

~~Construction~~ Administration and Inspection ~~Specification~~ Activities for
Concrete Pavement and Concrete Base

(As Specified in OPSS 350 and SSP 350S02~~NSSP~~
PVMT0007)

350.01 SCOPE

This CAIS covers the construction administration and inspection requirements for Concrete Pavement and Concrete Base as specified in OPSS 350, July 2023 and SSP 350S02, October 2024. ~~March 1998 and NSSP PVMT0007, June 2021.~~

350.02 REFERENCES

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

Ontario Provincial Standard Specifications, Construction:

~~OPSS 314 Untreated Granular Subbase, Base, Surface, Shoulder and Stockpiling~~
OPSS 350 Concrete Pavement and Concrete Base
OPSS 366 Repairing Concrete Pavement and Concrete Base
OPSS 369 Sealing or Resealing of Joints and Cracks in Concrete Pavement and
Concrete Base
OPSS 904 Concrete Structures
OPSS 919 Formwork and Falsework
OPSS 929 Abrasive Blast Cleaning - Concrete Construction
~~OPSS 1212 Hot Poured Rubberized Asphalt Joint Sealing Compound~~

Ontario Provincial Standard Specifications, Materials:

OPSS 1302 Water
OPSS 1306 Burlap
OPSS 1308 Joint Filler in Concrete
OPSS 1315 White Pigmented Curing Compounds for Concrete
OPSS 1350 Concrete - Materials and Production
OPSS 1440 Steel Reinforcement for Concrete
OPSS 1441 Load Transfer Assemblies
OPSS 1442 Epoxy Coated Steel Reinforcement for Concrete

MTO Non-Standard Special Provisions:

~~NSSP PVMT0007 Amendment to OPSS 350 – Replacement of Construction Specification for
Concrete Pavement and Concrete Base~~

Construction Administration and Inspection Specifications (CAIS):

~~CAIS 314 Untreated Granular Subbase, Base, Surface, Shoulder and Stockpiling~~
CAIS 366 Repairing Concrete Pavement and Concrete Base
CAIS 369 Sealing and Resealing of Joints and Cracks in Concrete Pavement

	<u>and Concrete Base</u>
CAIS 904	Concrete Structures
CAIS 919	Formwork and Falsework
CAIS 929	Abrasive Blast Cleaning - Concrete Construction
CAIS 1212	Hot Poured Rubberized Asphalt Joint Sealing Compound
CAIS 1302	Water
CAIS 1306	Burlap
CAIS 1308	Joint Filler in Concrete
CAIS 1315	White Pigmented Curing Compounds for Concrete
CAIS 1350	Concrete - Materials and Production
CAIS 1440	Steel Reinforcement for Concrete
CAIS 1441	Load Transfer Assemblies
CAIS 1442	Epoxy Coated Steel Reinforcement for Concrete

MTO Forms:

PH-CC-433-A	Concrete Mix Submission Form A
PH-CC-885	Concrete Referee Testing Request Form

350.03 DEFINITIONS

For the purpose of this CAIS, the definitions shall be as specified in [NSSP PVMT0007OPSS 350](#).

350.04 DESIGN AND SUBMISSION REQUIREMENTS

350.04.01 Design Requirements

350.04.01.01 Concrete Mix Designs

350.04.02 Submission Requirements

350.04.02.01 Concrete Mix Design

Administrative Activities:

1	M	Check that concrete mix design submissions are as specified in OPSS 1350. <u>Additional administrative and inspection activities shall be according to CAIS 1350.</u>	-
<u>2</u>	<u>M</u>	<u>As specified in CAIS 1350.</u>	<u>-</u>

350.04.02.02 Curing Compound

Administrative Activities:

1	M	Check that curing compound submissions are as specified in OPSS 904. <u>Additional administrative and inspection activities shall be according to CAIS 904.</u>	-
<u>2</u>	<u>M</u>	<u>As specified in CAIS 904.</u>	<u>-</u>

350.04.02.03 Temperature Control Plans

350.04.02.03.01 Cold Weather

Administrative Activities:

1	M	At least 7 Days prior to concrete paving operations that require curing during cold weather. <u>Receive</u> a temperature control plan <u>at least 7 Days prior to concrete paving operations that required curing during cold weather.</u> for concrete paving operations that require curing during cold weather.	-
2	M	Check <u>and Review</u> that the temperature control plan is as specified in OPSS 904. <u>Additional administration and inspection activities shall be according to CAIS 904.</u>	-

350.04.02.03.02 Hot Weather

Administrative Activities:

1	M	At least Seven 7 Days prior to placement of concrete pavement subject to hot weather. <u>Receive and Review</u> a description of the methods to be used to control the temperatures of the concrete and underlying base <u>at least 7 Days prior to placement of concrete subject to hot weather.</u>	-
2	M	<u>Check and Review that the submitted description covers all the materials and equipment required to control the temperature of concrete and underlying base within the specified temperature.</u>	-

350.04.02.04 Temperature Records

Administrative Activities:

1	-	Receive <u>Check that</u> the temperature records for concrete paving operations that require curing during cold weather <u>is received</u> and check that temperature records are as specified in Clause OPSS 904.07.09.02.04. <u>Additional administration and inspection activities shall be according to CAIS 904.</u>	-
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350.04.02.05 Effluent Management

Administrative Activities:

1	-	<u>At least</u> 14 Days prior to commencement of the effluent producing work, receive a written agreement from the operator of the receiving site or property owner selected to accept the effluent.	-
2	-	At the completion of the work, receive a copy of a release signed by the same receiving site operator or property owner.	-
3	-	Receive a copy of the Contractor's Environmental Compliance Approval for a Waste Management System prior to the commencement of the effluent producing work.	-

350.05 MATERIALS

350.05.01 Bond Breaker

Inspection Activities:

1	-	<u>Check that the dowel bars and load transfer devices (when applicable) are coated with a bond breaker both by checking the tag on the dowel bar bundles and by visually checking the surface of the dowel bars and load transfer devices, except for dowel bars which are installed into existing concrete.</u>	<u>100%</u>
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Administrative Activities:

1	-	<u>Check that the bond breaker is as specified.</u>	-
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350.05.02 Burlap

Inspection Activities:

1	-	<u>Check that the burlap is as specified in OPSS 1306.</u>	<u>10%</u>
2	-	<u>Check that the burlaps have no tears or holes.</u>	<u>10%</u>

350.05.01350.05.03 Concrete

Administrative Activities:

1	-	<u>Review the concrete mix design materials requirement as specified in OPSS 1350, and the exception-Check that the maximum allowable proportion by mass of the total cementing material for slag is does not exceed 30%, as specified in OPSS 350.</u>	-
2	-	<u>Check that concrete and concrete materials are as specified with the following exception: Check that the concrete mix design has a specified 28-Day compressive strength of 35 MPa, the maximum allowable proportion by mass of the total cementing material for slag shall be 30%.</u>	-
3	-	<u>Check that concrete and concrete materials are as specified and CAIS 1350. Check that the minimum specified 28-day compressive strength is 35 MPa Additional administrative and inspection activities shall be according to CAIS 1350.</u>	-

350.05.02 Bond Breaker for Dowel Bars and Load Transfer Devices

Administrative Activities:

4	-	Check that the bond breaker is as specified in NSSP PVMT0007.	-
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350.05.03 ————— **Burlap**

Administrative Activities:

4	-	Check that the burlap is as specified in OPSS 1306.	-
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350.05.04 **Curing Compound**

Administrative Activities:

1	-	Check that the curing compound is as specified in OPSS 1315.	-
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350.05.05 **Epoxy Adhesives**

Administrative Activities:

1	-	Check that <u>the</u> epoxy adhesives <u>are</u> of the type approved for horizontal dowel applications and mixed in the nozzle (cartridge).	-
2	-	Check that the epoxy adhesive is from the ministry's DSM list.	-

350.05.06 **Expansion Joint Filler**

Administrative Activities:

1	-	Check that the expansion joint filler is as specified in OPSS 1308.	-
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350.05.07 **Forms**

Administrative Activities:

1	-	Check that the forms are as specified in OPSS 919. <u>Additional administrative and inspection activities shall be according to CAIS 919.</u>	-
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350.05.08 ————— **Joint Sealant**

Administrative Activities:

1	-	Check that the hot poured rubberized asphalt joint sealing compound is as specified in OPSS 1212.	-
2	-	Check that the hot poured rubberized asphalt joint sealant is from the Ministry's DSM list, designated on the DSM for use with this specification.	-

350.05.09350.05.08 Moisture Vapour Barrier

Administrative Activities:

1	-	Check that the moisture vapour barrier is as specified, in Nssp PVMT0007.	-
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350.05.10350.05.09 Proprietary Patching Materials

Administrative Activities:

1	-	Check that the proprietary patching materials are suitable for the application and are from the Owner's list of acceptable proprietary concrete patching materials (i.e., Ministry's List of Concrete Patching Materials).	-
2	-	Verify the suitability of the proprietary patching material with regional Quality Assurance Office, Concrete Section, Engineering Materials Office (EMO).	-

350.05.10 Tie Bars, Dowel Bars and Load Transfer Devices

Administrative Activities:

1	-	Check that tie bars and dowel bars are as specified in OPSS 1440. <u>Additional administrative and inspection activities shall be according to CAIS 1440.</u>	-
2	-	Check that tie bars and dowel bars are epoxy coated as specified in OPSS 1442. <u>Additional administrative and inspection activities shall be according to CAIS 1442.</u>	-
3	-	Check that load transfer devices are as specified in OPSS 1441 <u>and the Contract Documents.</u>	-

350.05.11 Water

Administrative Activities:

1	-	Check that the water is as specified in OPSS 1302. <u>Additional administrative and inspection activities shall be according to CAIS 1302.</u>	-
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350.06 EQUIPMENT

350.06.01 Air Compressor

Administrative Inspection Activities:

1	-	<u>Check that the air compressor is as specified.</u>	<u>-2510%</u>
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350.06.01350.06.02 Batching Plant and Delivery Equipment

Inspection Activities:

1	-	Check that <u>the</u> delivery equipment is as specified in Clause OPSS 1350.06.02. <u>Additional administrative and inspection activities shall be according to CAIS 1350.</u>	<u>-10%</u>
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Administrative Activities:

1	-	Check that <u>the</u> batching plant is as specified in Clause OPSS 1350.06.01. <u>Additional administrative and inspection activities shall be according to CAIS 1350.</u>	-
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350.06.02350.06.03 Diamond Grinder

Administrative Inspection Activities:

1	-	When a diamond grinder is used, <u>c</u> Check that the diamond grinder is as specified. in NSSP PVMT0007.	<u>-10%</u>
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350.06.04 Effluent Collection Systems

Inspection Activities:

1	-	<u>Check that the effluent collection systems are as specified.</u>	<u>-2510%</u>
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350.06.05 Gang Drill

Inspection Activities:

1	-	<u>Check that the gang drill is as specified.</u>	<u>-2510%</u>
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350.06.06 Grooving Machines

Inspection Activities:

1	-	Check that the <u>grooving machine</u> is as specified.	<u>-2510%</u>
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350.06.03350.06.07 Hand Finishing Equipment

Administrative Inspection Activities:

1	-	Check that <u>the</u> hand finishing equipment are as specified in NSSP PVMT0007.	<u>-2510%</u>
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350.06.04350.06.08 Sawc Cutting Equipment

Administrative Inspection Activities:

1	-	Check that <u>the</u> saw cutting equipment areis as specified in NSSP PVMT0007.	<u>-10%</u>
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350.06.05350.06.09 Slip-Form Paving Equipment with Automatic Dowel Bar Inserter (DBI)

Administrative Inspection Activities:

1	-	When an automatic dowel bar inserter is used, <u>C</u> check that slip-form paving equipment is as specified in NSSP PVMT0007.	<u>-10%</u>
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350.06.06 Grooving Machines

Administrative Activities:

4	-	Check that grooving equipment is as specified in NSSP PVMT0007.	-
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350.06.07350.06.10 Straight Edge

Administrative Inspection Activities:

1	-	Check that <u>the</u> straight edge is as specified in NSSP PVMT0007.	<u>-10%</u>
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350.06.08350.06.11 Thermocouples and Dataloggers

Administrative Inspection Activities:

1	-	Check that <u>the</u> thermocouples and associated instrumentation are as specified in NSSP PVMT0007.	<u>-10%</u>
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350.06.09 Effluent Collection Systems

Administrative Activities:

4	-	Check that effluent collection systems are as specified in NSSP PVMT0007.	-
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350.06.10 Air Compressor

Administrative Activities:

4	-	Check that air compressor is as specified in NSSP PVMT0007.	-
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350.06.11 Gang Drill

Administrative Activities:

4	-	Check that gang drill is as specified in NSSP PVMT0007.	-
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350.07 CONSTRUCTION

350.07.01 General

Inspection Activities:

1	-	Check that concrete pavement and concrete base are constructed true to grade, cross-section and to the dimensions specified in the Contract Documents at a minimum of 3 random locations per subplot.	100%
2	-	Check that the concrete pavement or concrete base are protected from damage to the surface.	100%
3	-	Check that traffic, other than foot traffic and rubber-tired sawing equipment, is not permitted on the concrete until it has attained a compressive strength of 20 MPa <u>MPa</u> .	100%
4	-	Check that construction of shoulders is as specified in OPSS 314 <u>in the Contract Documents</u> .	100%

Administrative Activities:

1	-	Seven Days prior to the commencement of the concrete paving operation, Check that Receive the intent to place concrete pavement in writing <u>is received</u> .	-
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350.07.02 Production of Concrete

Inspection Activities:

1	-	Check that production of concrete is as specified in General, Temperature Control, Mixing Time and Mixing Rate, and Delivery subsections of OPSS 1350. <u>Additional administrative and inspection activities shall be according to CAIS 1350.</u>	100%
2	-	Check that when concrete is delivered by means of non-agitating equipment, discharge is completed within 30 minutes after introduction of water to the cement and aggregates.	100%

350.07.03 Placing of Concrete

350.07.03.01 General

Inspection Activities:

1	-	Check that immediately ahead of concrete placing operations, the subgrade-underlying materials is wetted by means of a uniform spray of water sufficient to wet the underlying materials subgrade thoroughly without leaving standing water.	100%
2	-	Check that concrete is transported, placed, and consolidated as specified in <u>NSSP PVMT0007</u> .	100%
<u>3</u>	<u>-</u>	<u>Record the time and location of interruptions in placing concrete greater than 20 minutes and measures taken for protecting the concrete.</u>	<u>100%</u>

Administrative Activities:

1	-	<u>When there is an interruption in placing concrete greater than 20 minutes, Receive and Check that an immediate notification from the Contractor and a proposal for remedial action when there is an interruption in placing concrete greater than 20 minutes is received. Notify the Contractor if the proposal is approved.</u>	-
<u>2</u>	-	<u>Provide an approval where a proposal for remedial action has been submitted.</u>	

350.07.03.02 Concrete Placing Restrictions

Inspection Activities:

1	-	Check that no concrete is placed until all curing material and, in cold weather, all cold weather protection material, has been delivered to the site.	100%
2	-	Check that concrete work does not proceed when there is a restriction as specified in NSSP PVMT0007.	100%
<u>3</u>	-	<u>Check that the temperature of the underlying materials and the forms (if used) are as specified.</u>	<u>25%</u>

350.07.04 Consolidation

Inspection Activities:

1	-	Check that for slip-form pavers, the concrete is consolidated as specified in NSSP PVMT0007.	25%
2	-	Check that for fixed-form placement, the concrete is consolidated as specified in NSSP PVMT0007.	25%

350.07.05 Finishing

Inspection Activities:

1	-	Check that finishing is as specified in NSSP PVMT0007.	100%
2	-	Check that no water or other materials are applied to the concrete surface or the finishing tools to aid in the finishing.	100%

350.07.06 Initial Texturing of Concrete Pavement or Concrete Base Surface

Inspection Activities:

1	-	Check that immediately after finishing and before the application of curing, the plastic surface of the concrete receives an initial texturing as specified in NSSP PVMT0007.	100%
<u>2</u>	-	<u>Check that the burlap condition is as specified.</u>	<u>50%</u>

<u>3</u>	-	<u>Check that the initial texturing is created in the longitudinal direction and is uniform, as specified.</u>	<u>100%</u>
<u>4</u>	-	<u>Check that water is not added to the concrete surface.</u>	<u>100%</u>

350.07.07 Curing

350.07.07.01 General

Inspection Activities:

<u>1</u>	-	<u>For slip-form placement, Check that curing is applied immediately after initial texturing of the concrete surface and within 15 minutes of concrete being formed by the paver.</u> <u>For slip-form placement, Record time between concrete being formed by the paver and application of curing compound a minimum of 10 times per Day's placement.</u>	100%
<u>2</u>	-	<u>For fixed-form placement, check that curing is applied immediately after initial texturing of the concrete surface.</u> <u>For fixed-form placement, Record time between concrete receiving initial texture and application of curing compound a minimum of 5 times per Day's placement.</u>	<u>100%</u>
<u>23</u>	-	Check that the curing period is appropriate for the weather and type of curing applied as specified in <u>NSSP PVMT0007.</u>	100%
<u>4</u>	-	<u>Check that the curing method is used as specified and according to the applicable clause in OPSS 904.</u> <u>Additional administrative and inspection activities shall be according to CAIS 904.</u>	<u>100%</u>
<u>5</u>	-	<u>When curing compound is used, check that it is not applied to joint faces against which joint sealing compound will be placed or to concrete surfaces to which concrete or mortar is to be bonded as specified.</u>	<u>100%</u>
<u>36</u>	-	Check that curing compound used on the surface of a concrete base is removed completely prior to the application of tack coat and overlaying with asphalt pavement by means of abrasive shot blasting <u>as specified in OPSS 929 and it does not result in any damage to the concrete surface.</u> <u>Additional administrative and inspection activities shall be according to CAIS 929.</u>	100%
<u>7</u>	-	Check that the removal process of curing compound meets all environmental constraints as specified in the Contract Documents.	100%

350.07.08 Cold Weather Protection

350.07.08.01

General

Inspection Activities:

1	-	Check that during cold weather, the temperature of the concrete is monitored and controlled for a minimum period of 7 Days <u>and the monitoring is commenced at the start of the concrete placing operation</u> as specified in <u>NSSP PVMT0007</u> .	100%
2	:	<u>Check that the concrete temperature does not fall below 15 °C for the first 3 Days of curing and then 10 °C for the following 4 Days.</u>	<u>100%</u>
3	-	Check that for cold weather conditions, concrete is protected according to the measures specified in the Minimum Cold Weather Protective Measures table of the Concrete Subject to Cold Weather clause in OPSS 904. <u>Additional administration and inspection activities shall be according to CAIS 904.</u>	100%
4	:	<u>Check that the cold weather condition is monitored, and the protection system is modified as required.</u>	<u>100%</u>
5	:	<u>If the cold weather protection is removed for sawcutting of joints, check that no concrete is left unprotected or exposed for more than the specified limits.</u>	<u>100%</u>

350.07.08.02

Monitoring and Control of Temperature

Inspection Activities:

1	-	<u>During cold weather, F</u> for each Day's placement of concrete, select a minimum of four locations near the concrete surface, equally distributed throughout the placed concrete, for thermocouple wires or sensors to be installed.	100%
2	:	<u>Check that the thermocouples were installed as specified.</u>	<u>100%</u>
3	:	<u>Check at least one additional thermocouple or sensor is installed to measure ambient air temperature above the surface of the concrete and outside of the specified cold weather protection.</u>	<u>100%</u>
4	:	<u>Check the number of installed thermocouple or sensor and the monitoring started as specified.</u>	<u>100%</u>
5	:	<u>Verify the temperature readings at random intervals.</u>	<u>25%</u>

350.07.08.03

Submission of Temperature Records

Administrative Activities:

1	-	At the end of each Day during the temperature monitoring period, Receive and Review the datalogger temperature records and a record of any actions taken to maintain control of temperature <u>is received</u> .	-
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2	-	At the end of the temperature monitoring period, <u>check that Receive and Review</u> the complete temperature record <u>for all thermocouples or sensors is received.</u>	-
<u>3</u>	-	Check and r <u>Review the records if they met the requirements of temperature during the temperature monitoring period.</u> The regional Quality Assurance Office can be contacted for assistance interpreting the data.	-

350.07.09 Joints

350.07.09.01 General

Inspection Activities:

1	-	Check that joints are of the type and at the locations specified in the Contract Documents.	100%
<u>3</u>	-	Check that where new concrete pavement or concrete base is placed adjacent to existing concrete pavement or concrete base, concrete is connected along longitudinal joints using tie bars and along transverse joints using dowel bars, according to the Contract Documents. <u>Check that tie bars are used for longitudinal joints and dowel bars are used for transverse joints, according to the Contract Documents.</u>	100%
<u>3</u>	-	<u>Check that the transverse joint in new pavement is located at the same locations and continuous with transverse joints in the existing adjacent pavements.</u>	<u>100%</u>

350.07.09.02 Longitudinal and Transverse Joints

Inspection Activities:

<u>1</u>	:	<u>Check that reservoir cut is not done and backer rod is not used for the joints.</u>	<u>1025%</u>
<u>2</u>	:	<u>For concrete pavement, check that the dimensions of the longitudinal and transverse joints are full depth joint filling without reservoir cut as specified</u>	<u>1025%</u>
<u>3</u>	:	<u>For concrete base, check that the dimension of the joint is as specified in the Contract Documents.</u>	<u>1025%</u>

350.07.09.03 Construction Joints

Inspection Activities:

1	-	Check that transverse construction joints are constructed at the end of each Day's production or when an interruption greater than 20 minutes occurs in the concrete paving operation.	100%
<u>2</u>	:	<u>Check that the construction joints is located at a transverse joint or an expansion joint location.</u>	<u>100%</u>

350.07.09.04 Tie Bars and Dowel Bars

350.07.09.04.01 General

Inspection Activities:

<u>1</u>	:	<u>Prior to placement of concrete or the installation of tie bars or dowel bars, check that if any bars are loose, broken, cracked or damaged.</u>	<u>100%</u>
<u>2</u>	:	<u>Check that all loose, broken, cracked or damaged bars are removed and replaced as specified.</u>	<u>100%</u>

350.07.09.04.01350.07.09.04.02 Protection of Tie Bars and Dowel Bars

Inspection Activities:

1	-	Check if the tie bars and dowel bars shall <u>are</u> stored and protected as specified in NSSP PVMT0007.	100%
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350.07.09.04.02350.07.09.04.03 Repair of Installation of Tie Bars and Dowel Bars

Inspection Activities:

1	-	Check that tie bars are installed <u>repaired or replaced</u> as specified in NSSP	<u>-100%</u>
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		PVMT0007.	
<u>2</u>	-	Check that <u>the repairs to damaged epoxy coating are completed as specified and OPSS 1442.</u> <u>Additional administration and inspection activities shall be according to CAIS 1442.</u>	<u>100%</u>

350.07.09.04.04 Installation of Tie Bars in Plastic Concrete

Inspection Activities:

<u>1</u>	-	Check that tie bars at longitudinal joints are installed according to the Contract Documents.	<u>-100%</u>
<u>2</u>	-	Check that tie bars are not manually inserted into the plastic concrete.	<u>50100%</u>
<u>3</u>	-	Check that the tie bars are installed within the tolerance of <u>± 15 from the specified depth</u> and are not placed within 600 mm of a transverse joint.	<u>50100%</u>

350.07.09.04.03350.07.09.04.05 Installation of Dowel Bars in Plastic Concrete

Inspection Activities:

<u>1</u>	-	Check that dowel bars at transverse joints are installed according to the Contract Documents.	<u>100%-</u>
<u>2</u>	-	<u>Record the locations where the dowel bars were installed using a DBI or by means of load transfer devices for calculating the lot size. Check that load-transfer devices are used as specified in NSSP PVMT0007.</u>	<u>-</u> <u>50100%</u>
<u>3</u>	-	When load transfer devices are used, <u>checkverify that:</u> <ul style="list-style-type: none"> • <u>they are placed securely using stakes as specified</u> • <u>they are placed a minimum of 100 m in advance of the concrete placing operations</u> • <u>the spacer wire is cut as specified</u> 	<u>50100%</u>
<u>4</u>	-	Check that the dowel bars are installed within the tolerance specified.	<u>50100%</u>
<u>5</u>	-	Check that the location of the centre of the dowel bars are precisely marked to permit joint forming or cutting operations directly over the centre of the dowel bars.	<u>50100%</u>

350.07.09.04.04350.07.09.04.06 Installation of Tie Bars and Dowel Bars in Hardened Concrete

Inspection Activities:

<u>1</u>	-	Check that tie bars and dowel bars are installed in hardened concrete at the locations and within the tolerances specified in Clauses <u>350.07.09.04.02-Installation of Tie Bars in Plastic Concrete</u> and <u>Installation of Dowel Bars in Plastic Concrete350.07.09.04.03.</u>	<u>-25%</u>
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2	-	Check that tie bars and dowel bars are installed in hardened concrete by drilling holes <u>using a gang drill</u> as specified in NSSP PVMT0007.	<u>-25%</u>
3	-	Check that for concrete that is less than seven Days of age, prior to drilling, cylinders are prepared as specified in Clause OPSS 904.07.14 to demonstrate that the concrete has reached a minimum compressive strength of 20 MPa <u>Mpa.</u>	<u>-25%</u>
<u>4</u>	<u>M-</u>	<u>Check that the drill holes are drilled using gang drill, meet the diameter and dimension tolerance, and are cleaned as specified prior to tie bar or /dowel bar installation.</u>	<u>5025%</u>
<u>5</u>	-	<u>Check that epoxy adhesive is injected into the back of the cleaned holes and the tie/ or the dowel bar are installed- with grout retention disks attached and- encased with epoxy adhesive for the full depth of the hole as specified.</u>	<u>10025%</u>
<u>76</u>	-	<u>After curing of the epoxy adhesive installation, pull a couple a minimum of 10 bars to ensure proper application of epoxy adhesive.</u>	<u>10025%</u>
47	-	Check that holes that have been started but not completed are cleaned and filled with a proprietary patching material from the Owner's list of acceptable concrete patching materials.	<u>-100%</u>
8	<u>M--</u>	<u>Check that bond breaker is applied to the free end of dowel bars and the exposed vertical concrete face along the transverse joint immediately before placing concrete.</u>	<u>100%</u>

350.07.09.05 Sawcutting, Cleaning and Sealing of Joints in Concrete Pavement

350.07.09.05.01 General

350.07.09.04.05 Sawcutting of Joints

Inspection Activities:

<u>21</u>	-	<u>Check that longitudinal and transverse sawcutting, dimensions, cleaning, and sealing of joint operations are carried out as specified in <u>OPSS 350, Contract Documents and in OPSS 369-NSSP PVMT0007.</u></u> <u>Additional administration and inspection activities shall be according to CAIS 369.</u>	25%
<u>2</u>	-	<u>Receive a 4-litre sample of the hot poured rubberized joint sealing compound from the heating and mixing kettle at the beginning, middle and the end of the process of joint sealing compound installation for each calendar year for testing by the Owner, and delivered to the designated laboratory.</u>	<u>100%</u>
<u>3</u>	-	<u>Notify the Contractor if more frequent hot poured rubberized joint sealing sampling is required.</u>	<u>100%</u>

Administrative Activities:

1	:	Check that a proposal to temporarily sealing joints (if applicable) is received. – Review the proposal and notify the Contractor of acceptance or rejection of the proposal.	:
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350.07.09.06 Sawcutting and Cleaning of Joints in Concrete Base

Inspection Activities:

1	:	Check that sawcutting, dimensions, and cleaning of joint operations are carried out as specified in OPSS 350, Contract Documents, and OPSS 369. Additional administration and inspection activities shall be according to CAIS 369.	25%
2	:	Check that concrete base joints are not sealed.	25% 100%

350.07.09.06.1 Cleaning of Joints

Inspection Activities:

4	-	Check that joints are flushing with water in one direction to remove all slurry, grinding and grooving effluent and any other debris. Check that the effluent, slurry, and waste material is managed appropriately.	100%
2	M	Check that joints which are sealed prior to final texturing are cleaned according to the timelines specified in Clause 350.07.09.05.03.	75%

350.07.09.06.2 Preparation and Sealing of Joints

Inspection Activities:

4	-	Check that joint sealing compound is not placed until new concrete has cured for a minimum of 7 Days.	100%
2	-	Check that joint sealing compound is not placed when the ambient air or pavement or base surface temperatures are less than 5 °C.	100%
3	-	Check that joints are clean and dry when the joint sealing compound is placed.	100%
4	-	Check that joints are prepared and filled as specified in Clause 350.07.09.05.04.	100%
5	-	Check that immediately prior to sealing operations, all joint faces are abrasive-blast cleaned as specified in OPSS 929.	100%
6	-	Check that joint sealing compound is installed according to the manufacturer's recommendations.	100%
7	-	Check that any joint sealing compound damaged by construction traffic or by the Contractor's operations is replaced.	100%

350.07.10 Optional Diamond Grinding to Improve Surface Tolerance and Smoothness

Inspection Activities:

1	-	Check that the optional diamond grinding is proceeds <u>according to the submitted proposal only after the written permission according to the submitted proposal is received.</u>	100%
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Administrative Activities:

1	-	<u>When optional diamond grinding is selected by the Contractor, check that a written proposal is received at least 5 business days prior to commencing the diamond grinding.</u>	100%
2	-	<u>Review the proposal according to Repairs subsection and check that the sublots, stations limits, and the length of each location are listed.</u>	100%
3	-	<u>Issue a Permission to Proceed in writing if the proposal meets the requirements as specified.</u>	100%

~~350.07.10~~ 350.07.11 Final Texturing of Concrete Pavement Surface

350.07.11.01 Trial Section

Inspection Activities:

1	-	<u>Select the location of a 500 metre single lane trial section.</u>	100%
2	M	For the trial section, check that the final texturing meets the requirements <u>as specified</u> of <u>NSSP PVMT0007</u> at a minimum of 10 random locations and any areas of concern.	100%
3	M	<u>If the trial section does not meet the requirements, select another trial section and check the final texturing until the requirements is met.</u>	100%

Administrative Activities:

1	-	Issue Permission to Proceed with the grooving texture on the Contract when it has been demonstrated that the trial section meets the requirements of <u>as specified</u> <u>NSSP PVMT0007</u> .	-
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~~350.07.10~~ 350.07.11.02 Final Texturing of Concrete Pavement

Inspection Activities:

1	-	Check that concrete pavement receives a final texturing by <u>longitudinal</u> grooving as specified in <u>NSSP PVMT0007</u> . <u>Check that concrete base does not receive final texturing.</u>	100%
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2	-	Check that final texturing is done after the curing period and, if applicable, <u>after completion of</u> the cold weather protection period, is complete . Check that prior to final texturing, all concrete repairs are completed according to the Contract Documents.	100%
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Administrative Activities:

1	-	Receive written notification from the Contractor if any of the defects or conditions listed in Clause 350.08.05 <u>Acceptance of Concrete Surface Texturing</u> are present in the work. The notification shall include the extent of the defects and an explanation of the cause.	-
2	-	Receive and Review a proposal for the remedial work for any defects and conditions as specified in Clause 350.07.10.02 <u>listed in Clause Acceptance of Concrete Surface Texture</u> .	-
<u>3</u>	<u>-</u>	<u>Review and notify the Contractor for acceptance or rejection of the proposal.</u>	<u>-</u>

350.07.12 Surface Tolerance

Inspection Activities:

1	-	Check that the surface of concrete <u>meets the surface tolerance requirement is</u> as specified in Clause 350.07.11 .	<u>40</u> 25%
2	-	If required, Check-check that diamond grinding is carried out as specified in Clause 350.07. Surface Tolerance and Surface Smoothness Deficiencies <u>15 Clause</u> to ensure that concrete surface meets the surface tolerance requirements <u>as specified of Clause 350.07.11</u> .	25%
<u>3</u>	<u>-</u>	<u>Check the surface of the concrete is join flush with adjacent concrete pavement or concrete base.</u>	<u>25%</u>

350.07.13 Material Sampling and Testing

Inspection Activities:

<u>1</u>	<u>-</u>	<u>Check that the sampling requirements for aggregates are carried out as specified in OPSS 1350.</u>	<u>10%</u>
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350.07.13.01 Sampling of Water, Admixtures, Limestone Filler and Cementing Materials

Inspection Activities:

1	-	Check that sampling of water, admixtures, <u>limestone filler (if applicable)</u> and cementing materials are carried out as specified in Clause OPSS 1350.07.05 . <u>Additional administration activities shall be according to CAIS 1350.</u>	<u>-10%</u>
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350.07.13.02 Sampling and Testing of Plastic Concrete

Inspection Activities:

1	-	Check that sampling, testing, acceptance, adjustments, visual acceptance, and submission of results for plastic concrete are as specified in eClauses in OPSS 1350.07.05, with the exception that after satisfactory control has been established, testing shall be carried out on one load of concrete in every 5 <u>five loads, randomly selected</u> . <u>Additional inspection activities shall be according to CAIS 1350.</u>	100%
2	-	Check that satisfactory control of plastic concrete is established each day as specified in NSSP PVMT0007.	100%
3	-	After satisfactory control has been established, select a random load of concrete for testing as specified in Clause 350.07.12.02.	100%

350.07.13.03 Sampling for Acceptance Testing of Thickness, 28-Day Compressive Strength, Air Void System Parameters, and Rapid Chloride Permeability and Acceptance of Joint Sealing

350.07.13.03.01 General

Inspection Activities:

1	-	Check that lot and subplot size and number of cores per subplot are as specified in Clause 350.08.	100%
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Administrative Activities:

<u>1</u>	<u>-</u>	<u>After sealing operations are completed, check with the regional Quality Assurance Office whether additional coring, up to 2 cores per subplot, at joint locations is required to evaluate the acceptability of the joint cleaning and sealing.</u>	<u>-</u>
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350.07.13.03.02 Coring

Administrative Activities:

Inspection Activities:

1	-	Select 2 random locations adjacent panels for coring within each subplot and Check Witness that core samples are being obtained for acceptance testing as specified in Clause 350.07.12.03.02.	100%
2	-	When the concrete is seven-7 to 10 Days, S select a random location from within the subplot for removal of 5 core samples from the concrete pavement or concrete base for acceptance testing of 28-Day compressive strength, air void system parameters and rapid chloride permeability.	100%

		<u>CheckWitness</u> that the 3 cores for acceptance testing of 28- day <u>Day</u> compressive strength are removed from a single panel of concrete pavement or <u>concrete</u> base at the random location.	
		<u>CheckWitness</u> that the cores for air void system parameters and rapid chloride permeability are taken from a panel of concrete pavement or concrete base adjacent to the panel from which the cores for compressive strength testing were taken.	
3	-	After completion of any repairs and final texturing, select a <u>nother-second</u> random location from within each subplot for removal of a single core for measurement of thickness.	100%
<u>4</u>	-	<u>When requested by the Owner, select up to 2 core locations per subplot, at joint locations to evaluate the acceptability of the joint cleaning and sealing. Additional inspection activities shall be according to CAIS 369.</u>	<u>100%</u>
<u>45</u>	-	Check that cores are marked, bagged and tagged as specified in Clause 350.07.12.03.02.	100%
<u>56</u>	-	Upon removal of the core samples, immediately take possession of the cores and deliver them to the designated <u>Area Quality Assurance</u> laboratory for testing.	100%
<u>7</u>	-	<u>Check that core holes are filled as specified in OPSS 1350.</u>	<u>100%</u>

352.07.10.01 — Sampling of Hot Poured Rubberized Joint Sealing Compound

Inspection Activities:

4	-	During the process of sealant installation, Check that a sample of the joint sealant is collected if required.	100%
2	-	Check that sealant samples are stored in sealed epoxy-lined pails or suitable leak-proof plastic containers.	100%
3	-	Check that sealant samples are delivered to the lab accompanied by the documents specified in Clause 350.07.12.04.	100%

350.07.14 — Preparation for Measurement of Position and Alignment of Dowel Bars

350.07.13.04 350.07.14.01 — 350.07.13.01 — Joint Cut-Out Procedure

Inspection Activities:

1	-	Select the transverse joint to be evaluated and check that the <u>joint cut-outs are is</u> carried out by the Contractor as specified in Clause 350.07.13.01. <u>Confirm the measurement of dowel position and alignment using the magnetic pulse induction (MPI) device is completed for the joint before the joint cut-out operations.</u>	100%
2	<u>-M</u>	Measure and evaluate the <u>dowel bar position and</u> alignment of the dowel bars at the joint as specified in Clause 350.08.	100%

3	-	<p>After the selected joint has been measured and evaluated, Check that the joint is removed and replaced with a full depth concrete repair, 2 m in length, as specified in OPSS 366, with the exception that joint sealing shall as specified in NSSP PVMT0007.</p> <p><u>Additional administrative and inspection activities shall be according to CAIS 366.</u></p>	100%
<u>4</u>	-	<p><u>Within the full depth concrete repair area, measure and record the depth of the exposed tie bars.</u></p>	<u>100%</u>

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350.07.14.02 ~~13.02~~ **Preparation for Measurement of Position and Alignment of Dowel Bars**

Inspection Activities:

1	-	Check that the lot size, measurement and acceptance of position and alignment of dowel bars using MIT scan <u>MPI device</u> are as specified in Clause 350.08.	<u>-100%</u>
2	-	Check that the area to be measured are free of loose stone, debris and obstructions.	100%
3	-	After the measurements by the MIT scan <u>MPI device</u> are completed and prior to the commencement of any corrective work, Check that all areas to be repaired are marked on the concrete surface.	100%

Administrative Activities:

1	-	Check that Receive a written notification <u>is received</u> from the Contractor when the concrete pavement or concrete base is ready for measurement of position and alignment of dowel bars.	-
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350.07.14 ~~350.07.15~~ **Preparation for Surface Smoothness Measurement**

Inspection Activities:

1	M	Check that areas to be measured are clearly marked out as specified as specified in Clause 350.07.15.	100%
2	-	If reflectors are used for measurements, Check that requirements of Clause 350.07.15 <u>as specified.</u>	50%
3	-	When necessary, c Check that traffic protection during measurement is in accordance with MTO OTM Book 7.	100%
4	<u>M</u>	<u>Review the measurement result and identify and direct the eContractor to mark the areas to be repaired due to rejectable sublots or incidents of localized roughness or both prior to the commencement of any corrective work.</u>	<u>100%</u>

Administrative Activities:

1	-	Receive <u>Check that</u> a written notification <u>is received</u> from the Contractor when the concrete pavement or concrete base is ready for surface smoothness acceptance testing.	-
2	-	Check that final texturing has been completed <u>prior to surface smoothness acceptance test.</u>	-

350.07.15350.07.16 **Repairs**

350.07.15.01350.07.16.01 **Repair of Surface Tolerance and Surface Smoothness Deficiencies**

Inspection Activities:

1	-	When Owner's acceptance testing of surface smoothness and surface tolerance indicates that there are deficiencies, <u>check that diamond grinding is the only used as the</u> corrective method used .	100%
2	-	Check that diamond grinding is performed as specified in Clause 350.07.15.01 .	100%
<u>3</u>	-	<u>Check that all the repaired sublots are identified in the Contractor's proposal.</u>	<u>100%</u>
<u>34</u>	-	<u>When repaired areas do not meet the specified texturing requirement, check/verify that re-texturing is performed as specified.</u>	<u>-100%</u>

Administrative Activities:

1	-	When diamond grinding repair is required, Receive and Review a written repair proposal at least 5 Business Days prior to the start of repairs as specified in Clause 350.07.15.01 .	-
2	M	Issue the permission to proceed if the repair proposal is as specified in the Contract Documents .	-

350.07.15.02350.07.16.02 **Crack Repairs**

Inspection Activities:

1	-	<u>When approved by the Owner, check the remedial works is completed according to the proposal. Check that transverse cracking in excess of one-third the depth of the pavement or base thickness are repaired as a full depth concrete repair, a minimum of 2 m in length, as specified in OPSS 366, with the exception that joint sealing shall be as specified in NSSP PVMT0007.</u>	100%
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Administrative Activities:

<u>1</u>	-	<u>When cracks are found in the concrete pavement or concrete base, check that a proposal for remedial works is received.-</u>	-
<u>2</u>	-	<u>Review the proposal for remedial works which shall include the location of the crack(s), their length(s) and depth(s) and any relevant information. Notify and provide the submitted documentation to the Quality Assurance Office (QAO).</u>	-
<u>23</u>	-	<u>Notify the Contractor for acceptance or rejection of the proposal.- No repair work is proceeded until approval.</u>	-

350.07.16.01 ~~350.07.17~~ **Management of Effluent from Concrete Grinding and Grooving Operations**

350.07.16.01 ~~350.07.17.01~~ **General**

Inspection Activities:

1	-	Check that effluent from concrete grinding and grooving operations are captured and managed according to the Contract Documents.	-100%
<u>2</u>	-	<u>Check that the Contractor's Environmental Compliance Approval (ECA) for a Waste Management System and the receiver's ECA for a Waste Disposal Site are valid for the items specified in Clause 350.07.17.03.</u>	-

352.07.10.02 ~~Carrier Information~~

Administrative Activities:

1	-	Check that the carrier has one of the certificates of approvals as specified in Clause 350.07.17.01.	-
<u>2</u>	-	<u>Receive a notification a minimum of 2 weeks prior to the first shipment and a minimum of 24 hours' notice prior to each subsequent shipment requiring the manifest.</u>	-
<u>3</u>	-	<u>Receive and Complete a Regulation 347 Form 1 manifest for "Part A"</u>	-

350.07.16.02 ~~350.07.17.02~~ **Environmental Compliance Approval**

Administrative Activities:

<u>1</u>	-	<u>Check that Contractor's ECA for a waste management system and the receiver's ECA for a waste disposal site are valid as specified.</u>	-
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Inspection Activities:

352.07.10.03 ~~Manifest~~

Administrative Activities:

350.07.18 ~~Management of Excess Material~~

Inspection Activities:

<u>1</u>	-	<u>Check that the excess material is managed as specified.</u>	<u>100%</u>
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350.08 QUALITY ASSURANCE

350.08.01 ~~Acceptance of Concrete Pavement and Concrete Base~~

Inspection Activities:

1	-	<u>Check that if any concrete pavement or concrete base are unacceptable or rejectable.</u>	100%
2	-	<u>Notify the Contractor for the unacceptable or rejectable works.</u>	100%
1	-	Check that unacceptable lots and sublots are removed and replaced as specified in Clause 350.08.01.	100%

Administrative Activities:

1	-	Check that the concrete pavement and concrete base are acceptable as specified in Clause 350.08.01.	-
2	-	Contact <u>Regional</u> Quality Assurance <u>Office section</u> for any specialized testing.	-
3	-	<u>Check that the pavement or concrete base that has been replaced are evaluated for acceptance on the same basis as the original lots and sublots.</u>	-

350.08.02 Field Inspection

Inspection Activities:

1	M	Check the work during production and reject all or a portion of the work based on the presence of one or more of the defects specified in NSSP PVMT0007.	100%
2	-	After sealing operations are complete, C check any cores taken at joint locations to evaluate the acceptability of the joint cleaning and sealing. Document the location of the cores, the visual examination and prepare a report that includes photographs of the cores.	100%

350.08.03 Acceptance of 28-Day Compressive Strength, Air Void System Parameters, Rapid Chloride Permeability and Thickness

350.08.03.01 General

Inspection Activities:

1	-	<p>Check that acceptance of 28-day <u>Day</u> compressive strength, air void system parameters, rapid chloride permeability and thickness are based on cores removed from hardened concrete.</p> <ul style="list-style-type: none"> • <u>Acceptance of 28-Day compressive strength and thickness is on a lot basis.</u> • <u>Acceptance of air void system parameters and rapid chloride permeability is on a subplot basis.</u> 	-
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350.08.03.02 Lot Size for 28-Day Compressive Strength, Air Void System Parameters, Rapid Chloride Permeability and Thickness

Inspection Activities:

1	-	Check that a total of 6 cores are removed from each subplot.	-100%
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Administrative Activities:

1	-	Determine the lot and subplot size as specified in Clause 350.08.03.02.	-
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350.08.03.03 ~~Acceptance Testing for 28-Day Compressive Strength, Air Void System Parameters, Rapid Chloride Permeability and Thickness~~

350.08.03.03.01 28-Day Compressive Strength Testing

Administrative Activities:

1	-	Check that the 28- day <u>Day</u> compressive strength is performed according to LS-410, <u>with the exception that determination of concrete pavement thickness is not required.</u>	-
2	-	Determine the 28- day <u>Day</u> compressive strength of a subplot by taking the average of the set of three cores for the subplot, rounded to one decimal place.	-

350.08.03.03.02 Air Void System in Hardened Concrete

Administrative Activities:

1	-	Check that one half of one core representing the subplot is tested for air void system parameters according to LS-432 and the other half is retained for audit purposes by the owner.	-
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350.08.03.03.03 Rapid Chloride Permeability

Administrative Activities:

1	-	Check that the rapid chloride permeability test is performed according to LS-433 and the test is performed when the concrete is 28 to 32 Days of age.	-
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350.08.03.03.04 Thickness Testing

Administrative Activities:

1	-	Check that the concrete pavement or concrete base thickness for each subplot is determined according to LS-450.	-
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350.08.03.04 ~~Basis of Acceptance for 28-Day Compressive Strength, Air Void System Parameters, Rapid Chloride Permeability and Thickness~~

350.08.03.04.01 28-Day Compressive Strength

~~December 2021~~ October 2024

Administrative Activities:

1	-	Review and <u>Check that all Quality Assurance results for 28-Day compressive strength meet the requirements as specified of the Contract Documents</u> <u>Calculate the Percent Within Limits for the criteria of strength and thickness. Calculate the payment factors for strength, air void system, rapid chloride permeability and thickness and determine the combined payment factor. Forward all Quality Assurance test results electronically to Quality Assurance Section within 4 Days of receiving results.</u>	-
2	-	<u>Determine acceptance and rejection and price adjustment (if applicable) of the subplot as specified.</u>	-

350.08.03.04.02 Air Void System in Hardened Concrete

Administrative Activities:

1	-	<u>Review and Check that all Quality Assurance results for hardened air content and spacing factor meet the requirements as specified.</u>	-
2	-	<u>Determine acceptance and rejection and price adjustment (if applicable) of the subplot as specified.</u>	-

350.08.03.04.03 Rapid Chloride Permeability

Administrative Activities:

1	-	<u>Review and Check that all Quality Assurance results for rapid chloride permeability meet the requirements as specified.</u>	-
2	-	<u>Determine acceptance and rejection and price adjustment (if applicable) of the subplot as specified.</u>	-

350.08.03.04.04 Thickness

Administrative Activities:

1	-	<u>Review and Check that all Quality Assurance results for thickness meet the requirements as specified.</u>	-
2	-	<u>Determine acceptance and rejection and price adjustment (if applicable) of the lot as specified.</u>	-

350.08.03.05 Referee Testing for 28-Day Compressive Strength, Air Void System Parameters, Rapid Chloride Permeability and Thickness

350.08.03.05.01 General

Administrative Activities:

1	-	Check that referee testing for a subplot is invoked by the Contractor within 5 <u>3</u> Business Days of receiving the test results.	-
2	-	Review the Contractor's request to invoke Referee Testing (including the original test results to verify they do not meet the specified Quality Assurance acceptance requirements).	-
3	-	Complete the Referee Request Form (PH-CC-885) and <u>s</u> Submit it to the appropriate Quality Assurance Officer (QAO).	-
4	-	Notify the Referee laboratory that they have been selected as the Referee laboratory and let them know the quantity of samples and type of testing required.	-
5	-	If the laboratory cannot complete Referee Testing in a reasonable timeframe, inform the QAO, who will provide another referee laboratory from the EMO referee roster.	-
6	-	Submit a copy of the completed Referee Request Form provided by EMO to the referee laboratory by email.	-
7	-	For referee testing of air void system parameters or thickness, Contact the Area Quality Assurance laboratory and notify them to ship the referee samples immediately to the referee laboratory.	-
8	-	Track the delivery of the samples to ensure they arrive at the referee laboratory.	-
9	-	If cores are required for referee testing, coordinate the core removal and determine the locations for core removal and notify the Contractor.	-
10	-	Once the schedule for referee testing has been finalized, provide the Contractor and QAO with the details of the referee laboratory, dates and times at least 3 Business Days in advance of the date and time of Referee Testing.	-
11	-	Confirm that the Contractor will be witnessing the Referee Test (maximum of 2 people). Note that if the date provided by the referee laboratory meets the minimum of 3 Business Days prior to the intended date of performing the test. The date is non-negotiable by the Contractor unless a change is formally requested by the MTO.	-
12	-	Once testing is complete, Receive and Review the test results from the Referee Laboratory.	-
13	-	Request clarification from the Referee Laboratory if required, otherwise, Submit the results to the Contractor. Also Submit the Referee results together with a cover letter to the applicable QAO.	-
14	-	Forward the referee test results to the Contractor as they become available.	-

350.08.03.05.02 28-Day Compressive Strength

~~Administrative Inspection~~ Activities:

1	-	Within 24 hours of the Contractor invoking referee testing, <u>Check witness</u> that a new set of three cores are removed by the Contractor.	-
2	-	Check that cores for referee testing for each disputed subplot are taken at a location no more than 1 m from the location that each of the disputed acceptance cores were removed from.	-
3	-	Check that the core size and core extraction are as specified in Clause <u>350.07.12.03.02</u> .	-
4	-	Check that the core holes are filled as specified in OPSS 1350.	-
<u>5</u>	:-	<u>Determine and whether referee result confirms the test acceptance test result or not. Revise the payment adjustment calculations as specified (if applicable).</u>	:-

350.08.03.05.03 Air Void System in Hardened Concrete

~~Inspection-Administrative~~ Activities:

1	-	Check that the referee testing for air voids is carried out on the same half of the core sample that was tested for acceptance.	-
<u>2</u>	:-	<u>Discard the acceptance test result and replace it with the referee test result. Determine acceptance and rejection as specified.</u>	:-

350.08.03.05.04 Rapid Chloride Permeability

Inspection Activities:

1	-	Within 24 hours of invoking the referee testing, Check that a new core is removed by the Contractor.	-
2	-	Check that cores for referee testing for each disputed subplot are taken at a location no more than 1 m from the location that each of the disputed acceptance cores were removed from.	-
3	-	Check that the core size and core extraction are as specified in Clause <u>350.07.12.03.02</u> .	-
4	-	Check that the core holes are filled as specified in OPSS 1350. <u>Additional administrative and inspection activities shall be according to CAIS 1350.</u>	-
<u>5</u>	:-	<u>Determine acceptance and rejection as specified and whether referee result confirms the test acceptance test result or not.</u>	:-

350.08.03.05.05 Thickness

~~Inspection Administration~~ Activities:

1	-	Check that r Referee testing of thickness for a subplot is done on the same core that was used for acceptance testing of thickness.	-
2	-	Determine acceptance and rejection as specified and whether referee result confirms the test acceptance test result or not. Determine acceptance and rejection as specified.	-

350.08.04 Acceptance of Position and Alignment of Dowel Bars

350.08.04.01 General

Administrative Activities:

1	-	Receive and Review Check that a written notification that the pavement or <u>concrete</u> base is ready for acceptance testing <u>is received and reviewed</u> .	-
2	-	Check that the pavement or base is free of loose stone, debris, and obstructions.	-
3	-	Arrange for acceptance testing after the above two activities are completed and Provide the Contractor with a 48 hours' notice of when the dowel position and alignment measurements will begin.	-

350.08.04.02 Lot Size ~~for Position and Alignment of Dowel Bars~~

Administrative Activities:

1	-	Determine the lot and subplot size as specified in Clause 350.08.04.02 .	-
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350.08.04.03 Measurement and Acceptance ~~for Position and Alignment of Dowel Bars~~

Administrative Activities:

1	-	Upon receiving the Contractor's written notice that the concrete pavement or <u>concrete</u> base is ready for measurements by the Owner for position and alignment of dowel bars, coordinate with the Owner to retain the services of a testing service provider, to measure the position and alignment of dowel bars according to the Contract Documents.	-
2	-	Calculate the Percent Within Limits for the criteria of dowel bar position and alignment and the payment factor.	-
3	-	Check that the dowel bar position and alignment for the lot is acceptable as specified in Clause 350.08.04.03 .	-

44	-	Check that all areas to be repaired, after the measurements by the MIT-MPL <u>scandevise</u> , are marked on the concrete surface prior to the commencement of any corrective work.	-
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350.08.04.04 Referee Testing ~~for Position and Alignment of Dowel Bars~~

350.08.04.04.01 General

Administrative Activities:

1	-	Check that referee testing for a subplot is invoked by the Contractor within five- <u>3</u> Business Days of receiving the test results.	-
2	-	Review the Contractor's request to invoke Referee Testing (including the original test results to verify they do not meet the specified Quality Assurance acceptance requirements).	-
3	-	Complete the Referee Request Form (PH-CC-885) and Submit it to the appropriate Quality Assurance Officer (QAO).	-
4	-	Coordinate with the Owner to retain the services of a testing service provider, to measure the position and alignment of dowel bars according to the Contract Documents.	-
5	-	Once the schedule for referee testing has been finalized, provide the Contractor and QAO with the details, dates and times at least 3 Business Days in advance of the date and time of Referee Testing.	-
6	-	Confirm that the Contractor will be witnessing the Referee Test (maximum of 2 people).	-
7	-	Once testing is complete, Receive and Review the test results.	-
8	-	Forward the referee test results to the Contractor as they become available.	-

~~350.08.04.04.01~~ 350.08.04.04.02 Referee Testing Cost

As specified in ~~OPSS 350.~~ Administrative Activities:

<u>1</u>	<u>:</u>	<u>Determine who is responsible for the referee testing cost.</u>	<u>:</u>
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350.08.05 Acceptance of Concrete Surface Texturing

Inspection Activities:

1	-	Select, i <u>n</u> inspect, and m <u>m</u> Measure grooving areas for acceptance as specified in <u>Clause 350.08.05.</u>	-10%
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Administrative Activities:

<u>1</u>	<u>:</u>	<u>Determine acceptance and rejection as specified.</u>	<u>:</u>
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350.08.06 Acceptance of Surface Smoothness

350.08.06.01 General

Administrative Activities:

1	-	Arrange for acceptance testing of the lot <u>by the Owner</u> after: a) Final texturing has been completed, and b) Written notification that the <u>concrete</u> pavement or <u>concrete</u> base is ready for acceptance testing is received, and c) The pavement or <u>concrete</u> base is checked to be free of loose stone, debris, and obstructions.	-
2	-	Provide the Contractor with a 48 hours' notice of when the surface smoothness measurements will begin.	-
<u>3</u>	-	<u>Check that if the weather conditions is suitable for testing, according to the equipment manufacturer's recommendations, the testing shall be suspended and resumed only when the conditions are acceptable.</u>	-
<u>34</u>	-	<u>Forward the test results to the Contractor as they become available.</u>	-

350.08.06.02 Lot Size ~~for Surface Smoothness~~

Administrative Activities:

1	-	Determine the lot and subplot size as specified in Clause 350.08.06.02.	-
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350.08.06.03 Measurement and Acceptance of Surface Smoothness

Inspection activities:

1	-	After the measurements are analyzed, C check that all areas to be repaired due to rejectable sublots or incidents of localized roughness or both, are marked on the concrete surface prior to the commencement of any corrective work.	100%
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Administrative Activities:

1	-	Check that smoothness measurement of the surface of the concrete pavement or concrete base, and incidents of localized roughness are measured as specified in LS-296, using an inertial profiler, and Clause 350.08.06.03.	-
2	-	Ensure smoothness measurements are done using an approved inertial profiler and operator.	-

3	-	Check that the subplot's smoothness is acceptable as specified in Clause 350.08.06.03.	-
4	-	<u>Calculate the Percent Within Limits for smoothness and the payment factor.</u>	-
5	-	<u>Calculate payment adjustment for incident(s) of localized roughness.</u>	-
46	-	Determine areas that need to be repaired, as specified, in Clause 350.08.06.03.	-

350.08.06.04 Referee Testing of ~~Surface Smoothness~~

350.08.06.04.01 General

Administrative Activities:

1	-	Check that referee testing for a subplot is invoked by the Contractor within five 5 Business Days of receiving the test results.	-
2	-	Review the Contractor's request to invoke Referee Testing (including the original test results to verify they do not meet the specified Quality Assurance acceptance requirements).	-
3	-	Complete the Referee Request Form (PH-CC-885) and Submit it to the appropriate Quality Assurance Officer (QAO).	-
4	-	Coordinate with the Owner to retain the services of a testing service provider, based on the applicable referee roster.	-
5	-	Check that all sublots that are requested for referee testing are re-measured, as specified in LS-296 within 21 Business Days of receiving the written request for referee testing.	-
6	-	Once testing is complete, Receive and Review the test results.	-
7	-	Forward the referee test results to the Contractor as they become available.	-

350.08.06.04.01 350.08.06.04.02 Referee Testing Cost

~~As specified in NSSP PVMT0007.~~

Administrative Activities:

1	-	<u>Determine who is responsible for the referee testing cost.</u>	-
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350.08.07 Acceptance of Repairs

350.08.07.01 General

Inspection Activities:

1	-	Check repaired areas to <u>ensure the requirements</u> assess effectiveness of the	<u>-100%</u>
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		repairs as specified in Clause 350.08.07.01.	
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350.08.07.0402 Acceptance of Repair of Surface Tolerance and Surface Smoothness Deficiencies

Inspection Activities:

1	-	Check that sublots repaired by diamond grinding to correct deficiencies or as chosen by the Contractor, or areas that have been removed and replaced, are re-measured for surface smoothness.	100%
2	-	Check that a repaired subplot is acceptable as specified in Clause 350.08.05 and 350.08.06.	100%
3	-	Check that grooving in areas that have been diamond ground after final texturing are re-evaluated for acceptance as specified in Clause 350.08.05.	100%

Administrative Activities:

1	-	Receive a written notification from the Contractor when the repaired sublots are ready for acceptance re-measurement by the Owner.	-
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350.08.08 ~~Acceptance of Hot Poured Rubberized Joint Sealing Compound~~

Inspection Activities:

4	-	If tested, Check that hot poured rubberized joint sealing compound is acceptable as specified in OPSS 1212, "All District" category.	-
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350.08.09 350.08.08 Scaling Warranty

350.08.08.01 General

Inspection Activities:

1	-	Inspect and assess the severity of scaling of the concrete pavement, if any, according to Figures 1 to 6 of NSSP PVMT0007.	-100%
2	-	Check that areas of medium and severe scaling are removed and replaced.	-100%

Administrative Activities:

1	-	For light scaling greater than 20% of the component, Receive and Review a repair proposal. <u>Notify the Contractor if the repair proposal is acceptable.</u>	-
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350.08.08.0201 Warranty Period

Administrative Activities:

<u>1</u>	-	<u>Determine the end of warranty period As specified.</u>	-
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As specified in Nssp PVMT0007.

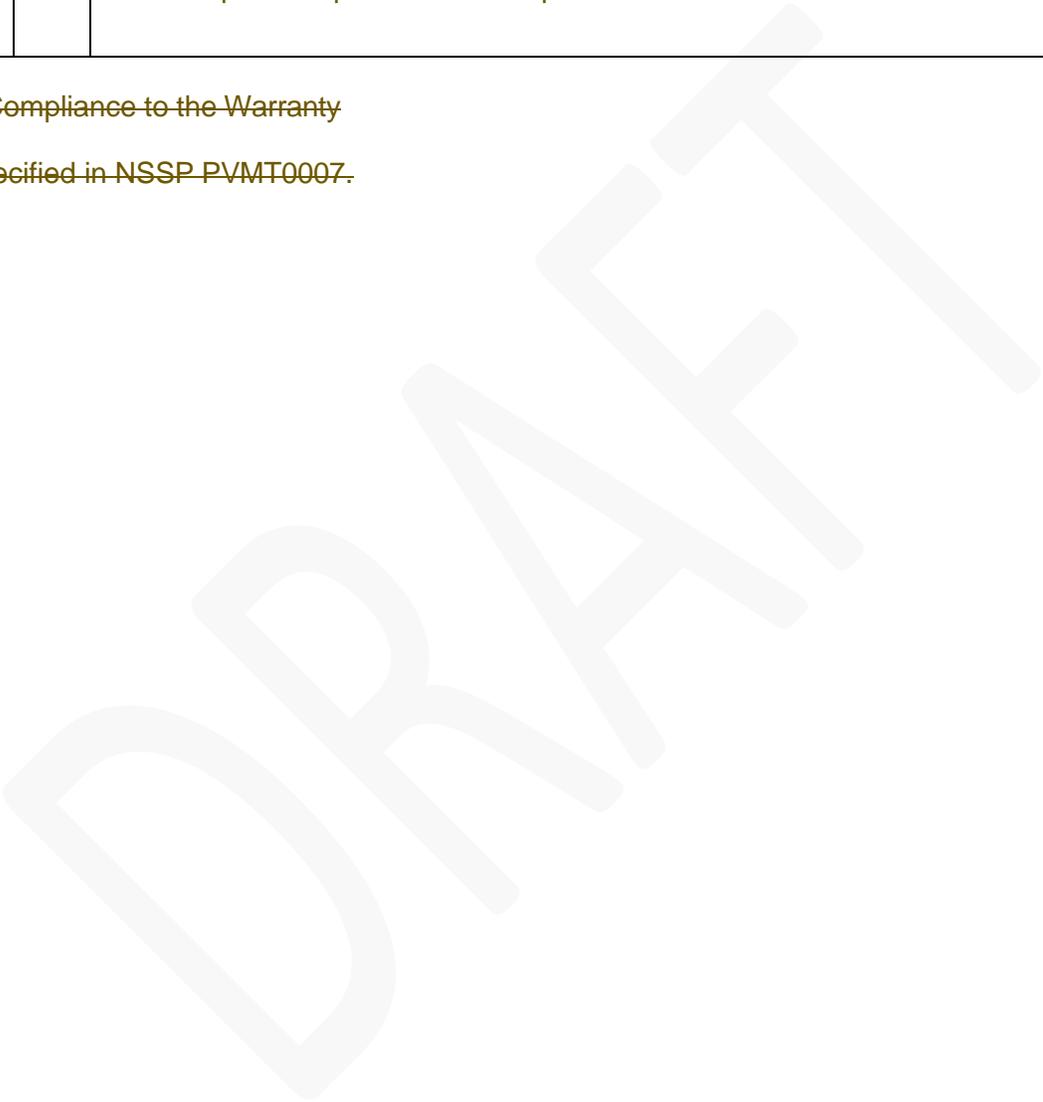
Termination of the Warranty

Administrative Activities:

<u>4</u>	-	<u>Issue the Release from Warranty notice no later than 30 Days after confirming that the repair and performance requirements were met or exceeded.</u>	-
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Non-Compliance to the Warranty

As specified in Nssp PVMT0007.



350.08.08.023 **Distress Survey**

Inspection Activities:

1	-	Carry out a survey at any time during the warranty period if required.	<u>-100%</u>
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Administrative Activities:

1	-	At least 60 days prior to the end of the warranty, send <u>submit</u> the survey results to the Contractor.	-
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350.09 **MEASUREMENT FOR PAYMENT**

Administrative Activities:

1	-	Measurement for payment shall be as specified in <u>NSSP PVMT0007</u> .	-
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350.10 **BASIS OF PAYMENT**

Administrative Activities:

1	-	Basis of payment shall be as specified in <u>NSSP PVMT0007</u> .	-
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WARRANT: Always with NSSP PVMT0007 OPSS 350, Construction Specification for Concrete Pavement and Concrete Base.