

Administration and Inspection Activities for Prestressed Concrete - Precast Girders

(As Specified in OPSS 909)

909.01 SCOPE

This CAIS covers the construction administration and inspection requirements the installation of precast prestressed concrete girders as specified in OPSS 909, November 2025.

909.02 REFERENCES

This CAIS refers to the following standards, specifications, or publications:

Ontario Provincial Standard Specifications, Construction:

OPSS 909 Prestressed Concrete - Precast Girders

Ontario Provincial Standard Specifications, Materials:

OPSS 1355 Precast Concrete – Materials and Production

Construction Administration and Inspection Specifications (CAIS):

CAIS 1355 Precast Concrete – Materials and Production

Ontario Ministry of Transportation Publications

Structural Manual

MTO Forms:

PH-CC-701 Request to Proceed

PH-CC-702 Notice to Proceed

909.03 DEFINITIONS

For the purposes of this CAIS, the definitions shall be as specified in OPSS 909.

909.04 DESIGN AND SUBMISSION REQUIREMENTS**909.04.01 Design Requirements****909.04.01.01 General**

Administrative Activities:

1	M	Check that the design is according to CSA S6, the MTO Structural Manual, Division 1 and the Contract Documents.	-
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909.04.01.02 Permissible Changes from the Contract Drawings**909.04.01.02.01 General**

Administrative Activities:

1	M	Receive changes from the Contract Drawings and for permissible changes, verify that they are as specified in OPSS 909.04.01.02.	-
2	M	If changes are not permissible as specified in OPSS 909.04.01.02, Notify MTO's Quality Assurance Section.	-

909.04.01.02.02 Prestressing of Girders

Administrative Activities:

1	-	Check that any permissible changes to prestressing of girders are as specified in OPSS 909.04.01.02.02.	-
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909.04.01.02.03 Reinforcing of Girders

Administrative Activities:

1	-	Check that any permissible changes to reinforcing of girders are as specified in OPSS 909.04.01.02.03.	-
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909.04.01.02.04 Other Design Details

Administrative Activities:

1	-	Check that any permissible changes to other design details of girders are as specified in OPSS 909.04.01.02.04.	-
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909.04.01.03 Temporary Bracing

Administrative Activities:

1	M	Check that the temporary bracing details are provided and in conformance with the Contract Documents and as specified in OPSS 909.04.01.03.	-
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909.04.02 Submission Requirements

909.04.02.01 Working Drawings

Administrative Activities:

1	M	Verify that one electronic copy in PDF format of the Working Drawings, including supporting documentation, are submitted and received at least 7 Days prior to commencement of fabrication of the girders, or 35 Days when other authorities are involved in the approval of the design or construction.	-
2	M	When other authorities are involved in the approval of the design or construction, verify that one additional copy of the Working Drawings and supporting documentation submission is provided for each authority.	-
3	M SSI	Review the Working Drawings and supporting documents and Check that they contain the information listed in OPSS 909.04.02.01.	-
4	-	After reviewing the Working Drawings and technical documentation submissions, submit with comments, to the Contractor, MTO Contract Services Administrator (CSA) and MTO Structural within 2 Business Days of receipt.	-
5	-	Ensure a final copy of all Contractor submissions is shared with inspection staff and available to perform on-site administration and inspection duties.	-
6	-	Ensure a final copy is sent to MTO Structural Section.	-

909.04.02.02 Design Change Proposals

Administrative Activities:

1	-	Receive one electronic copy in PDF format and Check any design change proposals. Check that they also bear the seal and signature of the design Engineer and the design checking Engineer.	-
2	-	Issue a response for the design change proposal within 10 Business Days.	-

909.05 MATERIALS

909.05.01 Precast Concrete Girders

Administrative Activities:

1	-	Check that precast concrete girders are as specified in OPSS 1355 in its entirety. For precast concrete girders, additional inspection and administrative activities shall be as specified in CAIS 1355.	-
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909.07 CONSTRUCTION**909.07.01 Inspection of Elements Prior to Installation**

Administrative Activities:

1	M	If any defects or deficiencies are present on the girders, receive notification from the contractor.	-
2	M	If no defects or deficiencies are present or have been repaired, receive the MTO for PH-CC-701, Request to Proceed from the Contractor, after delivery of the girders to site before installation.	-
3	M	Check that the girders are fabricated according to the Working Drawings and Contract Documents, and Check girders for dimensional tolerances, sweep and defects and deficiencies prior to installation.	-
4	M	If defects or deficiencies are found, Notify the Contractor of the type, size, and quantity and which element that they occur on.	-
5	-	Check that the repairs have been completed according to the Defects and Deficiencies clause of OPSS 1355.	-
6	-	Once the girders and any repairs are acceptable, issue MTO form PH-CC-702, Notice to Proceed, to the Contractor.	-

909.07.02 Installation of Girders

Inspection Activities:

1	M	Check that the girders delivered to site are installed according to the Working Drawings and the Contract Documents.	100%
2	-	Check that the forces resulting from the lifting devices acting on the girders are not inclined to the vertical at an angle exceeding 30 degrees.	100%
3	-	Check that the girders are lifted and placed in a manner to ensure they are not overstressed, unstable, or unsafe at any time.	100%
4	M	Immediately after installation, Check that the girders are properly braced according to the Working Drawings and the Contract Documents.	100%

5	M	Check and measure the sweep of each girder immediately after installation. Ensure sweep is within the tolerances specified in Table 1 of OPSS 909.	100%
6	M	Check all the girders are to be permanently connected within the same construction season.	100%
7	-	Check installed girders for any defects and deficiencies. If there are any defects and deficiencies, Notify the Contractor in writing. Check repairs to ensure they meet the approved repair proposal, OPSS 1355 and the Contract Documents.	100%

Administrative Activities:

1	M	Receive written notification of the installation date at least 3 Business Days prior to the commencement of field installation operations.	-
2	-	Receive and Check the Contractor's submission required under GC 7.02.07 regarding the certification by an Ontario Land Surveyor or Engineer for grade and layout of the component, prior to girder erection. Alert MTO Structural if top of bearing seat elevations or span dimensions are not as specified in the Contract Documents.	-
3	-	Check that a copy of the Working Drawings is kept on site during installation of the girders.	-
4	-	If repairs are required to installed girders, receive and Review repair proposal.	-

909.07.03 Installation Tolerances

Inspection Activities:

1	M	Check that girders satisfy the installation tolerances specified in Table 1 of OPSS 909 and the Contract Documents.	100%
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909.07.04 Inspection after the Installation of the Girders

Administrative Activities:

1	M	Receive a MTO form PH-CC-701, Request to Proceed, after the installation of each girder type for each structure within a construction stage and prior to the cutting or removal of any temporary lifting, setting, or levelling devices, or casting of concrete or grouted joints.	-
2	M	Issue a MTO form PH-CC-702, Notice to Proceed in a timely manner for the next operation to proceed.	-

909.07.05 Management of Excess Materials

Administrative Activities:

1	-	Check that management of excess materials is as specified in the Contract Documents.	-
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909.08 QUALITY ASSURANCE**909.08.01 General**

Inspection Activities:

1	M	Inspect the girders to Check that the acceptance of girders is as specified in OPSS 909 and the Contract Documents.	100%
2	M	Inspect the girder for defects or deficiencies as specified in OPSS 1355. Additional inspection activities shall be as specified in CAIS 1355.	100%

Administrative Activities:

1	-	Check that the acceptance of girders is according to the Contract Documents and OPSS 909.08.	-
2	-	For precast concrete girder, Check that quality assurance and acceptance is as specified in OPSS 1355. Check that precast concrete girders meet the quality assurance requirement as specified in OPSS 1355, including acceptable 28-Day compressive strength, air void system parameters, and rapid chloride permeability. For precast concrete girders, additional administrative activities shall be as specified in CAIS 1355.	-
3	-	Notify MTO's Quality Assurance Section for any girder that fails to meet the acceptance requirements. Provide written notification to the Contractor, after consultation with MTO, for rejectable work.	-

909.08.02 Acceptance of Installation Tolerances

Inspection Activities:

1	SSI	Once notification that the girders are ready for verification measurements is received, Check that the girders have been installed to the tolerances specified in Table 1 of OPSS 909.	100%
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Administrative Activities:

1	-	Receive notification from the Contractor that the girders have been installed.	-
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909.08.03 Field Inspection

Inspection Activities:

1	M	Inspect the girders and the work for any defects and deficiencies. Notify MTO's Quality Assurance Section of any defects or deficiencies.	100%
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909.10 BASIS OF PAYMENT

Administrative Activities:

1	-	Basis of payment shall be as specified in OPSS 909.	-
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