/>	M
Current Industry ASTM C1364 Standards on file.	<input type="checkbox"/>	<input type="checkbox"/>	M
CSI Industry Standards and Specifications on file.	<input type="checkbox"/>	<input type="checkbox"/>	M
Product Data and SDS Sheets on hand for all admixtures, release agents and chemicals used.	<input type="checkbox"/>	<input type="checkbox"/>	M
Product Delivery Records are maintained.	<input type="checkbox"/>	<input type="checkbox"/>	P
Product Inspection Records are maintained.	<input type="checkbox"/>	<input type="checkbox"/>	P

### Quality Control Testing:

	Yes	No	
As required by most current ASTM C1364, one (1) sample from every (500) cubic feet cast will be tested to meet ASTM C1194 and C1195 in house or by a private lab and records kept - Last 24 Months on File.	<input type="checkbox"/>	<input type="checkbox"/>	M
500 cubic feet In House testing - Records kept 24 months (exclusive of last 6 months).	<input type="checkbox"/>	<input type="checkbox"/>	P
All new mix designs used in production of material, classified as Cast Stone, in accordance with most recent ASTM C1364 and CSI 4720, shall be tested for strength and absorption compliance prior to producing units.	<input type="checkbox"/>	<input type="checkbox"/>	M

### General Plant Safety Requirements:

	Yes	No	
All CSI plants will be OSHA compliant per a letter of compliance from one of the following: 1. OSHA consulting service 2. Producer/Member's Insurance Company. 3. Local Safety and Health Independent Consultant	<input type="checkbox"/>	<input type="checkbox"/>	M

### Shop Drawings:

	Yes	No	
All dimensions and details are shown on shop drawings.	<input type="checkbox"/>	<input type="checkbox"/>	M
Units are identified with a piece Marking system.	<input type="checkbox"/>	<input type="checkbox"/>	M
Finished surfaces are delineated by identifiable marks on all drawings.	<input type="checkbox"/>	<input type="checkbox"/>	M
Reinforcing, <i>if applicable</i> , type, size, quantity and location are identified.	<input type="checkbox"/>	<input type="checkbox"/>	M
Handling/Lifting Devices, when shown (Type and Location).	<input type="checkbox"/>	<input type="checkbox"/>	M

### Samples:

	Yes	No	
Samples are on file and in finishing area for all projects being manufactured.	<input type="checkbox"/>	<input type="checkbox"/>	M
All samples clearly marked and readily identified.	<input type="checkbox"/>	<input type="checkbox"/>	M
Samples are easily accessible and available for review of all products being manufactured, and mix designs on file.	<input type="checkbox"/>	<input type="checkbox"/>	M

**Raw Materials:**

	Yes	No	
No Cross Contamination of Aggregates in bins consisting of walls and a floor.	<input type="checkbox"/>	<input type="checkbox"/>	M
Bulk cements are checked for type and color before being pumped into silo.	<input type="checkbox"/>	<input type="checkbox"/>	P
Bag cement is protected from elements.	<input type="checkbox"/>	<input type="checkbox"/>	M
Bag cement is stored clear of the ground.	<input type="checkbox"/>	<input type="checkbox"/>	M
Rotate stock of bagged cements so oldest bag is used first.	<input type="checkbox"/>	<input type="checkbox"/>	P
Control Samples are kept of each raw material being used for comparison to new deliveries	<input type="checkbox"/>	<input type="checkbox"/>	M
§ Grade of reinforcing stamped and is verified at time of delivery. All reinforcing to be grade #40 or greater.	<input type="checkbox"/>	<input type="checkbox"/>	M

**Batching Procedures:**

	Yes	No	
Approved Mix Designs are on file and posted or displayed at mixing station.	<input type="checkbox"/>	<input type="checkbox"/>	M
Batching methods are by volume or weight capable of consistency of 3% ±	<input type="checkbox"/>	<input type="checkbox"/>	M
Proper mixing procedures are followed, moist aggregates, cement, water and admixtures as recommended by manufacturer.	<input type="checkbox"/>	<input type="checkbox"/>	P
Check water content in mix by moisture meter or other consistent procedure. A slump/flow spread test is used for verification of wet cast mix.	<input type="checkbox"/>	<input type="checkbox"/>	M
Mixers are clean and have adequate lighting and are in good, safe repair.	<input type="checkbox"/>	<input type="checkbox"/>	M
Mixers are completely discharged after mixing before a new batch is begun.	<input type="checkbox"/>	<input type="checkbox"/>	M
Mix is transported to final mold by means that prevent contamination.	<input type="checkbox"/>	<input type="checkbox"/>	M
Mixers are thoroughly cleaned between color changes, in order to prevent color inconsistencies.	<input type="checkbox"/>	<input type="checkbox"/>	M

**Molds:**

	Yes	No	
Molds must be constructed as not to deflect or move during casting.	<input type="checkbox"/>	<input type="checkbox"/>	M
A qualified casting person checks all molds for correct dimensions prior to casting.	<input type="checkbox"/>	<input type="checkbox"/>	M
Removable or Drafted sides are provided on all molds to prevent damage while de-molding	<input type="checkbox"/>	<input type="checkbox"/>	M

**Vibrant - Dry Cast Stone:**

	Yes	No	
Employees are using short stroke bench rammers of adequate size and pressure to tamp earth moist mix.	<input type="checkbox"/>	<input type="checkbox"/>	M
All molds are checked dimensionally before filling with mix.	<input type="checkbox"/>	<input type="checkbox"/>	M
Molds are secured in all areas to maintain dimensions.	<input type="checkbox"/>	<input type="checkbox"/>	M
Tampers must be aware of mix moisture conditions at all times, useable working time 60 minutes, max. No dry or re-tempered mix shall be used.	<input type="checkbox"/>	<input type="checkbox"/>	M
Tampers scratch between layers with a hand rake.	<input type="checkbox"/>	<input type="checkbox"/>	M
Tampers place reinforcement after raking between layers.	<input type="checkbox"/>	<input type="checkbox"/>	M
Tampers work in a straight back and forth overlapping pattern.	<input type="checkbox"/>	<input type="checkbox"/>	M
Exposed sides of product appear as dense as the face of the piece.	<input type="checkbox"/>	<input type="checkbox"/>	M
Bottoms of produced pieces are to be smooth even though they are not exposed.	<input type="checkbox"/>	<input type="checkbox"/>	M
Finished edges are tooled, as needed, before sending stone into the curing area.	<input type="checkbox"/>	<input type="checkbox"/>	M
Curing is done in a controlled environment for not less than 12 hours after casting.	<input type="checkbox"/>	<input type="checkbox"/>	M

**Wet Cast Stone:**

	Yes	No	
All molds are sealed and made watertight by either using silicone caulk or foam tape or other suitable sealing material.	<input type="checkbox"/>	<input type="checkbox"/>	M
All surfaces of molds in contact with the stone mix must be coated with a mold release agent.	<input type="checkbox"/>	<input type="checkbox"/>	P
Stone mix is to be evenly placed in the mold, internal vibrator not to be used to spread mix.	<input type="checkbox"/>	<input type="checkbox"/>	M
Adequate vibration is to be used to consolidate mix in mold and to minimize air voids.	<input type="checkbox"/>	<input type="checkbox"/>	M
Non-Exposed areas of produced pieces are to be finished with a float or trowel so as to have a flat finish.	<input type="checkbox"/>	<input type="checkbox"/>	M
Steps are taken to contain and keep in moisture during the curing process.	<input type="checkbox"/>	<input type="checkbox"/>	P

**Machine Made Cast Stone:**

	Yes	No	
Molds and shoes are periodically checked for wear in order to maintain crisp edges.	<input type="checkbox"/>	<input type="checkbox"/>	M
Exposed sides of finished product appear as dense as the face.	<input type="checkbox"/>	<input type="checkbox"/>	M
Regular maintenance schedule is followed for all moving parts of automated equipment & repair.	<input type="checkbox"/>	<input type="checkbox"/>	M
Mix design for machine-made material should be the same as that used for hand-made material.	<input type="checkbox"/>	<input type="checkbox"/>	M
Curing is done in a controlled environment for not less than 12 hours after casting.	<input type="checkbox"/>	<input type="checkbox"/>	M

**Finish:**

	Yes	No	
The product finish is to be a fine-grained, or custom texture per CSI standard color and finish specification.	<input type="checkbox"/>	<input type="checkbox"/>	M
Finish area has adequate equipment and lighting for handling, finishing and palletizing finished stone.	<input type="checkbox"/>	<input type="checkbox"/>	P
Trowel marks or imperfections on finished surfaces are sanded or washed away.	<input type="checkbox"/>	<input type="checkbox"/>	M
Stones are identified by project number and adequately packaged to prevent damage in transit.	<input type="checkbox"/>	<input type="checkbox"/>	M

**Finished Product Requirements:**

	Yes	No	
All stones are checked dimensionally using approved shop tickets or drawings.	<input type="checkbox"/>	<input type="checkbox"/>	M
All stones are checked against the sample for color and texture finish.	<input type="checkbox"/>	<input type="checkbox"/>	M
Stone tolerances are checked according to CSI standards.	<input type="checkbox"/>	<input type="checkbox"/>	M
Piece marks are both visible and permanently marked on each stone and the outside of each pallet.	<input type="checkbox"/>	<input type="checkbox"/>	M
No seams, tamp marks, patches, imperfections or air voids are visible from a distance of five feet in direct sunlight on any exposed side of the stone.	<input type="checkbox"/>	<input type="checkbox"/>	M
All stones are checked for soft edges, or soft tamping, ragged edges, visible cracks, or foreign matter in the face of the stones.	<input type="checkbox"/>	<input type="checkbox"/>	M

**General Plant Requirements:**

	Yes	No	
Plant has sufficient heat to maintain a minimum 60 degrees.	<input type="checkbox"/>	<input type="checkbox"/>	<b>P</b>
Plant has adequate lighting in all production and finish areas.	<input type="checkbox"/>	<input type="checkbox"/>	<b>P</b>
Plant has sufficient storage room for at least one Month's production within the confines of plant premises.	<input type="checkbox"/>	<input type="checkbox"/>	<b>P</b>
All stones are palletized or properly stored off the ground and are marked clearly for quick identification.	<input type="checkbox"/>	<input type="checkbox"/>	<b>M</b>
Housekeeping is carried out through out the plant and storage areas are kept in a neat and orderly manner free of all debris.	<input type="checkbox"/>	<input type="checkbox"/>	<b>M</b>