

Table 5
Alternative methods for specifying concrete

(See Clauses 4.1.2.1, 4.1.2.3, 4.4.1.1, 5.2.4.3.2, and 8.1.5 and Annex J.)

Alternative	The owner shall specify	The contractor shall	The supplier shall
(1) Performance: When the owner requires the concrete supplier to assume responsibility for performance of the concrete as delivered and the contractor to assume responsibility for the concrete in place.	<ul style="list-style-type: none"> (a) required structural criteria, including strength at age; (b) required durability criteria, including class of exposure; (c) additional criteria for durability, volume stability, architectural requirements, sustainability, and any additional owner performance, pre-qualification or verification criteria; (d) quality management requirements (see Annex J); (e) whether the concrete supplier shall meet certification requirements of concrete industry certification programs; and (f) any other properties that might be required to meet the owner's performance criteria. 	<ul style="list-style-type: none"> (a) work with the supplier to establish the concrete mix properties to meet hardened concrete, considering the contractor's criteria for construction and placement and the owner's performance criteria; (b) submit documentation demonstrating the owner's pre-qualification performance requirements have been met; and (c) prepare and implement a quality control plan to ensure that the owner's performance criteria will be met and submit documentation demonstrating the owner's performance requirements have been met. 	<ul style="list-style-type: none"> (a) certify that the plant, equipment, and all materials to be used in the concrete comply with the requirements of this Standard; (b) certify that the mix design satisfies the requirements of this Standard; (c) certify that production and delivery of concrete will meet the requirements of this Standard; (d) certify that the concrete complies with the performance criteria specified; (e) prepare and implement a quality control plan to ensure that the owner's and contractor's performance requirements will be met, if required; (f) provide documentation verifying that the concrete supplier meets industry certification requirements, if specified; and (g) at the request of the owner, submit documentation to the satisfaction of the owner, demonstrating that the proposed mix design will achieve the required strength, durability, and performance requirements.
(2) Prescription: When the owner assumes responsibility for the concrete.	<ul style="list-style-type: none"> (a) mix proportions, including the quantities of any or all materials (i.e., admixtures, aggregates, cementing materials, and water) by mass per m³ of concrete; (b) the range of air content; (c) the slump range; (d) use of a concrete quality plan, if required; and (e) other requirements. 	<ul style="list-style-type: none"> (a) plan the construction methods based on the owner's mix proportions and parameters; (b) obtain approval from the owner for any deviation from the specified mix design or parameters; and (c) identify to the owner any anticipated problems or deficiencies with the mix parameters related to construction. 	<ul style="list-style-type: none"> (a) provide verification that the plant, equipment, and all materials to be used in the concrete comply with the requirements of this Standard; (b) demonstrate that the concrete complies with the prescriptive criteria as supplied by the owner; and (c) identify to the contractor any anticipated problems or deficiencies with the mix parameters related to construction.

Notes:

- (1)** The owner may accept recognized concrete facility certification programs from British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec or the Atlantic Concrete Association.
- (2)** Some of these specification performance requirements necessitate that performance be measured (pre-qualified) by test submissions that demonstrate conformance. If the requested performance characteristics cannot be demonstrated from a pre-existing concrete mix design, timing for developing the mix, testing, and reporting need to be accommodated in the job schedule and planning process.
- (3)** See Annex J for background information and guidance on the use of this Table.