REQUESTED CHANGE/ADDITION:
What wording do you propose for the change?

1.3.1.2. Applicable Editions

Table 1.3.1.2.
Documents Referenced in the Building Code

Issuing Agency	Document Number	Title of Document	Code Reference
BNQ	CAN/BNQ 3680-600-2023	Onsite Residential Wastewater Treatment Technologies	8.6.2.2.(5) Table 8.6.2.2. 8.7.9.1.(6)

1.4.1.2. Defined Terms

Combined Treatment and Dispersal System means a type of *treatment unit* consisting of pipes, modules, conduits, or other treatment and distribution components, together with the associated layer of *system sand*, which provides a specific degree of *sanitary sewage* treatment to reduce the contaminant load from that of *sanitary sewage* to a given *effluent* quality, and is intended for use only as part of a *Type C dispersal bed constructed* in accordance with Subsection 8.7.9. of Division B.

System sand means sand specified for the certified model of a *Combined Treatment and Dispersal System* including its gradation, permeability, and placement requirements identified as part of the system's certification and associated installation requirements.

Type C dispersal bed means a *leaching bed constructed* in accordance with Subsection 8.7.9. of Division B that receives *effluent* from a *Combined Treatment and Dispersal System.*

8.2.1.6. Clearances for a Class 4 or 5 Sewage System

(1) Except as provided in Sentences 8.2.1.4.(1) and (2), a treatment unit, other than a *Combined Treatment and Dispersal System*, shall not be located closer than the minimum horizontal distances set out in Table 8.2.1.6.-A

(2) Except as provided in Sentences 8.2.1.4.(1) and (2), the centreline of a distribution pipe, ~~or~~ leaching chamber, or pipe, module, conduit, or other treatment and distribution component forming part of a *Combined Treatment and Dispersal System* shall not be located closer than the minimum horizontal distances set out in Table 8.2.1.6.-B and these distances shall be increased when required by Sentence 8.7.4.2.(11).

(See Note A-8.2.1.6.(2))

Table 8.2.1.6.-B

Minimum Clearances for Distribution Piping, ~~and~~ Leaching Chambers and Combined Treatment and Dispersal System

8.6.2.2. Other Treatment Units (See Note A-8.6.2.2.)

	(2) A *treatment unit* that is used in conjunction with a *leaching bed constructed* as a *shallow buried trench, Type A dispersal bed*, ~~or~~ *Type B dispersal bed* or *Type C dispersal bed* shall be designed such that the *effluent* does not exceed the maximum concentrations set out opposite a Level IV *treatment unit* in Columns 2 and 3 of Table 8.6.2.2. **8.7.1.2. Limitation on Installation** (1) The design and installation of a *shallow buried trench, Type A dispersal bed*, ~~or~~ *Type B dispersal bed* or *Type C dispersal bed* shall be carried out by a person competent in this field of work. **8.7.9. Type C Dispersal Beds** (See Note A-8.7.9.) 8.7.9.1. Construction Requirements (1) The *Combined Treatment and Dispersal System* used in conjunction with a *leaching bed constructed* as a *Type C dispersal bed* shall be designed such that the *effluent* does not exceed the maximum concentrations set out opposite a Level IV *treatment unit* in Columns 2 and 3 of Table 8.6.2.2. (2) A *Type C dispersal bed* shall be backfilled with *leaching bed fill* so as to ensure that, after the *leaching bed fill* settles, the surface of the *leaching bed* will not form any depressions. (3) The *Type C dispersal bed* shall have the long dimension parallel to the site contours. (4) The combined thickness of the sand layer in a *Type C dispersal bed* shall not be less than 300 mm and shall, (a) be comprised of a layer of *system sand* installed below the pipes, modules, conduits, or other treatment and distribution components, and (i) where necessary to satisfy the minimum combined thickness requirement in Sentence (4), be supplemented with additional *system sand* and/or imported sand, and (ii) where imported sand is used, the imported sand shall be placed below the *system sand* and shall have, (A) a *percolation time* of at least 6 and not more than 10 min, and (B) not more than 5% fines passing through a 0.074 mm (No. 200) sieve. (b) be *constructed* such that the base of the *system sand* layer is at least 600 mm above the *high ground water table*, rock or *soil* with a *percolation time* of 1 min or less or greater than 50 min, (c) *Leaching bed fill* with a *percolation time* not exceeding 15 min may be used to satisfy the vertical separation requirements of Clause (4)(b). (See Note A-8.7.9.1.(4)) (5) Except as provided in Clause (b), the *Combined Treatment and Dispersal System* shall

	(a) have a *system sand* layer area that is not less than the value determined by the formula, A = QT/850 where: A = the area of contact in square metres between the base of the *system sand* layer and the underlying *soil,* or *leaching bed fill* if utilized, Q = the total daily design *sanitary sewage* flow in litres, and T = the lesser of 50 and the *percolation time* of the underlying *soil*. (b) Where the underlying *soil* has a *percolation time* of more than 15 min, the *system sand* shall have an area that is not less than the value determined by the formula, A = QT/400 where, A = the area of contact in square metres between the base of the *system sand* layer and the underlying *soil,* or *leaching bed fill* if utilized, Q = the total daily design *sanitary sewage* flow in litres, and T = the lesser of 50 and the *percolation time* of the underlying *soil*. (6) The pipes, modules, conduits, or other treatment or distribution components forming part of the *Combined Treatment and Dispersal System*, including the arrangement, spacing, venting, maximum run lengths, distribution method, dosing device, sampling device and minimum *system sand* thicknesses above, below, and between the units, shall be designed and installed in accordance with (a) the installation and design requirements associated with the certified model of the system, and (b) any limitations and configurations associated with the system's certification to CAN/BNQ 3680-600. (7) Following installation of the *system sand* required for the *Combined Treatment and Dispersal System*, any areas within the limits of the *system sand* layer that are not required to be *system sand* as part of the certified configuration of the system shall be backfilled, from the top of the *system sand* layer up to the elevation of the top of the *Combined Treatment and Dispersal System*, so as to provide a continuous dispersal surface. (8) The backfill required by Sentence (7) shall consist of (a) *system sand*, or (b) imported sand meeting the requirements of Sub-subclauses 8.7.9.1.(4)(a)(ii) (A) and (B)

(9) Sentence (7) shall not be used to reduce any minimum *system sand* thicknesses or placement requirements associated with the certified configuration of the *Combined Treatment and Dispersal System*.

(10) A *Combined Treatment and Dispersal System* shall be arranged, in accordance with Sentence (6), to distribute e*ffluent* evenly over the *system sand* layer so as to avoid localized overloading, subject to any adjustments necessary to ensure that the minimum horizontal distances set out in Table 8.2.1.6.-B are provided to the centrelines of the pipes, modules, conduits, or other treatment or distribution components and are increased when required by Sentence 8.7.4.2.(11).

(11) The *Combined Treatment and Dispersal System* shall be installed so that the vertical cover measured from finished grade to the top of the *Combined Treatment and Dispersal System* is not less than 300 mm and not greater than 600 mm in depth.

(12) The *Combined Treatment and Dispersal System* shall be designed and *constructed* so that it can be detected by,

(a) magnetic means,

(b) means of a 14 gauge TW solid copper light coloured plastic coated tracer wire,

(c) means of a 12 gauge copper clad steel light coloured plastic coated tracer wire, or

(d) other means of subsurface detection.

8.9.2.4. Sampling of Treatment Units

(1) Every person operating a *treatment unit* that is used in conjunction with a *leaching bed constructed* as a *shallow buried trench, Type A dispersal bed*, ~~or~~ *Type B dispersal bed* or *Type C dispersal bed* shall

(a) take a grab sample of the *effluent* to determine the level of $CBOD_5$ and suspended solids in the *effluent*,

(b) carry out the sampling required by Clause (1)(a) in accordance with the methods described in the APHA/AWWA/WEF, “Standard Methods for the Examination of Water and Wastewater,” and

(c) promptly submit the results of the sampling required by Clause (a) to the *chief building official*.

(2) Except as provided in Sentence (4), the sampling required by Sentence (1) shall be conducted,

(a) initially, once during the first 12 months after the *sewage system* was put into use, and

(b) thereafter, once during every 12 month period, at least 10 months and not more than 18 months after the previous sampling has been completed.

(3) The concentration of $CBOD_5$ and suspended solids in the grab sample described in Sentences (1) and (4) is deemed to comply with the maximum concentration requirements set out in Table 8.6.2.2. when it does not exceed 20 mg/L for each of these parameters.

	(4) If the results of the sampling required by Sentence (1) do not comply with Sentence (3), the person operating the *treatment unit* shall, (a) resample the *effluent* in accordance with Clauses (1)(a) and (b) within 6 months after the previous sampling has been completed, and (b) promptly submit the results of the resampling required by Clause (a) to the *chief building official*. **8.9.3.4. Class 4 Sewage Systems** (1) *Septic tanks* and other *treatment* units, other than a *Combined Treatment and Dispersal System,* shall be cleaned whenever sludge and scum occupy one-third of the *working capacity* of the tank.

PROBLEM: Why should the existing provision be revised? If requesting an addition to the Code, what is missing?	CTDS are currently used in Ontario under BMEC authorizations intended for innovative / non-standard technologies not explicitly addressed in the OBC; however, CTDS have matured into a routine and widely adopted servicing solution with multiple authorizations and an established installed base. When a system is no longer considered innovative, the MMAH has historically moved toward codification. A codified acceptable solution is missing for CTDS, and the current BMEC-only pathway creates inconsistent treatment performance assurance compared to other Level IV pathways that use the OBC's CAN/BNQ 3680-600 recognition framework.
JUSTIFICATION/EXPLANATION: How does the requested change address the problem?	The change codifies CTDS as a new leaching bed type (Type C dispersal bed) under a dedicated subsection, with clear, enforceable design/construction rules and consequential edits to definitions, clearances, competency, and sampling. The approach explicitly aligns CTDS with the OBC's existing performance recognition model for advanced systems (Level IV effluent criteria + certification recognition basis) and improves consistency by moving from product-specific BMEC authorizations to one harmonized OBC framework.
OBJECTIVE(S): Which of the Code's objectives does the requested change address? (See Part 2 of Division A of the Building Code for the list of objectives.)	Primary objectives addressed: OE (Environmental Integrity), OH2.1 (Health–Sanitation), and OH5 (Health–Hazardous Substances Containment), supported by functional statements focused on controlling contaminant release and preventing sewage system failure (e.g., F110, F111, F112; and CTDS sampling also aligns with the existing Part 8 sampling objective mapping).
COST/BENEFIT IMPLICATIONS: Will the change entail any added costs (material, long-term or operational)? Will it provide benefits that are measurable? (e.g. energy efficiency, enhanced fire safety, accessibility, operating costs)	Costs: Minor incremental construction materials, beyond what is presently required by the BMEC, may occur where additional sand is required to meet codified minimums Benefits: Measurable benefits include improved performance assurance and reliability through a standardized, enforceable framework (reduced risk of mounding/breakthrough and clearer compliance pathway), and reduced administrative reliance on product-specific authorizations for routine installations.
ENFORCEMENT IMPLICATIONS: Can the requested change/addition be enforced by the infrastructure available to enforce this Code? Will its enforcement require an increase in resources?	Codification is expected to improve enforcement consistency by consolidating baseline requirements in the OBC rather than relying primarily on technology-specific BMEC authorization documents.
EFFECT ON OTHER CODES: Will the proposed change affect other Codes? (e.g. Fire Code, Electrical Safety Code, Gas Utilization Code) If so, have you consulted with the appropriate authority? (e.g. Office of the Fire Marshal, Electrical Safety Authority, Technical Standards and Safety Authority, etc.)	No direct amendments to other Ontario codes have been identified as part of the CTDS codification; the proposal is scoped to OBC Part 8 design, construction, and monitoring requirements for on-site sewage systems.
OTHER COMMENTS: For example, identify other Code requirements affected by the requested change, etc.	Earlier CTDS proposals (2022–2023) had broad support for codification but were not implemented due to the need for further development and agreement, particularly among authorization holders; this proposal aims to provide harmonized framework to move forward.

ATTACHED SUPPORTING MATERIAL: (e.g. research, test results, statistics, case studies - List and attach.)	n/a