

OPSS 909 – Construction Specification for Prestressed Concrete – Precast Girders

Date: April 2026

Comments received by TCP:

Comment ID	Organization	TCP Comment	MTO Response
477-1	BOT Construction Group	<p>909.04.01.03 – Temporary Bracing</p> <p>Comment: The clause states: “the bracing for the girders shall be design for multi-year construction using a return period of 25 years.”</p> <p>Drawing SS107-9 specifies the design force based on wind pressure 395kPa. This pressure is already higher than 25 years return period pressure in 90% of Ontario. SS107-9 in addition to the intermediate braces (which are sufficient for girders stability) specify anchor braces which provide additional but not counted addition to the stability. SS107-9 in current form tends to “overbracing” the girders. Just following drawing’s requirements, the bracing required probably is strong enough for 100 years return period.</p>	<p>The design provided in SS107-9 was not designed for a specific location. It was used as it represents the 90th percentile of the 10 year return wind for Ontario. The wind pressure used was provided so the contractor has the ability to make modifications to the lateral bracing design if the return wind at the project site is higher or lower than 395 Pa, or if the girders are left erected without the deck for more than one construction season.</p>

477-2	BOT Construction Group	<p>909.07.03</p> <p>Comment: The clause states: “Girders shall meet the installation tolerances specified in Table 1 and the Contract Documents. Installation tolerances are a combination of fabrication tolerances, erection tolerances and interfacing tolerances. Unless specified otherwise, the installation tolerances shall be according to NCHRP Project 12-98 Appendix C, CSA A23.4, and MNL-135-00.”</p> <p>The combination of fabrication tolerances and installation tolerances doesn’t make any sense. The installation needs to have its own independent tolerances. Current tolerances for I girders $\pm 15\text{mm}$ on the bearing in both longitudinal and transverse directions are adequate. For box girders the tolerance of 70mm is the same for any number of girders, can be as little as 3 girders and as many as 30. Maybe this should be updated.</p>	<p>This clause was added for clarity but did not change the intent of the tolerances. Fabrication defects have an impact on installation.</p> <p>The tolerance for the installation of all girders other than side-by-side box girders has been changed to $\pm 15\text{mm}$ on the bearings in both the transverse and longitudinal location</p>
477-3	BOT Construction Group	<p>909.08.02</p> <p>Comment:</p>	<p>Changes in bridge geometry are difficult to accommodate during construction. Installation tolerances are critical to</p>

		It should be stressed that the girders are installed on the certified bearings. If there are undisclosed issues with bridge geometry, they can affect installation tolerances, and any corrections may be difficult or impossible.	maintaining the designed bridge geometry. We do understand that there would be situations where the individual tolerances of, for example, the bearing installation and the girder fabrication are met but installation tolerances may be exceeded. The general contractor is responsible to build to the correct geometry and achieve all the tolerances in the contract and will have to plan ahead to avoid these situations.
477-4	BOT Construction Group	Table 1 Row #2 Installation Tolerances Joint Width Comment: This row does not belong to girder tolerances table.	This tolerance would apply to the joint between two girders in the same girder line. It would be the specified joint gap plus or minus 13mm.
477-5	BOT Construction Group	Table 1 Row #3 Installation Tolerances Maximum accumulated tolerance for side-by-side box girders Comment: This row is a less restricted version of Row #6 "Side-By-Side Box Girders."	Row 3 has been removed.
477-6	BOT Construction Group	Table 1 Row #4 Installation Tolerances Maximum jog in alignment of matching edges (Straight-line measurement	This tolerance is to avoid any deviation in the specified girder alignment. The tolerance has been changed to 15mm

		<p>taken horizontally from adjacent girders)</p> <p>Comment: Table 1 Row #5 Installation Tolerances Plan location at bearing (Straight-line measurement taken horizontally from the plan datum at bearing locations)</p> <p>Comment: The only place this may matter is at piers for outside girder. All ends of interior girders are encased into diaphragms. Standard gap at piers is 200mm and after concrete is poured any jog becomes invisible. Reasonable tolerance for outside girders only should be 15mm.</p>	<p>and to include all girders other than side-by-side box girders.</p>
477-7	BOT Construction Group	<p>Table 1 Row #7 Squareness and Plumbness</p> <p>Comment: This part of the table does not make much sense. The tolerance in the transverse direction, which is 100% controlled by the erector, seems to be excessive (± 15mm from old specification looks more reasonable). The tolerance in the longitudinal direction if combined with girder length and span length variance cannot be</p>	<p>The General Contractor is responsible to achieve the requirements of the contract. MTO does not have a contractual relationship with any subcontractor.</p>

		controlled by the erector. If numbers do not add up after girder is erected the erector cannot be blamed.	
477-8	BOT Construction Group	If squareness or plumbness is out of tolerance the only explanation is that the bearing was out of plumbness. It is not controlled by the erector.	The General Contractor is responsible to achieve the requirements of the contract. MTO does not have a contractual relationship with any subcontractor.
484-1	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>First page - OPSS 2016</p> <p>Comment: It appears that the changes have been made to the OPSS.PROV 909 Nov 2016 version. However, there was a recent version OPSS.PROV 909 April 2025. Are the changes from Nov 2016 to Apr 2025 still being captured in either OPSS.PROV 909 Nov 2025 or OPSS.PROV 1355 Nov 2025?</p> <p>Proposed change: More clarity is required on this item.</p>	<p>The April 2025 OPSS 909 has incorporated SSP 199S24 (January 2025).</p> <p>The content of SSP 199S24 has been included in the draft update to OPSS 909/1355.</p>
484-2	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>909.04.01.02.02</p> <p>f) Increase of vertical strand spacing between hold-down points from 25 mm up to 50 mm.</p> <p>Comment: Need to allow for decrease or increase</p> <p>Proposed change:</p>	Wording has been modified to allow the strand spacing to vary between 25 to 50mm between hold-down points.

		f) Increase or decrease of vertical strand spacing between hold-down points within the range of 25 mm to 50 mm	
484-3	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>909.04.02.01 When other authorities are involved in the approval of the design or construction of a highway structure, the fabrication Working Drawings submission shall be at least 5 weeks prior to commencement of the work and one additional copy of the submission shall be provided for each authority</p> <p>Comment: The requirement for submissions 5 weeks prior to commencement of the work when other authorities are involved is excessive. An additional 7 days or at most 14 days beyond the typical 7-day period, should be sufficient to allow coordination with outside authorities without creating unnecessary delays.</p> <p>Proposed change: ...shall be at least 7-14 days prior to commencement of the work and one additional copy of the submission shall be provided for each authority</p>	No change will be made to the submission timeline when other authorities are involved, due to time required to coordinate.
484-4	Individual -	909.07.01	This requirement does not diminish the role of the fabricator's Certificate of

	<p>Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)</p>	<p>Inspection of Girders Prior to Installation</p> <p>Comment: It is unclear from this clause whether the intent is to remove or diminish the role of the fabricator's Certificate of Conformance and instead place responsibility on the Contract Administrator to perform a full fabrication inspection prior to installation. Currently, MTO's comprehensive plant inspection program and the required CSA/CPCQA certification already ensures that girders meet all specified requirements through rigorous QC and QA processes, including regular audits and testing at certified plants.</p> <p>Requiring the Contract Administrator to sign off on girders as defect and deficiency free at the plant appears to duplicate responsibilities already addressed by the fabricator and MTO's QA retainer program. This may unintentionally create additional inspections, re-inspections, and paperwork on top of an already robust quality framework, contrary to recent MTO communications emphasizing the reduction of redundant inspection burdens.</p>	<p>Conformance and does not transfer responsibility for fabrication compliance signoff to the Contract Administrator.</p> <p>This requirement is meant to detect any damage that may have occurred during delivery and any defects that may have been missed during previous inspections. This is specified to avoid installing girders that have defects.</p>
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484-5	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>909.07.03 Girders shall meet the installation tolerances specified in Table 1 and the Contract Documents. Installation tolerances are a combination of the fabrication tolerances, erection tolerances and interfacing tolerances. Unless specified otherwise, the installation tolerances shall be according to NCHRP Project 12-98 Appendix C, CSA A23.4, and MNL-135-00.</p> <p>Comment: Could you please confirm how installation tolerances are to be interpreted when fabrication, interfacing, and erection are performed by separate parties?</p> <p>Should each party be expected to meet</p>	Specified tolerances must be met. All requirements in both 909 and 1355 are requirement that the Contractor must meet. MTO does not have a direct contractual relationship with producers, suppliers or subcontractors.

		<p>its respective tolerance (fabrication, erection, interfacing) independently, with the understanding that the final installed girder must fall within the overall installation tolerance?</p> <p>Or should the erection tolerances be considered variable depending on how much of the tolerance has already been consumed by fabrication and/or interfacing?</p> <p>Clarification is required to ensure responsibilities are clearly defined and no single party is unfairly constrained by deviations introduced outside their scope of work.</p> <p>Proposed change: Define tolerances for each stage: fabrication, interface and install.</p>	
484-6	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>909.08.02 Acceptance of Installation Tolerances</p> <p>Comment: It is unclear from this clause whether the intent is to remove the role of the Erector's Certificate of Conformance and instead place responsibility on the Contract Administrator to perform a full inspection after installation.</p> <p>Could you please clarify how</p>	<p>No, the Contract Administrator is not assuming that responsibility. The Contractor is still required to check for compliance.</p> <p>Also, please see response to comment 484-4 above.</p>

		<p>responsibility for tolerance compliance will be assessed, given that fabrication, interfacing, and erection are often performed by different parties?</p> <p>Will the acceptance check consider whether each party met their respective tolerance requirements, or is the final installation tolerance applied solely to the erected condition of the girder?</p> <p>If fabrication or interfacing tolerances are exceeded, will the installed girder be deemed rejectable regardless of whether erection work was performed within its allowable tolerance?</p> <p>Clarification on this point is required to ensure expectations are clear and that responsibility for potential deviations is assigned fairly.</p> <p>Proposed change: Define acceptance for each stage: fabrication, interface and install.</p>	
484-7	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON	<p>Table 1</p> <p>Installation Tolerances Joint Width</p> <p>Comment:</p>	This applies to the joint between side-by-side box girders as well as other joints such as between girders in the same line over a supporting element.

	member producers)	<p>It's unclear what "Joint width" refers to. Is this the joint between side-by-side box girders specifically? Also how is "visually non-critical" and "hidden" defined?</p> <p>Proposed change: More clarity is required on this item.</p>	<p>Agree, the specification has been revised to have a single tolerance that applies to all joints.</p>
484-8	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>Table 1 Installation Tolerances Maximum accumulated tolerance for side-by-side box girders</p> <p>Comment: Maximum accumulated tolerance for side-by-side box girders ± 70 mm is already covered by the item below in the table.</p> <p>Proposed change: Delete: Maximum accumulated tolerance for side-by-side box girders ± 70 mm</p>	<p>Agree, deleted this row.</p>
484-9	Individual - Comments submitted on behalf of Ontario precast producers (CPCI and its ON member producers)	<p>Table 1 Plan location at bearing (Straight-line measurement taken horizontally from the plan datum at bearing locations)</p> <p>Comment: Confirmation is required on how installation tolerances are to be interpreted when fabrication,</p>	<p>See response to comment above.</p>

		<p>interfacing, and erection are performed by separate parties?</p> <p>Proposed change: Define tolerances for each stage: fabrication, interface and install.</p>	
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Comments received by email:

Date	Organization	Email Comment	MTO Response
		No comments received by email.	