CONCRETE SASK PLANT CERTIFICATION FOR READY MIXED CONCRETE PRODUCTION FACILITIES

AUDIT AND CHECKLIST

EIGHT 8th EDITION
JANUARY 2026

PRODUCTION FACILITIES INFORMATION

Producer Name: _____

Company Address: _____

Plant Location: _____

Contact Person: _____

Telephone Number: _____

Email: _____

INSPECTION INFORMATION

Inspection Date: _____

Auditing Engineer: _____

Technical Personnel: _____

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FOREWARD AND APPLICANT ACKOWLEDGEMENT

Forward

Concrete is a manufactured product, the quality and uniformity of which correlates to a producer's manufacturing process (including production controls). The concrete industry recognizes that good quality ready mixed concrete ("**Concrete**") is produced by mixing suitable ingredients in appropriate proportions. These ingredients must be thoroughly blended, and producers must ensure that the finished product is delivered to customers without damage. The production of Concrete is contingent on multiple factors, including, but not limited to, utilization of appropriate good quality, well-maintained equipment.

Concrete Sask is a member of the Canadian Ready Mixed Concrete Association (CRMCA). Concrete Sask has a Concrete Production Facilities Certification Program (the "**Program**") that its members may access. Under the Program, an independent party inspects a production plant and determines whether the plant can produce good quality concrete, based on whether the plant meets the specifications that are set out in the checklist contained within this Manual (the "**Checklist**"). A certificate of conformance issued by Concrete Sask to a producer of a Concrete production facility (a "**Certificate**") confirms that the producer's manufacturing plant meets the specifications set out in the Checklist.

Participation in the Program is voluntary.

Acknowledgment by Applicant

In executing and delivering the Acknowledgment contained in this Manual, the Applicant acknowledges and agrees that neither Concrete Sask nor Concrete Sask's directors, officers, employees or representatives have made or purport to make any representations, warranties, or covenants with respect to the specifications or information contained in this Manual or the Checklist or the results obtained by use of the Checklist; nor is Concrete Sask liable for any damage, loss or claims that the Applicant may incur in relation to a plant inspection or the Checklist, including those of an incidental or consequential nature.

The Applicant acknowledges and agrees that multiple factors apply to the manufacturing of good quality Concrete. Concrete Sask provides no assurance that a plant that is certified in accordance with the Program will deliver good quality Concrete. The Certificate is intended only to evidence that certain manufacturing plant capabilities exist.

EXECUTIVE SUMMARY

The Manual

This Manual consists of the following:

1. Forward and Acknowledgement
2. Executive Summary
3. Inspection Procedures
4. Checklist for Ready Mixed Concrete Production Facilities
    a. Material Storage and Handling
    b. Batching Equipment
    c. References
5. Verification of Inspection and Application for Certificate
6. Scale Checking Agreement and Volumetric Batching Devices and Dispensers **(Scale Checking Agreement)**
7. Truck Mixer Fleet Maintenance Agreement
8. Engineer Information Form
9. Appendices

Any ready mixed Concrete producer who is a member of Concrete Sask may obtain, free of charge, copies of this Manual for each plant that a producer wishes to have inspected under the Program.

Inspection Process

Any member of Concrete Sask that wishes to apply for certification under the Program may contact Concrete Sask and request an inspection of the producer's manufacturing plant. Concrete Sask will then retain an independent, registered Professional Engineer, licensed to practice engineering in Saskatchewan (the "**Engineer**") for the inspection. The Engineer will have experience in Concrete materials and Concrete construction. The Engineer will inspect the applicant's production facility or will arrange for an accredited professional technologist or designated examiner to do so (in either case, the "**Inspector**").

The Inspector will assess whether a producer's manufacturing facilities conform to all of the specifications set forth in the Checklist. The producer is expected to provide the Inspector with reasonable co-operation during the inspection, including with respect to working space, labour and access to equipment. Wherever possible, the Inspector will work with the producer to correct any deficiencies, as the inspection progresses. Concrete Sask encourages producers to instruct their staff to co-operate with the Inspector to expedite the inspection, and where necessary and possible, to correct deficiencies in plant installations or operations as the inspection progresses.

The Checklist

While inspecting a production facility, the Inspector will complete the Checklist, to determine whether the producer's plant conforms to all the specifications in the Checklist. In completing the Checklist, the Inspector will enter one of the following symbols, as appropriate, in the space provided in the Checklist.

√ if the requirement is met
F (failed) if the requirement is not met
N/A (not applicable) if an item is not applicable to the type of plant being inspected

The Inspector may append explanations where the Inspector considers that useful.

The Inspector will initial each page of the Checklist, and will submit the original of the completed Checklist and accompanying documents to Concrete Sask. The Inspector will provide a copy of the completed Checklist to the producer for the producer's records and will retain a second copy for the Engineer's file.

Ancillary Documents

Following the Inspector's inspection and confirmation that the plant conforms with all the items in the Checklist, the Inspector will have an authorized representative of the producer to sign the Scale Checking Agreement, the Truck Mixer Fleet Maintenance Agreement, and the Acknowledgment Forms contained herein (collectively, the "**Ancillary Documents**").

Certification

i. The successfully completed Audit and Checklist shall be valid for a period of **three (3)** years from the anniversary date
ii. A producer may not assign the Certificate to any other party, and the Certificate becomes invalid upon change of ownership of the facility
iii. The Certificate may be revoked at the sole discretion of ConcreteSask (note g).
iv. All past and current documentation shall be available for inspection at the time of audit or during a random inspection. This includes:
    a. Scale calibration certification worksheets from the past three (3) years
    b. Admixture and water meter (if applicable) calibration records for the past three (3) years
v. While the Audit and Checklist is valid for a period of up to three (3) years the Certificate remains valid only if the following are submitted **annually** to ConcreteSask by the concrete producer:
    a. Scale calibration worksheets from the past year (1 for every six months of operation)
    b. Admixture and water meter (if applicable) calibration records for the past year (1 for every six months of operation)

Non-Conformance with these requirements can result in the requirement of another full Audit process carried out by an approved third party at the expense of the concrete company, or loss of certification of the concrete production facility (the above requirements do not apply to any facility that is closed). Re-application is subject to the terms and conditions of ConcreteSask.

Recertification

A producer may apply to Concrete Sask for recertification of a plant prior to the expiration date of the certificate. A plant inspection and audit will be necessary as part of the recertification process and **Concrete Sask will require the producer to execute and deliver new Ancillary Documents.**

Suspension or Revocation of a Certificate

Concrete Sask may suspend or revoke any Certificate issued by Concrete Sask, following a resolution passed by a two-thirds majority vote of Concrete Sask's Board of Directors (a "**Resolution**"), for any of the following reasons (each, an "**Event**"):

i) The plant subject to the Certificate changes ownership.
ii) The plant has been moved.
iii) Changes are made to the plant with respect to items listed in the Checklist or the Ancillary Documents that the producer executed prior to issuance of the Certificate.

Provided that no such suspension or termination shall take place until the Certificate holder has had an opportunity to dispute the suspension or termination in accordance with the following procedure:

i) Upon becoming aware of an Event, Concrete Sask shall provide written notice (using the contact information indicated in the Acknowledgment) to the Certificate holder that Concrete Sask plans to suspend or terminate the Certificate holder's Certificate (the "**Notice**"), and why. Within **15** days following the date of the Notice (the "**Response Deadline**"), the Certificate holder may submit a response to Concrete Sask (a "**Response**"), disputing Concrete Sask's intention to revoke the Certificate, and explaining the basis for the certificate holder's dispute.

ii) If the Certificate holder submits a Response, it shall also provide relevant supporting documentation for consideration by Concrete Sask's Board of Directors.

iii) If Concrete Sask receives a Response from the Certificate holder, then within **30** days after Concrete Sask's receipt of the Response, and following a Resolution, Concrete Sask shall issue a final written decision regarding whether the Certificate is revoked or suspended (effective as of a specified date), or whether the certificate will remain in force**.**

iv) If the Certificate holder does not provide a Response on or before the date of the Response Deadline, the Certificate shall be deemed to be suspended or revoked, as the case may be, immediately following any Resolution to that effect. Concrete Sask shall provide the producer with prompt notice of such suspension or revocation.

INSPECTION PROCEDURES

The references listed at the end of the document provide useful information for evaluating the production facilities. It is expected that the examining engineer will employ his/her professional judgement in interpreting the requirements and will use technical assistance where it is needed. The guidance herein provided is for instruction only and does not modify the requirements of certification. The numbering system below corresponds to that in the checklist. Reference is made only to items not considered self-explanatory.

The objective of inspection and certification is to assure adequate facilities, and it must therefore be assumed that the producer will co-operate fully to provide the inspecting engineer with working space, labour and access to equipment. It is most desirable that, wherever possible, the engineer supplies information to and works with the producer to correct deficiencies as the inspection progresses. It will be the responsibility of the inspecting engineer to establish that the information on the Certificate of Conformance is correct before signing and sealing the document.

Scales

In lieu of his own detailed, independent check of scale accuracy, the engineer may accept evaluation of a qualified expert. It is probable that inspections made by a scale manufacturer's technical staff will be considered satisfactory by the engineer but he/she will be the sole judge of their validity. In checking a scale system for accuracy under Section 6 of the checklist, cut-off, signaling and dampening devices and similar appurtenances may be removed.

Mass Setting Devices

Depending on the type of plant, mass-setting devices may be scale-poises, pointers, dials, punch cards, etc. Whatever is used must permit distinguishing differences as small as 0.1% of the capacity of each scale.

Batching Systems

A usual problem will be to distinguish between automatic and semi-automatic systems or between semi-automatic and manual systems. The former two can be distinguished as follows:

- In an automatic system, the entire sequence of measurement of all major ingredients - cementitious materials, aggregates and water, is actuated by a single operation (i.e., pushing a button, accessing a computer mix code or inserting a card) after which the cycle is completed without further attention.
- In a semi-automatic system, the weighing of an ingredient is actuated separately by the operator, but is terminated automatically when the proper amount has been reached; and
- In a manual operation, cut-off of a material at the proper quantity is accomplished by the operator. The system shall be classed as manual if any major ingredient – cementitious materials, aggregates or water – is batched manually.

Central Mixer

Procedures for measuring the uniformity of concrete from central mixers are given in CSA A23.1:24. In using the test, the engineer should require that the materials be batched and the equipment be operated in accordance with the methods employed in operation of the plant.

Truck Mixers and Agitators

Evaluation of delivery units must involve some subjective judgement. Particularly in large fleets, defects may exist in a small percentage of units as they approach the time for scheduled maintenance or rehabilitation. It should be assumed however, that these would not constitute more than ten percent (10%) of the fleet at one time. The record of acceptable and unacceptable units is intended to provide a general picture of condition. A purchaser may request up-to-date evaluations, if he/she intends to restrict the use of questionable units.

RAW MATERIALS

1. Cementing Materials

1.1 Bins or silos are tight and with free movement to discharge opening. ☐

1.2 Separate storage is provided for different types of cementing materials to prevent contamination. ☐

1.3 All cementitious feeder pipes are marked and designated. ☐

1.4 Mill test certificates and SCM test reports from a North American Certified Laboratory are on file and available for review, as per requirements of CSA A3001 and CSA A23.1:24). ☐

2. Aggregates

2.1 Aggregate storage is arranged to ensure that each aggregate as removed is clean, distinct and not intermingled with others. ☐

2.2 Procedures for unloading and storing of aggregates prevent harmful segregation. ☐

2.3 Inter-facility handling and transportation of aggregates prevent harmful segregation. ☐

Separate storage bins compartments or storage areas for each size and type of aggregate is properly constructed and charged to prevent mixing of different sizes and types. ☐

2.4 The Concrete Producer must provide documentation from the Raw Material Supplier certifying that all primary aggregates used conform to CSA A23.1:24. The Raw Material Supplier must also have on record material conformance test results from a certified laboratory for review, current as per CSA A23.2-30A. ☐

3. Water

3.1 Adequate supply, with pressure sufficiently constant or regulated to prevent interference with accuracy of measurement, where flow meters are used to measure water. The flow mater shall be calibrated and documented at intervals of no more than six (6) months. ☐

3.2 The water used meets the requirements of CSA A23.1:24. Water can be from one or more of the following sources (only check the sources that apply):

a) Potable source (supplied by a government/commercial agency) ☐

b) Non-potable source ☐

c) Water from concrete production operations ☐

(See Appendix B for definitions of water sources)

Inspector Initials _____

4. Admixtures

4.1 Storage of liquid admixture is provided to prevent event damage by freezing or contamination. ☐

4.2 Agitation provided for liquid admixtures that are not stable solutions. ☐

4.3 Each admixture is measured and discharged separately. ☐

4.4 The concrete producer has a Dispensing System/Calibration report dated within six months of the audit date from the Admixture Supplier. The Admixture Supplier must also provide a letter or documentation certifying that all admixtures used conform to CSA A23.1:24, Table 23. ☐

4.5 Admixture dispensing system is visible to batching personnel by a camera system or other methods to observe the dispensing of the admixtures. ☐

5. Winter Concrete

5.1 When a plant produces concrete regularly in sub-freezing weather, heating facilities for admixtures, water and/or aggregates are provided. ☐

Inspector Initials _____

BATCHING EQUIPMENT

6. Scales

6.1 Each scale comprised of a suitable system of levers or load cells which will weigh consistently within the tolerance given in 6.2, with loads indicated whether by a beam with balance indicator or a full-reading dial. Digital read-out or display may be accepted in lieu of beam or dial indication, provided readings distinguish sufficiently small differences to permit verifying accuracy, in accordance with 6.2. ☐

6.2 Each scale accurate to within ± 0.20% of scale capacity throughout the range of use. For direct digital read-out, the tolerance shall be increased to ± 0.25% to allow for tracking restrictions. ☐

6.3 Plant owner agrees to recheck scales in accordance with the following circumstances of plant operation: ☐

- Every 180 days when plant is operational year-round;
- At the beginning of the construction year if plant is operated seasonally;
- Whenever alterations or additions are made to the plant which might affect the weighing accuracy of the scales. (See the Scale Checking Agreement).

6.4 Mass-setting devices capable of being set to 0.1% of the total capacity of the scale. (No mass-setting device is required for a dial scale in a manual plant.) ☐

6.5 Pivot and bearing loops of all scales made of hard metal to assure sustained accuracy. There must be no evidence of burring or wear. ☐

6.6 Lever system scales so designed that center of gravity of gross load always lies within load pivots. ☐

Note:

- **Each scale must be calibrated at a minimum of 2 points within 20% and 80% of the scales normal operating range and meet the requirements of CSA A23.1:24, Table 23.**

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7. Beam Scales:

7.1 Provided with zero balance beam, balance indicator and separate weighing beam for each ingredient of a batch to be weighed on the same scale. ☐

7.2 Beam poises corrosion resistant, equipped with positive and accurate holding devices, and capable of being set to the minimum graduate interval, which shall not be greater than 0.1% of capacity with a clear interval of not less than 0.8mm. ☐

7.3 Balance indicators sufficiently sensitive to show movement when mass corresponding to 0.1% of scale capacity is placed in the batch hopper at a load equal to or greater than 50% of scale capacity. Pointer travel at least 5% of net rated capacity of largest weigh beam or 90kg., whichever is less, for under-load and 4% or 45 kg., whichever is less, for over-load; provision made for damping oscillation or pointer. ☐

7.4 Load-cell scales arranged to transmit load to one or more cells, directly or through a system of levers in such a way that the cell system registers the entire load accurately on the load indicating device. ☐

7.5 Dial Indicating Scales

- Have dial indicators and dial faces protected from dust.
- Dials indicate load in batches continuously from zero balance to full weighing capacity of scale.
- The clear interval between graduations on the circular reading line of the dial face not less than 1mm. ☐

Note:

Each scale must be calibrated at a minimum of 2 points within 20% and 80% of the scales normal operating range and meet the requirements of CSA A23.1:24, Table 23.

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8. Batchers – General

8.1	Batchers for weighing materials consists of suitable containers freely suspended from a scale system and equipped with the necessary charging and discharging mechanisms.	☐
8.2	Cement and other cementitious materials weighed on a scale and in a weigh hopper separately from other ingredients.	☐
8.3	Batchers capable of receiving rated loads without contact of the weighed materials with the charging system.	☐
8.4	Cement batchers equipped with dust seal between charging mechanism and hopper, installed in such a way that weighing accuracy will not be affected; cement weigh hopper vented to permit air escape; hopper self-cleaning to ensure complete discharge.	☐
8.5	Batcher charging mechanism designed and operated to stop flow of material within the weighing tolerances specified in Section 9 and preventing loss of material when closed.	☐
8.6	Vibrators and other appurtenances installed and operated so as to not affect the accuracy of weighing.	☐
8.7	The entire weigh batching system and equipment sufficiently protected against weather conditions.	☐
8.8	Admixture dispenser systems capable of measurement within tolerances indicated in Section 9.4, and equipped with a calibrated container in which the admixture may be collected to verify the accuracy of measurement; for positive displacement dispensing systems, such verification by means of a calibrated container may be conducted on a periodic basis.	☐
8.9	Admixture dispensers located to permit batching personnel to observe the dispensers and adjust the amount of admixture being batched if necessary. Note: The batching personnel should have an unobstructed view of the admixture dispensers. Use of cameras mounted near the admixture dispensers or other methods to allow batching personnel to see the admixture dispensers may be required.	☐

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9. Accuracy of Plant Batching

Note: For weighed ingredients, accuracy of batching is determined by comparison between the desired weight[1] and the actual scale reading; for volumetric measurement of water and admixtures, accuracy is determined by checking the discharged quantity by weight on a scale or by volume in an accurately calibrated container.

9.1 Cement and other cementitious materials measured by weight within ± 1% of the desired weight, for batch quantities between 30% and 100% of scale capacity[1]. ☐

9.2 Aggregates measured by weight within ± 2% of the desired weight, for batch quantities between 15% and 100% of scale capacity[1],[2]. ☐

9.3 Water measured by volume or weight within ± 2% of the desired amount for batch quantities between 30% and 100% of the measuring capacity[1]. Company officials agree to recheck batching accuracy of volumetric water batching devices (including water meters) not less frequently than every 180 days. See Agreement to Regularly Check Scales. ☐

9.4 Admixtures measured to within ± 3% of the desired amount or ± 30 grams, whichever is more, for batch quantities between 10% and 100% of the measuring capacity. Liquid admixtures are to measured by volume or weight and powdered admixtures are to measured by weight. ☐

Notes:

[1]The lower limit of batch quantities referred to in 9.1, 9.2, 0.3 and 9.4 is not to be interpreted as a limit on the size which can be satisfactorily produced.

[2]As indicated to the batch person, corrected for aggregate moisture, if required.

Inspector Initials _____

10. Batching Systems: Definitions and Requirements of Components

Manual Batcher: A system in which all ingredients are charged, weighed and discharged, with gates or valves actuated manually and with the accuracy of the measuring operation dependent upon the operator's visual observation of the scales.

Semi-Automatic Batcher: A system in which the weighing of all ingredients is actuated separately by the operator but is terminated automatically when the desired mass has been reached. It is inter-locked to assure that the discharge mechanism can't be activated until the mass is within the tolerance specified in sections 9.1, 9.2 and 9.3 for the weighed ingredients.

Automatic Batcher: A device for measuring cementitious materials, water or aggregates consisting of charging, weighing and discharging apparatus such that, when a start switch actuates the mechanism, the gates and valves will open automatically for the start of the weighing operation and closes automatically when the designated weight of the material has been reached. Interlocking of the automatic controls shall assure that:

- The charging device cannot be actuated until the scale has returned to zero balance within ± 0.3% of its capacity.
- The charging device cannot be actuated if the discharge mechanism is open.
- The discharge device cannot be actuated if the charging mechanism is open.
- The discharge device cannot be actuated until the designated weight is within tolerance specified in sections 9.1, 9.2 or 9.3, above.

Manual Batching Records: Manual batching records are considered acceptable for the purpose of plant certification, if a computerized record keeping system is not in place, provided:

- All records are written and maintained in ink;
- All records note the following:
  - Date batched;
  - Time batched;
  - Weights of aggregates, cementitious materials, admixtures and water batched for each load of concrete; and
  - Volume of each load of concrete.

When different kinds of aggregates or different kinds of cement or cementitious materials are weighed cumulatively on a single scale, interlocked sequential controls shall be provided for each material. ☐

Inspector Initials _____

11. Recorders and Records

Recorders:

Devices that provide a permanent record of the quantity of cementitious materials, aggregates, water or admixtures measured into a particular batch of concrete.

	Cementitious Materials	Aggregate	Water	Chemical Admixtures
A graphical recorder provides a record on a chart simultaneously with the indication of the scale, as the materials are being weighed or measured. A graphical recorder shall register scale readings within ± 2% of total scale capacity.	☐	☐	☐	☐
OR		**OR**		
A digital recorder provides a printed record of the quantity of material weighed or measured. A digital recorder shall reproduce the scale reading within ± 0.1% of scale capacity.	☐	☐	☐	☐
Manual Recorders	☐	☐	☐	☐

Recorders shall:

Be properly protected, i.e., provided with effective security to prevent tampering with records. (Graphical recorders must be in a locked housing and capable of being read without unlocking.)	☐	☐	☐	☐
Provide for identifying each batch with the corresponding delivery ticket.	☐	☐	☐	☐
Register empty balance or tare to within ± 0.3% of scale capacity for weighed ingredients.	☐	☐	☐	☐
Register the quantity of ingredients or ingredients batched.	☐	☐	☐	☐

Inspector Initials _____

12. Central Mixer

12.1 **Definition**: A stationary mixer installed at the plant for the purpose of mixing the concrete completely (central mixing) or partially (shrink mixing).

12.2 **Uniformity of Mixing:** For central mixing operations, the mixer at the plant shall be capable of producing uniform concrete in the mixing time recommended by the plant manufacturer when operated with a capacity batch in accordance with the method regularly employed in operation of the plant or in the time designated in CAN CSA A23.1:24.

The concrete is considered uniform if it meets the requirements of CSA A23.1:24, Table 13, sampled and tested in accordance with CSA A23.1:24, clause 5.2.4.5 and CSA A23.2-1C, clause 7.4. ☐

12.3 The plant is equipped with a timing device that will not permit the batch to be discharged before the predetermined mixing time has elapsed. ☐

Inspector Initials _____

13. Inspection and Certification of Delivery Vehicles

13.1 General

The concrete producer has the following two options for the inspection of the concrete delivery fleet:

Option A: Delivery Fleet Inspection by the Producer

This option is provided to allow inspection of the delivery fleet as a part of the routine maintenance and quality control program of the producer and to avoid the necessity for the Inspector to physically inspect all the delivery vehicles in a short period of time and helps in circumstances when delivery vehicles operate from other facilities owned by the producer.

To assure the credibility of the in-house inspection by the producer, the program must be under the direction and supervision of a responsible **Company Official** who monitors and routinely participates in the delivery vehicle inspection process, to ensure that established company policies are followed in the process. The personnel inspecting the delivery vehicles shall be under the supervision of the company official or on contract with the company.

Personnel inspecting the delivery vehicles shall be familiar with the requirements of section 13 when conducting the inspections of the delivery vehicles. A statement of qualifications must be maintained for all personnel involved in the delivery vehicle inspection process.

The statement of qualifications for all personnel involved with delivery inspection shall be provided to the Inspector during the inspection and audit of the production facility. The Inspector shall interview the personnel and witness a demonstration of inspection procedures on at least two (2) mixers or agitators that have seen significant use and if previously inspected, in the latter half of their 12-month inspection period.

The demonstration of the delivery vehicle inspection procedures is an essential requirement to assure the Inspector that defective units that adversely affect the quality of delivered concrete are properly identified and corrective actions, if any, are made. The Inspector may waive the demonstration with prior experience or knowledge of the Company's personnel and procedures.

Designees of the Company Official must evaluate all units of the delivery fleet used to deliver concrete from the plant for conformance with the requirements in section 13. The inspection of each delivery vehicle shall be documented on the **Fleet Inspection Reporting Form (Appendix C).**

The Company shall retain a copy of the completed Fleet Inspection Reporting Form for all delivery units.

The Company shall maintain a completed **Fleet Inspection Reporting Form** for review by the Inspector during the inspection of the production facility and shall be maintained on file for the period of certification.

At the time of the inspection of the production facility, the Inspector shall:

- Review the records of the delivery vehicles inspection, including the completed Fleet Inspection Reporting Form for all units.
- Review of the Statement of Qualifications for the personnel conducting the vehicle inspection.
- Interview with the personnel conducting the delivery vehicle inspections and witness the demonstration of the inspection of at least two delivery units.
- Review completed sections 14, 15, Appendix C of the Checklist.
- Complete Appendix D of the Checklist.

Option B: Inspection of the Delivery Fleet by the Inspector

The Inspector shall conduct the inspection of all the delivery vehicles of the fleet used to deliver concrete from the plant for conformance with the requirements of sections 14 and 15 as appropriate. Each delivery vehicle will be listed on the **Fleet Inspection Reporting Form**, which shall be returned with a completed Checklist for the production facility or separately to certify the delivery vehicles. The delivery vehicles shall be re-inspected during the certification period of the production facility to maintain its certification status.

The Inspector shall complete sections 14, 15 and Appendix D of the Checklist.

Note:

A 60-day grace period prior to the expiration of certification is provided to allow for sufficient time to request and process certification of the delivery vehicles,

Truck mixers, agitators and non-agitating units used to deliver concrete from the facility will be evaluated and qualified as acceptable or unacceptable regarding conformance with the requirements noted in sections 12, 13 and 15. Agitators and non-agitating units are only permitted for central mixing operations.

Certification of a truck mixer fleet will not be granted if:

- 10% of the total truck mixers are listed as unacceptable in a truck-mixing or shrink-mixing operation; or
- 10% or more of the total truck mixers, agitators and non-agitating units are listed as unacceptable.

Note:

It is assumed that purchasers of concrete will forbid delivery in units that are allowed to remain defective but will permit use of new units added to the fleet or of units restored to acceptable condition, after execution of the Check List.

When the company has several production facilities in an area where delivery vehicles are loaded from different plants on the same or different days, it will be necessary to include all trucks that might be used at a plant in question on any given day in section 13 and in the Fleet Inspection Report Form (Appendix C). When trucks are rented from others they must be inspected prior to use if they are to be loaded from the plant in question. This also applies to units owned by others that operate from the plant. Concrete Sask recognizes that the delivery vehicle is an integral part of the production process and will not issue certification for production facilities without certified vehicles.

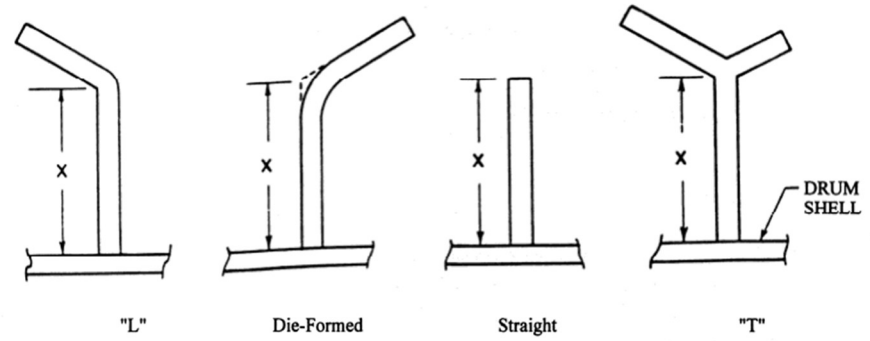
14. Truck Mixers

Definition:

Concrete mixers mounted on trucks or other vehicles used for the complete mixing of concrete ingredients after they have been batched at the plant. Each acceptable truck mixer shall conform to the following requirements:

14.1 Truck mixers adequately maintained, with the amount of blade wear in each mixer, measured as the total cross section length of the blades at the point of maximum drum diameter nearest the drumhead, being less than 10%. Where comprehensive truck mixer records are maintained, the examining engineer may waive the actual measurement of the blades, if the records show that the mixer has delivered less than 10,000 m³ of concrete. ☐

Note: Measurements should be conducted from drum access door of mixer drum.



14.2 Charging and discharge openings and chute in good condition, free from appreciable accumulations of cement or concrete with hopper and chute surfaces clean and smooth. ☐

14.3 Drum of such size that the rating as a mixer – in volume of mixed concrete – does not exceed 63% of the gross volume of the mixer, disregarding the blades. (This requirement is met, if all mixers carry a rating plate of the TMMB (Truck Mixer Manufacturer's Bureau.) ☐

Note: For truck mixers that don't bear a rating plate of the TMMB, documentation shall be provided to the Inspector to verify compliance of the rated mixing capacity and mixing uniformity provision of the Standards of the TMMB – TMMB100. Verification of ability to uniformly mix concrete shall be a one-time evaluation on one size of a truck mixer of same design. Documentation provided by the equipment manufacturer is acceptable.

14.4 Provided with documentation showing the mixer manufacturer's recommended operating speed for mixing which must be in the range of 6 to 18 rpm of the drum; demonstrated capabilities to operate satisfactorily at recommended speed. ☐

14.5 On units equipped to batch mixing water, equipment to be in proper working condition; water pump or injection system in good working order with unobstructed nozzles and without leakage and found accurate to within ± 1% of mixing water capacity. (Does not apply to convenience water.) ☐

Inspector Initials _____

15. Agitators

Definition: Drums or containers, mounted on trucks or other vehicles in which central mixed concrete is kept sufficiently in motion during delivery to prevent segregation.

15.1. Each acceptable agitator shall conform with the requirements of section **13, Truck Mixers**, except that the drum or container must be of such size that the ratings as an agitator (in volume of mixed concrete) does not exceed 80% of the gross volume of the container, disregarding blades. All units carrying a rating plate of the Truck Mixer Manufacturer's Bureau meets this requirement. ☐

The recommended operating speed for agitating must be in the range of Not less than 2 rpm nor more than 6 rpm, with demonstrated capability to Operate at recommended speed.

Note:
The inspecting engineer will evaluate all truck mixers and agitators used to deliver concrete from the plant. Any unit rated as unacceptable shall be **immediately** withdrawn from service and shall not be used again until its condition conforms to the above requirements.

16. Ticketing System

Delivery tickets contain provisions for the following required information: ☐

- Name and location of the batch plant
- Date and serial number of the ticket
- Name of the contractor (or other purchaser)
- Identification of the truck driver
- Specific job designation (name and location)
- Specific class of exposure and mix identification of the concrete
- Amount of concrete in cubic meters
- Truck number, cumulative total, and/or load number
- Time stamped when loaded or time of first mixing of the cement and aggregate
- Ordered slump or slump flow and air content
- Time that the load arrived on site
- Time that the discharge of the load started
- Time that the discharge of the load was completed
- Amount of water added after batching and units used
- Amount of admixture added after batching

Note:
As required in CSA A23.1:24, Clause 5.2.5.5, Delivery Ticket.

Inspector Initials _____

REFERENCES

1. CAN CSA A23.1, *Concrete Materials and Methods of Concrete Construction* and CAN CSA A23.2, *Methods of Test and Standard Practices for Concrete,* Canadian Standards Association, 5060 Spectrum Way, Mississauga, ON L4W 5N6
2. Annual Book of ASTM Standards, Volume 04.02, Concrete and Aggregates, ASTM, 100 Barr Harbour Drive, West Conshohocken, PA 19428-2959
3. Concrete Plant Standards, CPMB 100-18, Sixteenth Revision, 22 January 2018, Concrete Plant Manufacturers Bureau, 900 Spring Street, Silver Spring, MA 20910
4. Truck Mixer, Agitator and Front Discharge Concrete Carrier Standards, TMMB 100-16, Eighteenth Revision, 16 September 2016, Truck Mixer Manufacturer's Bureau, 900 Spring Street, Silver Spring, MA 20910
5. Guide for Measuring, Mixing, Transporting, and Placing Concrete, ACI 304R-00 (reapproved 2009), American Concrete Institute, P.O. Box 9094, Farmington Hills, MI 48333-9094
6. NRMCA Quality Control Manual – Section 3, Twelfth Revision, February 2015, Certification of Ready Mixed Concrete Production Facilities, National Ready Mixed Concrete Association, 900 Spring Street, Silver Spring, MA 20910
7. ARMCA Plant Certification for Ready Mixed Concrete Production Facilities Audit and Checklist, 10 December 2025

VERIFICATION OF INSPECTION AND APPLICATION FOR CERTIFICATE

The undersigned, a registered Professional Engineer in the province of Saskatchewan and approved by Concrete Sask, has conducted the inspection of the ready-mixed concrete plant described as:

_____

(*Company Name*)

_____

(*Plant and Location*)

and assets that, in his/her professional judgement, the information provided on this checklist is accurate and complete. Application is hereby made for the issuance of a Certificate for this plant, classified as follows:

General Operation	Batching System	Recording (if any)
☐ Truck Mixing	☐ Manual	☐ Cementitious Materials
☐ Central Mixing	☐ Semi-Automatic	☐ Aggregate
☐ Shrink Mixing	☐ Automatic	☐ Water
☐ Seasonal Restriction		☐ Chemical Admixtures

_____

(Inspection Date)

_____

(Signature of Professional Engineer)

_____

(Name, please print)

_____

_____

(Address)

_____

(email address) (seal)

SCALE CHECKING AGREEMENT AND VOLUMETRIC BATCHING DEVICES AND DISPENSERS

(To be completed by ready-mixed concrete company official)

The undersigned agrees that all scales in the plant described will be checked at intervals not exceeding those prescribed in section 6 by an authority acceptable to Concrete Sask for conformance with sections 6 of the "Plant Certification Checklist".

Any failure to meet the tolerance (± 0.20% of scale capacity throughout the range of use) will be promptly corrected. If, for any reason, correction is delayed, the batch weights of any concrete delivered will be adjusted to assure positively against a deficiency in unit cementitious content or an excess of water-cementitious ratio.

The undersigned also agrees that the batching accuracy of all volumetric admixture dispensers and all volumetric water batching devices (including water meters) in the plant will be checked at intervals not exceeding 180 days for conformance with the batching accuracy requirements for liquid admixtures and water contained in sections 4 and 9 of the checklist.

Accuracy of devices for automated aggregate moisture measurement, when used, will be checked at intervals not exceeding 180 days (CSA A23.1:24, Clause 5.2.3.2). Any failure to meet the required batching accuracy will be corrected promptly. (Checks may be made by qualified company personnel, by outside agencies or by scale checking companies.)

_____

(Signature of principal company official)

_____

(Name and Title, please print)

_____

_____

(Plant description and location, please print)

_____

_____

(Company and address, please print)

_____

(Date)

Note:
Please allow up to 30 days for processing and issuance of validation stickers

TRUCK MIXER FLEET MAINTENANCE AGREEMENT

The undersigned agrees to inspect each unit in his/her truck mixer and agitator fleet at intervals not exceeding one year. Any unit not meeting the requirements of Sections 13, 14 and 15, as applicable, shall immediately be withdrawn from service and shall not be returned to service until it meets the requirements of this standard.

_____

(Signature of principal company official)

_____

(Name and Title, please print)

_____

_____

(Plant description and location, please print)

_____

_____

(Company and address, please print)

_____

(Date)

Note:

Please allow up to 30 days for processing and issuance certificate or validation sticker

ENGINEER INFORMATION FORM

To be submitted to Concrete Sask with a completed copy of this "Plant Certification Audit and Checklist". This form needs to be submitted once only.

Name:_____

Company:_____

Address:_____

_____

_____

	YES	NO
Is the Engineer a registered Professional Engineer in the province of Saskatchewan?	☐	☐
Does the individual have permission to offer consulting services in Saskatchewan?	☐	☐
Does the company have a valid Certificate of Authorization to practice professional engineering?	☐	☐
Has the Professional Engineer been approved by Concrete Sask to perform plant certifications on its behalf	☐	☐

Attach resume of experience

(seal) _____

(Signature)

Appendix A: Example of Facilities Manual Batching Records (see CSA A23.1:24, Clause 5.2.2.1)

Plant Location:	Weather Conditions:
Production Date:	
Plant Operator:	
Primary Cement Type:	
Other Cementitious Materials:	

Batch Time:	Truck No.	Ticket No.	Batch Volume (m^3)	Mix ID No.	Agg. 1	Agg. 2	Cement (kg)	Other Cementitious Material (kg)	Water (L)	Admix A (ml)	Admix B (ml)	Admix C (ml)

Raw Materials Table

Agg 1: _____ Cement 1: _____ Admix A: _____

Agg 2: _____ Other _____ Admix B: _____

Admix C: _____

Note: If the producer cumulatively batches either aggregates or cement, the second value may represent the cumulative total of the materials

Pages: _____ **of** _____ **Signature:** _____

Appendix B – Definition of Water Sources

Potable Water:

- Defined as water that is safe for human consumption and regulated by provincial and municipal regulations.

Non-potable Water:

- Defined as not suitable for human consumption but has been tested to show that the strength and durability of concrete made with the water has been verified.

Water from Concrete Production Operations:

- Water of unknown quality that has been recovered from concrete production operations, including treated wash water and slurry water, storm water run-off, tested to verify that concrete produced using these types of water produces 28-day compressive strengths equal to at least 90% of a control mix using potable water. The control mix must be produced using the same materials, proportions and a known acceptable water.
- These types of water must be assessed semi-annually or more frequently if changes in the water quality is suspected.
- Mixes used to assess these types of water must be designed to meet a compressive strength of 25 MPa or greater at 28 days.
- Mixes using these types of water shall be tested and meet the provisions noted in CSA A23.2-2C.
- The owner may specify that any concrete using these types of water must meet the optional limits of Table 9, where appropriate.
- The total chloride ion content in the concrete should not exceed the limits specified in CSA A23.1:24, Clause 4.1.1.2, including any chlorides in the mixing water.
- The total alkali content in the concrete should follow CSA A23.2-27A, including any alkalis in the mixing water.
- Caution should be used when producing concrete with these types of water as excessive impurities in mixing water can also cause efflorescence, staining, corrosion of re-inforcement, and durability problems.

Appendix C – Summary of Fleet Inspection

Company Name:	
Name of Company Official:	
Company Official's Signature:	
Company Address:	
City/Province:	Postal Code:
Phone:	Email:
Inspected by (*Name*):	
Inspected by (*Signature*):	
Company's Selected Inspection Date:	New Expiration Date:

Truck No.	Prior Inspection Date	P or F*		Truck Type (M/A)[a]	Rated Size (m^3)	Mixer Manufacturer	Inspection Date
		Prev. Insp.	Current Insp.				

Use additional sheets as necessary and number the sheets

***P** - Pass **F** – Fail
[a] **M** – Truck Mixer Units **A** – Agitator Units

Inspector Initials _____

Appendix D – Delivery Vehicle Inspections

Option A – Delivery Fleet Inspection by the Company

- The delivery fleet inspection records show that not more than one unit or 10 percent of the units, whichever is greater, to be used at the plant fail to meet the requirements. ☐
- The delivery fleet used on a normal business day during the period when the plant facilities are being inspected demonstrates compliance with the requirements. ☐
- The Company maintains records that indicate compliance with the requirements of this Checklist for the inspection of delivery vehicles. ☐
- Personnel responsible for delivery vehicle inspections have demonstrated knowledge of the required inspection procedures and requirements of sections 14 and 15 of this Checklist, as appropriate. ☐
- Personnel responsible for delivery vehicle inspections have demonstrated appropriate judgement of what is acceptable blade wear and accumulations of hardened concrete. ☐

OR

Option B – Delivery Fleet Inspection by the Inspector

- The delivery fleet inspection indicates that not more than one unit or 10 percent of the units, whichever is greater, to be used at the plant fail to meet the requirements of sections 14 and 15. ☐
- The delivery fleet used on a normal business day during the period when the plant facilities are being inspected demonstrates compliance with the requirements. ☐

Summary of Fleet Operating from the Plant

Number of Units available for use: _____

Number of units certified or submitted for certification: _____

No. of truck mixers _____ Agitators _____ Non-agitating Units _____

The listing should be typical of the expected number of delivery vehicles that will operate from this specific plant and should include rented and leased vehicles, if used.

Maintaining Certification of Delivery Vehicles

- Company officials agree to ensure that certified delivery vehicles operating from this plant will be inspected and submitted for re-certification within the expiration period of 12 months. (See Truck Mixer Fleet Maintenance Agreement) ☐

Inspector Initials _____