



Construction Administration

And

Inspection Task Manual

March 2017

To all users of the Construction Administration and Inspection Task Manual (CAITM), March 2017

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CONSTRUCTION ADMINISTRATION AND INSPECTION TASK MANUAL

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SECTION 1.0: INTRODUCTION

1.1 PURPOSE OF THE MANUAL

The Construction Administration and Inspection Task Manual (CAITM) has been prepared to assist the Contract Administrator (CA) and the associated inspection staff in the administration of highway construction contracts for the Ministry of Transportation Ontario (MTO).

Service Providers are responsible for providing the Contract Administration Services and Deliverables in accordance with the Construction Administration Legal Terms and Conditions including the Construction Administration and Inspection Task Manual.

The CAITM is divided into two parts:

<p>Part A provides direction to the Contract Administration team on meetings, deliverables, protocol, instructions, administration, relationships and conduct.</p> <p>The document is divided into the following sections:</p> <ul style="list-style-type: none">• <i>Pre-Construction</i>• <i>During Construction</i>• <i>Post Construction</i>• <i>Performance Warranty Specifications (New in 2017 version)</i>	<p>Part B consists of inspection tasks intended to provide those involved in inspection on MTO contracts with a resource to check the quality and quantity of the Work is in accordance with MTO specifications, standards, drawings, policies and procedures.</p> <p>Inspection Categories:</p> <ul style="list-style-type: none">• <i>Grading and Drainage (GD)</i>• <i>Concrete and Structures (CS)</i>• <i>Bituminous (BIT)</i>• <i>Electrical and ATMS (E, ATMS, E/ATMS)</i>• <i>Traffic Control (TC)</i>• <i>Environmental (ENV)</i>• <i>Weighed Materials (WM)</i>
<p><i>This document is not a complete documentation of the construction administration process. It shall be read in conjunction with the Construction Contract Administration Agreement, MTO Construction Memoranda, Directives, requirements of the construction contract and pertinent legislation. In addition, further direction and guidance relating to interpretation may be given by the Contract Services Administrator.</i></p>	

1.2 ADMINISTRATION USING WBCMS

The following instructions only apply to Contracts that require the use of WBCMS. If the CA Agreement does not contain WBCMS, this section does not apply.

1.2.1 Interpretation in the CAITM

Web-Based Contract Management Services (WBCMS) means the MTO's browser based solution that provides an electronic means to record, collect, transmit and store "contract data".

The term "contract data" means (construction) Contracts and CA Agreement data.

Any reference in the Contract Documents or elsewhere in MTO documents (including but not limited to the CAITM, the RFP/RFQ) to "Owner Standard Form" or "PH-CC" shall be deemed to mean the electronic equivalent of that form within WBCMS. In many cases, the "PH-CC" names and numbers have been listed in the applicable sections of the CAITM for reference.

The words "write", "notify", "submit", "issue", "provide", "execute", "report", "give", "furnish", "return", "apply" and their variations, and other words referring to a communication from the CA to the Contractor or MTO, shall mean the word plus the appendage "electronically using WBCMS" (e.g. "writing electronically using WBCMS", "notify electronically using WBCMS").

1.2.2 Use of WBCMS

WBCMS shall be used to administer "contract data". After award of an assignment, submissions of deliverables shall only be accepted by MTO through WBCMS. When the Contract Documents require the submission of multiple copies of a document, and the document is to be submitted using WBCMS, then only the electronic submission is required. Additional details can be found in the CA RFP/RFQ.

Additional information related to WBCMS can be found on the WBCMS communications portal: <http://www.aurigo.com/wbcms-mto/>

SECTION 2.0: PRE-CONSTRUCTION

2.1 CONTRACT ADMINISTRATION ASSIGNMENT PRE-START MEETING

The purpose of the Contract Administration Assignment Start-up meeting is to define the roles and responsibilities of both the MTO and the Service Provider. The process for the handling of documentation and approvals will also be discussed. The Contract Services Administrator will arrange and conduct the Contract Administration Assignment Start-Up Meeting. The Service Provider's Project Manager and Contract Administrator(s), and the Area Contracts Engineer and Head Quality Assurance shall be in attendance. The Contract Administrator or a representative from the staff will be responsible for the minutes of this meeting. This meeting shall take place even if the Work has started.

The following issues should be discussed at the meeting:

2.1.1 Construction Administration Agreement

Review the status of the Construction Administration Agreement. Changes or revisions to the RFP/RFQ must be requested in writing by the Service Provider and approved by the MTO prior to implementation. The Contract Administration field team must familiarize itself with all the contract administration and contract requirements of the assignment.

2.1.1.1 MTO Staff Training

The Contract Administrator is responsible to provide on the job training to MTO staff as requested by the MTO.

2.1.2 Service Provider's Quality Control of Services and Deliverables Plan

The following records will be made available for review in the field office, in RAQS, and WBCMS if applicable, throughout the term of the agreement:

- The Service Provider's Quality Control of Services and Deliverable Plan
- Audit Reports for Milestone Inspection
- Final Verification Audit check for Services and Deliverables
- Audit Reports showing compliance and non-compliance

The Service Provider will immediately address and correct identified non-compliances to the Quality Control of Services and Deliverables Plan.

2.1.3 Invoices & Status Reports

Review the requirements of the CA Agreement. Confirm the frequency and method of invoicing for the Service Provider's Services and Deliverables. Discuss the format of the Status Reports to be prepared by the Service Provider that should include things such as: the status and staffing of the contract administration assignment, Change Orders and all associated documentation, etc.

2.1.4 General

- Address issues and concerns from both MTO and the Service Provider with respect to expectations and results with emphasis on the Services and Deliverables
- The Contract Administrator shall become familiar with their responsibilities regarding the Directives concerning Constructor conflicts and check that the Contractor co-ordinates all work with adjacent contractors/maintenance staff and service crews Provincial Highways Directive PHY-B-238 Occupational Health & Safety Act, Designation of "Constructor"
- Discuss documentation to be copied to MTO
- Discuss the Change Order process as outlined in Section 3.4 of this Manual
- Discuss/determine location of Service Provider's field office
- Discuss the need for calculating price adjustments for materials in a timely manner so that Contractor's Work is not affected
- Identify name and location of MTO designated laboratory
- Review Regional Policy regarding Media/MPP/General Public Inquiries

2.1.5 Survey Requirements

Prior to ground breaking the Service Provider shall

- From appropriate plans, locate and field-flag survey monuments to prevent their damage
- Have a survey monument inventory undertaken and identify potential conflicts with construction

Note: A monument is the official steel bar or post set in the ground to indicate a boundary. A marker is a wood stake or stone cairn to alert people to the monument.

After excavation commences, the Service Provider shall accurately survey and submit appropriate documentation for the following as required:

- After stripping the overburden, all new original rock cross sections shall be taken, independently of the Contractor. Check that zero (0) rock stations are supported by field measurement prior to blasting operations.
- New rock cross sections shall be surveyed and new rock surface (DTM) is created in In-Roads. New rock surface (DTM) shall be compared to the original rock surface (DTM) using In- Roads. Overburden, rock and shatter quantities shall be recalculated and the cross sections updated monthly for progress and final payment purposes.
- Actual muskeg depth and width.
- Verify under-fill stripping widths and depths and control over-stripping widths on a borrow contract.
- Topsoil piles for volumes if by cubic metre and not square metre.
- Earth borrow and rock borrow if in bank volume is used as opposed to truck haul (imported).
- Any sub-excavation or soft spots by elevation to check below specified sub-grade elevation verify record data including elevations and changes.
- Streambed and water level elevation for any in-water work, if not provided in the design.
- Quality Assurance checks for subgrade and granulars shall include the record of station, actual elevation and offset. This information is to be recorded at the specified intervals in a separate field book unless WBCMS is being used to administer the contract. The Service Provider survey work will be separate and independent from the Contractor's Quality Control surveys. All Transition Points to be verified by elevation and offset.
- Verify and document 10% of Contractor's alignment layout throughout the life of the contract.
- Review In-Roads final design cross sections when matching to existing tie-ins, structures, or new structures to check that elevations and transitions are properly coordinated.
- Verify, measure, record and submit all final vertical clearance along each edge of lane for any new structure (bridge, culvert, overhead sign, bridge widening or any other infrastructure.)
- Have any destroyed legal boundary survey monuments reinstated and reported on under OLS supervision.

2.1.6 Insurance and Risk Management Issues

Reference: Provincial Highways Directive PHY-B-103 Claims for Compensation for Personal and Business Losses During Construction

Review Regional Contracts Office policy regarding Third (3rd) Party claims. All claims for compensation for personal and business loss shall be forwarded to the Contractor by the Contract Administrator. The Contract Administrator shall obtain copies and maintain a file of any pertinent accident reports from the appropriate police force.

When the claims are forwarded through Management Board Secretariat's Insurance and Risk Management Section, the Contract Administrator shall examine the Contract Documentation and respond to requests for information. The CSA shall be copied on all communications.

Change Orders for Third (3rd) Party claims shall be managed as T&M and DWR's must be maintained.

2.1.7 Turnover of Documents from MTO to Service Provider

The following documents shall be transferred from MTO to the Service Provider. Discuss with the CSA how the documents will be transferred (WBCMS, hard copy, other electronic means):

1. Copies of the tender documents, contract drawings, and addenda
2. Signed contract
3. List of MTO contact names for the contract
4. MTO supplied documents (including digital files) listed in the Construction Administration Agreement
5. Completed Statement of Imported Content Form
6. Design calculations
7. Templates
8. Cost Share Agreements
9. Pavement Marking Drawings
10. Utility Work Orders
11. Original Structure Drawings
12. Overhead and Ground-Mount Message Sign Layouts
13. Horizontal and Vertical Control Sheets
14. Environmental Documentation:
 - a. Environmental Synopsis with Summary of Environmental Concerns and Commitments *
 - b. Transportation Environmental Study Report (TESR) or Design
 - c. Construction Report (DCR)

- d. Environmental permits, approvals, and authorizations including draft Permits to Take Water obtained by the MTO that the Contractor must apply to MOECC to have issued in the Contractor's name
- 15. Copies of applicable applications/permits related to construction
- 16. Design Reports:
 - a. Foundation Investigation Reports
 - b. Geotechnical Reports
 - c. Original Cross Sections (highways, side roads, entrances, culverts and sewers) (hardcopy)
 - d. Original Plots (sub grade reports, template sheets, granular base reports (top of "B"), profile elevations (Top of "A") (digital files)
- 17. Any other digital files (Detailed Calculation Sheets – reports)
- 18. Traffic Signal Legal Drawing (PH-M-125)
- 19. Property Agreements
- 20. Property Mark-up Plan.
- 21. MTO Project Engineer/Manager contact phone number and backup phone number
- 22. Design Service Provider and their Subcontractor contact phone numbers
- 23. Cost Share Agreements

* ***Note for #14: This document is available electronically from MTO in an updatable format for Group A and B projects and for Group C projects for which an Environmental Screening Document has been prepared. It must be obtained for addition of comments by the Contract Administrator relative to Contractor compliance with project-specific environmental mitigation, protection and monitoring measures described in the table and included in the Special Provisions.***

2.1.8 Concerns/Expectations on Issues

- Establishing and maintaining appropriate relationships with suppliers, Subcontractors, adjacent property owners, municipalities, other ministries' representatives, the OPP, local politicians, local police and emergency services, school boards, transit authorities, utility companies, etc.
- Recording all discussions and meetings
- Providing day-to-day liaison with the Contractor
- Providing first line interpretations of the Contract Documents to the Contractor, consistent with the intent of the Contract Documents
- Communicating the MTO's decisions to the Contractor
- Traffic management and lane and ramp closure notification protocol to be discussed
- Inform MTO of issues which may lead to delays or claims
- Inform MTO of any overruns and/or underruns
- Review the procedures for administration of progress payments
- Check that the Contractor provides deliverables in a timely, accurate manner

- Receiving submissions such as Working Drawings (shop drawings, construction drawings/details and related submissions) plans, proposals, and product data from the Contractor and forwarding them, with the Contract Administrator's comments, within two working days, to the MTO
- Confirming, documenting and reporting that Working Drawings
 - Are received within the specified time frame
 - Consist of the specified number of copies, content, and format
 - Are sealed and signed according to the Contract Documents; either by the Engineer or Design Engineer and design checking Engineer.
- Discuss Health and Safety Plan; issues and protection of employees. Advise Service Provider that they are MTO representatives and must abide by the Personal Protective Equipment Guideline
- Discuss all components of the Contractor's Environmental Incident Management Plan as required in the General Conditions; issues and protection of the environment
- Review the requirements of the General Conditions for the Contractor to submit CVORs for equipment on site and supplying source materials throughout the duration of the contact
- Performing a cursory review of all documents pertaining to the Work for the purpose of identifying errors and omissions and advising the MTO of such errors and omissions
- Carrying out all on-site inspection, surveying including layout not required of the Contractor, measuring and verification of construction methods as required by the Contract Documents
- Monitoring and reviewing the quality of Contractor's Work to confirm that the Contractor is discharging its obligations and responsibilities under the contract
- Notifying the Contractor of any deficiencies in the construction of the Work identified by the MTO or Service Provider's monitors and reviewers, instructing the Contractor to take appropriate corrective measures and confirming and reporting the results of the corrective measures
- Maintaining control of the receipt, use and final disposition of all MTO-supplied materials in accordance with MTO procedures
- Reasonable travel to/from the MTO's Regional office or other local location for pick-up/delivery of mail or other materials
- Identify and track any design related issues maintaining sufficient supporting documentation
- Written recommendations on situations/issues deemed necessary by the MTO
- Monitor environmental construction related permits to check that they are obtained as requested and/or adhered to as prescribed in the Contract Documents and that any follow up communications with the issuing regulatory agencies are documented
- For excavation and construction near pipelines that are regulated under the National Energy Board Act (e.g. TransCanada Pipelines, Enbridge), co-ordinate, communicate and consult with the pipeline company. Discuss requirements at the pre-start meeting with the Contractor.

- Construction Administrator must be aware of proper Change Order process according to Construction and Maintenance Change Order Manual.

2.1.9 Pre-Construction Survey

The Contract Administrator shall carry out a pre-construction survey of site conditions immediately in advance of commencement of construction. The Contract Administrator shall document all conditions and obtain photographs/videos including but not limited to signs, all entrances, side roads, ingress and egress of posted construction entrances, existing structures, electrical components, traffic signals, highway lighting, power plants, other authority's equipment such as hydro, bell, and railways. Copies of the documents shall be transferred to the Contract Services Administrator.

2.1.10 Documents Copied to MTO

The following documents shall be copied to MTO, discuss method of how documents will be transferred:

- Statement of Record of Working Days (if applicable)
- Change Orders
- Reports on delays
- Monitoring reports on over or under-runs
- Minutes of meetings
- Instruction Notices to Contractor
- Extension of time requests
- Environmental permits and approvals obtained by the Contractor as well as any follow up communications with regulatory agencies
- Accidents or claims from the public or property owners
- Major issues or delays
- Notification of lane closures/lane reductions at time of initiation/cancellation
- Contract related permits
- All documentation in accordance with the Construction Contract Administration Agreement.
- All other applicable documents requested by the MTO

2.1.11 Sampling and Material Testing

2.1.11.1 General

Material sampling and testing shall be according to the Contract Documents, CAITM, Field Guide for the Acceptance of Hot Mix Asphalt and Bridge Deck Waterproofing, and Directives Memoranda.

The Contractor shall obtain all samples to be tested by the Owner or the Owner's agent for:

- a) Quality Assurance Testing
- b) Referee Testing; and
- c) Other testing requested by the Owner

The Owner may take samples for its own purposes at any time from any location.

2.1.11.2 Referee Testing

Referee Testing may be invoked by the Contractor provided that the associated contractual conditions have been met. The Contractor shall identify in writing the material and specific property or properties, attribute(s) and lot or subplot(s) for which the referee testing is being requested.

The Contract Administrator shall coordinate the referee request as follows:

1. Confirm that the Contractor has met the timeframes to request referee as detailed in the Contract Documents.
2. Obtain a referee testing request form from the MTO's Registry, Appraisal, and Qualification System (RAQS) at www.raqs.merx.com.
3. Complete the referee request form in accordance to the Contractor's request and send to the appropriate Quality Assurance Officer (QAO) for the Contract. Include all pertinent data required to complete the referee testing, e.g., Gsb, briquette mass, and recompaction temperature. The QAO will provide the next referee laboratory and contact information from the appropriate MERO referee roster.
4. Contact the referee laboratory to inform them that they have been selected as the referee laboratory and communicate the quantity of samples and testing required verbally. If the referee laboratory cannot carry out the referee testing in a reasonable timeframe, inform the appropriate QAO of this issue, who will provide another referee laboratory from the MERO referee roster.

5. Contact the Regional Quality Assurance Laboratory for this Contract and instruct them to ship the referee samples within a reasonable timeframe to the referee laboratory.
6. Once the schedule for the referee testing has been set with the referee laboratory, issue an Instruction Notice to the Contractor (include the QAO) with the details of the referee laboratory, dates and times. The CA shall confirm that the notification is a minimum three (3) Business Days in advance of the date and time for Referee Testing. Provided that such notice is given, Referee Testing shall be carried out regardless of the absence of observers.

The referee laboratory will issue the resulting referee test results to the CA, which will be used for final evaluation and payment of the material refereed.

The CA will forward the referee results and final payment adjustment to the Contractor. The CA will forward the referee results together with a cover letter to the applicable QAO for the Contract.

Note: This protocol should be confirmed with the QAO for amendments or additional requirements.

2.1.11.3 Other Testing Requested by the Owner

When other testing is requested by the Owner, the CA arrange for the Contractor and the CA to furnish all reasonable assistance to the Owner.

2.1.11.4 Location of Sampling

The CA is responsible for determining the random location of sampling for all samples to be tested, noting any restrictions as specified in the Contract Documents. The frequency of testing shall be according to the requirements specified in the Contract Documents.

The CA shall make certain that the Contractor uses a covermeter capable of detecting the reinforcing material(s) in the component to establish the location of reinforcement in all concrete components prior to coring. Steel reinforcement, non-metallic reinforcement, and other embedded material shall be avoided while coring concrete.

The CA shall contact the QAO regarding steel reinforcement or other embedded material prior to undertaking or eliminating coring.

2.1.11.5 Sampling and Witnessing

All samples shall be obtained in the presence of the CA or a designated representative. This includes where off site locations are specified in the Contract Documents (eg. PGAC at hot mix plants, precast plants, etc.). Once samples are taken, the CA shall maintain custody and continuous presence with the samples. Samples shall not be left unattended or in the care of the Contractor.

The Contractor shall supply all the sample containers when specified in the Contract Documents. All containers used for samples of material controlled under WHMIS shall be appropriate for the materials being shipped.

The CA shall monitor the Contractor's operation to check that sampling techniques are according to the Contract requirements and inspect all samples to make sure they are the proper size, weight and volume and free of any damage or contamination.

All samples shall be properly packaged by the Contractor, in the presence of the CA, to minimize risk of damage during transport. The CA should not accept samples unless satisfied that they have been properly packaged.

2.1.11.6 Sampling and Supplying of Bearings

When strip bearings have been specified for precast boxes placed side-by-side, the CA shall make sure that the bearing strip supplied is at least 600 mm longer than required. The sample shall be cut from one end of the strip bearing, in the presence of the CA, in the field.

When elastomeric bearings have been specified, the CA shall make sure that all bearings are available for sampling either at the project site or at a location acceptable to the CA.

All sample bearings for testing purposes shall be selected by the CA from all the bearings of each size and thickness fabricated for the Contract according to the requirements specified in the Contract Documents. The CA shall advise the Contractor, by Instruction Notice, which bearings have been selected for testing.

2.1.11.7 Sample Labelling and Identification

All samples shall be clearly labelled according to the requirements specified in this section and the Contract Documents.

All samples shall be clearly labelled according to the requirements specified in this section and the Contract Documents.

All samples, including those handled by a commercial carrier, shall be accompanied by:

- a security seal (label or tag) which shall include a unique number for identification purposes
- WHMIS labels according to the applicable Dangerous Goods Legislation
- relevant Material Safety Data Sheets supplied by the Contractor
- additional documents as specified elsewhere in the Contract Documents

Once the CA determines that the sample is acceptable for delivery, the CA shall review the sample data information, as submitted by the Contractor, and enter the additional sample data information. Below are some examples:

- a) Testing code
- b) Security seal reference number
- c) Regional Assurance Laboratory

2.1.11.8 Application of Security Seals

The CA is responsible to retain possession of all bags and seals, and to properly apply security seals onto sample bags.

The sample can be placed in the plastic security bag once the sample has been taken and is properly packaged by the Contractor. Separate bags must be used for each portion of a duplicate sample and each of these bags shall be sealed with a different security seal. The CA/Inspector shall apply the security seal once the sample is in the bag.

Security bags and seals shall be used for the following samples:

- a) Hot Mix Bulk QA and referee samples
- b) Hot Mix compaction core QA and referee samples
- c) Hot Mix thickness cores
- d) CIR and CREAM bulk samples
- e) PGAC and asphalt cement QA and referee samples
- f) Emulsion QA and referee samples
- g) Soils, Aggregates and Granular QA and referee samples
- h) Soils, Aggregates and Granular physical properties QA and referee samples
- i) Concrete Cores
- j) Waterproofing
- k) Cement, supplementary cementing materials

- l) Admixtures and water for concrete
- m) Curing compound
- n) CIR and CIREAM compaction slabs and cores

Samples not requiring security bags and seals shall require a security seal (label/tag) with a unique number for identification purposes, to be provided by the regional QA section. These samples include but are not limited to concrete cylinder samples, steel rebars, elastomeric bearings, etc.

Security bags and seals may be applied to other types of samples in special circumstances at the direction of MTO.

MTO security bags and seals are supplied by the Regional QA Section. At the end of the Contract, the CA shall account for and return all unused MTO sample bags and security seals to the regional QA Section.

2.1.11.9 Sample Storage and Delivery by the Contract Administrator

The CA is responsible to deliver all samples identified in SP No. 199F57 to the designated laboratory (regional quality assurance laboratory or Materials Engineering Research Office (MERO)), according to the Contract Documents, and the CAITM.

The samples to be delivered to MERO include but are not limited to:

- Material Specification for Aggregates - Hot Mix Asphalt: Additional aggregate and hot mix samples taken for QA purposes, at the discretion of MTO, for Superpave 12.5FC1, Superpave 12.5FC1, SMA9.5, and SMA12.5 aggregates. These samples shall be shipped, no later than one (1) Business Day from the date of sampling to the MTO Soils and Aggregates section in MERO.
- Pavement Markings, Retained Soil Systems, Precast Reinforced Concrete Box Culverts and Box Sewers Samples: shall be delivered to the Manager, Concrete section in MERO.
- Geotextiles shall be delivered to the Soils and Aggregates section in MERO.
- Performance Graded Asphalt Cement (PGAC) samples shall be delivered to the Bituminous Laboratory in MERO in accordance to Table 2 of SP 111F09.

The CA shall take and maintain possession of the samples from when they are taken by the Contractor until they are received by the testing laboratory. Maintaining possession of the samples would not preclude the use of commercial/third party carriers as long as they are not associated with the Contractor. The third party carrier would be an extension of the CA.

Samples shall be delivered in a suitable testing condition with a security seal label including a unique number for identification purposes, Material Safety Data Sheets supplied by the Contractor, and WHMIS according to the applicable Dangerous Goods Legislation within the time limits and locations specified in the Contract Documents. If the time limits and/or locations for delivering samples are not specified elsewhere in the Contract Documents, then the samples shall be delivered by the CA according to the time limits and location specified in the RFP/RFQ.

All samples shall be securely stored and transported in such a manner to protect the samples from damage and contamination. Further, all samples shall not be subjected to freezing temperatures at any time and in the case of asphalt cores temperatures shall not exceed 40 degrees Celsius. Considerations include:

- Maintaining the samples in a dry environment (or in such condition as specified in the Contract Documents)
- Not exposing samples to direct ultraviolet light
- Avoid jarring, rolling and/or hitting samples

The CA shall normally deliver samples during normal business hours. Normal business hours are deemed to be from 8:00 a.m. to 5:00 p.m., Monday through Friday. Where a sample has to be delivered outside these hours, the CA shall give the laboratory one full Business Day notice. The CA shall sign the testing laboratory's records to confirm the date and time of delivery.

The regional QA laboratory will be designated by the Owner. Sample delivery time to the laboratory and maximum distance to the QA laboratory are identified in the RFP/RFQ.

2.1.11.10 Sample Delivery by the Contractor

All samples are to be delivered in a timely fashion, free of any damage or contamination, in a testable condition with proper identification (e.g. Contract number, date sampled, material type, lot, subplot, contact person, etc.). WHMIS labels shall be included with the sample(s) according to the applicable Dangerous Goods Legislation (supplied by the Contractor). The CA is to review deficiencies in these operations as identified by the CA's staff or the laboratory and take appropriate action if problems arise.

When the Contractor is responsible for delivery of the samples to the designated laboratory, the Contractor shall be responsible for any samples that are deemed to be "non-conforming". This could include samples that are lost, damaged, contaminated, do

not conform to Contract Documents (e.g. incorrect sample size/weight), and/or delivered outside the timelines specified in the Contract Documents.

When the Contractor delivered samples deemed unsuitable for testing by the laboratory or the owner, the Contractor shall be responsible for all costs associated with obtaining new samples and delivering them to the designated laboratory.

The CA shall confirm that all the required samples have been delivered to the appropriate laboratory for testing.

2.1.11.11 Contact with Laboratories

The CA must provide the laboratory with the pertinent Contract details (Contract number, WP number, phone and fax numbers and e-mail addresses for CA and for Contractor) as well as all pertinent information which affects testing procedures (hot mix re-compaction temperatures etc.). The CA shall clearly indicate what samples are to be tested and the specific tests required.

The CA shall investigate all sample non-conformance identified by the QA laboratory, and shall provide written direction to the QA laboratory to resolve the problems(s) in a prompt and efficient manner on the form provided. The CA is responsible for communicating such instances to MTO staff (e.g. CSA, Head of QA and QAO) as appropriate, and taking further administrative action as may be required by the Contract Documents.

The CA should liaise directly with the laboratories on routine matters as required, however, issues related to the performance of the area and/or MERO testing laboratories (e.g. turnaround times and quality of results) or any other related concerns shall be brought to the attention of the CSA, Head of QA, and QAO. Although most QA testing is done by the Area Testing Laboratories, some specialized materials testing is conducted through the MERO as listed below. MTO may add other samples as required.

Bituminous:

Additional samples of asphalt mix or asphalt cement
Additional Samples of Aggregates, Asphalt Mix or RAP

Concrete:

Portland Cement, Hydraulic Slag or Fly Ash Material Quality
Latex Modifier Quality
Post Tension Cables

Shotcrete Cores
Bridge Deck Waterproofing and Protection Board Quality
Hot Poured Rubberized Asphalt Joint Seal Quality
Expansion Joint Seals
Elastomeric/Rotational Bearings
Structural Steel Coating Material Quality
Metal Wire Galvanizing
Traffic Paint Quality (not thickness)
Glass Beads Quality
Thermoplastic Pavement Markings
Field Reacted Polymer Pavement Marking
Pre-formed Pavement Marking Tape
Steel Reinforcement
Mechanical Connectors
Glass Fibre Reinforcing Polymer

Soils & Aggregates:

Geotextile Quality
Additional Samples of Aggregates, Asphalt Mix or RAP

Foundations:

Wick Drains
Expanded Polystyrene
Geogrids
Slag

2.1.11.12 Maintaining a Log of All Samples

A log shall be maintained of all the samples delivered to the laboratories. This log shall include:

- a) Type of sample
- b) Quantity
- c) Security seal (label/tag) with a unique number for identification purposes
- d) Lot and subplot numbers as applicable
- e) Sample location
- f) Date sampled
- g) Name of all persons witnessing sampling (CA and/or Contractor's staff);
- h) Date shipped and method of shipping
- i) Date the samples were received by the laboratory; and
- j) Date the test results were received from the laboratory.

2.1.11.13 Review of Concrete and Asphalt Mix Designs

2.1.11.13.1 General

The CA shall review all concrete and asphalt mix designs (including cold in-place recycling mix designs) for compliance with the Contract Documents.

2.1.11.13.2 Asphalt Mix Designs

The asphalt mix design package, including the independent Superpave Mix Design check/one point mix check, shall be completed together with a summary of the review indicating compliance of the design within four (4) business days of the design being properly submitted by the Contractor.

2.1.11.13.3 Concrete Mix Designs

It is the Contractor's responsibility to ensure that Form A is acceptable and Form B is submitted prior to the placement of concrete. Should the Contractor choose to place concrete without a Form A being submitted in accordance with the Contract, the Contractor shall be subject to a major deviation. Should the Contractor chose to place concrete without a Form B being submitted in accordance with the Contract, the Contractor shall be subject to: a minor deviation for a late but correct submission, a major deviation for late and incorrect submission. Repeated non-compliance may be subject to the MTO Infraction Report process.

The CA must determine whether an acceptable Form A and Form B were in place prior to concrete placement, and take appropriate action.

The CA shall provide the Contractor an Instruction Notice confirming that Form A and the mix design supporting information meet the requirements as specified in the Contract Documents. The CA shall provide the Contractor a completed MTO "**Letter to Contractor – Re: Concrete Mix Design**", indicating Option #1 – Placement of this mix may now commence on this contract or Option #2 – advising the Contractor of any requirements that have not been met.

2.1.11.14 Review and Submission of Test Results

The CA is responsible for determining if the material meets the Contract requirements and using the results to calculate payments and adjustments, standard deviations, averages, lot summaries, etc., as required by the contract. The role of the lab is only to provide raw data and not determine acceptability.

After review by the CA, copies of test results should also be sent as detailed in the “Guidelines For Test Result Submissions” to the CSA and/or Head of QA (as determined by the Regional Operations Office). Test results are to be submitted within four (4) Business Days of the results having been submitted to the CA or within four (4) Business Days of the samples being available for testing in cases where the CA is responsible for testing. The CA shall monitor, record, and check that the test result submissions are meeting the required time frames. All test results are to be submitted in PDF format.

All submissions must be sent identifying the material represented, the acceptability of results, and any actions required as a result of not meeting the specification requirements. Where price adjustments are to be imposed, the price adjustments should be confirmed and indicate the responsibility for cost of referee and/or additional QA testing.

For materials that are decisioned using lots and sublots, individual test results need only be submitted when the results are outside of specified requirements (e.g. low cylinder breaks). These submissions should be accompanied by comments regarding any action that is being taken.

The “Guidelines for Test Result Submissions” has been developed, as an aid to CAs in order to more clearly identify which test results must be submitted to MTO. It is a general list that is to be used in conjunction with the Contract Documents and does not include all possible items which may be required to be submitted. If a conflict exists between the list and the Contract Documents, then the Contract Documents take precedence.

Not all materials are covered in the guideline for test result submissions. As a general rule, copies of all Quality Assurance results should be submitted to MTO.

2.1.11.15 Guidelines for Test Result Submissions

ITEMS	DETAILS OF SUBMISSIONS
Bituminous	
Asphalt ERS Test Results	ERS spreadsheet to be completed upon completion of the lot. Individual tests results are not required to be submitted unless specifically requested. If Referee Testing is invoked, the final spreadsheet shall also be submitted.

ITEMS	DETAILS OF SUBMISSIONS
Smoothness By Inertial Profiler	<p>Sketch of subplot locations and list of exempted sublots, indicating stations on both.</p> <p>Request for inertial profiler for QA/re-test/referee testing Summary of IRI results on the Summary Acceptance Forms to be submitted including localized roughness and pay factors. This includes profiles taken for sublots re-tested.</p> <p>Final summary of payment for the entire lot indicating pay factors and any pay adjustment imposed for localized roughness.</p> <p>Deliver all unfiltered and filtered electronic data files generated by the inertial profiler or the ProVAL software.</p> <p>Confirmation indicating that the inertial profiler has completed the measurements and complete the required electronic data.</p>
Hot Mix Aggregates Physical Properties	<p>QA results</p> <p>Referee results if applicable</p>
Pavement Markings	<p>Pavement Marking forms (glass bead application rates, paint thickness, paint quality samples taken and submitted) to be submitted within thirty (30) days of completion of pavement marking.</p>
Segregation	<p>Listing of areas of segregation including a description of severity as required by the "FIELD GUIDE FOR THE ACCEPTANCE OF HOT MIX AND BRIDGE DECK WATERPROOFING"</p>
Miscellaneous Asphalt Products PGAC Granular sealing Rout and Seal Tack Coat Anti-strip etc.	<p>QA test results.</p> <p>Referee results if applicable.</p> <p>PGAC test results also to be completed.</p>
Cold In-Place Recycling Mixes	<p>QA test results</p> <p>Control strip results to be submitted upon completion of control strip and QA compaction results.</p>

ITEMS	DETAILS OF SUBMISSIONS
Granular	
Granular O, A, B, M, SSM Physical Properties	QA test results Referee results if applicable
Granular O, A, B, M, SSM Production Samples	ERS spreadsheet to be completed upon completion of the lot. Individual tests results are not required to be submitted unless specifically requested. If referee testing is invoked, the final spreadsheet including referee data shall also be completed.
Surface Treatment (Aggregates) Physical Properties and Gradation	QA test results Referee results if applicable
Compaction Checks	Monthly summary of QC and QA compaction results and summary of acceptability on the Compaction Summary Sheet Trial Strip/Proctor results and QA/QC correlation results to be submitted upon completion.
Reinforced Earth Walls	All QC data required by the Contract
Miscellaneous Soils and Aggregates Products Geotextiles Seeding etc.	QA test results Referee results if Applicable
Concrete & Structural Items	
Compressive Strength Results	ERS spreadsheet to be submitted electronically monthly and upon completion of each lot for each class of concrete. QA results (for Contracts without ERS for compressive strength). If Referee Testing is invoked, the final spreadsheet shall also be completed.

ITEMS	DETAILS OF SUBMISSIONS
Temperature Records	Cold and Hot weather temperature records after completion of the curing and protection (if applicable) period. Temperature records for HPC after completion of curing (and protection) period.
Concrete Aggregates Physical Properties	QA results Referee results if applicable
Air Voids in Hardened Concrete	QA test results Referee test results if applicable
Tensile Bond Test	QA test results
Rapid Chloride Permeability	QA test results Referee test results if applicable
Waterproofing	Copy of Thickness Report and payment adjustment calculations for membrane and protection board Material Quality test results for membrane and protection board.
Half Cell Survey	Copy of Half Cell Survey and continuity check form to be submitted to QA and Regional Structural Office (or as indicated by CSA). Note: Submitted immediately upon completion of field testing and prior to initiation of removals.
Water test for expansion joints (if applicable)	Copies of the Record Of Expansion Joint – Water Testing to be completed to the Regional QA section and the Bridge Office.
Proprietary Products	On an as required basis: - Name of product - Test data for compressive strength, rapid chloride permeability, shrinkage and tensile bond or in accordance with specification - Type of repair it is being used for - Contractors proposal for use

ITEMS	DETAILS OF SUBMISSIONS
Structural Steel Coating	QC data as required by SP plus Daily Coating Reports and Summary Report.
Miscellaneous Concrete Materials Testing Portland Cement, Hydraulic Slag/Fly Ash Curing Compounds Admixtures, Air Entraining Expansion Joint Seals Elastomeric Bearings Post Tension Cables Grout results Hot Poured Rubberized Sealant Shotcrete test results	QA Test results Referee results if applicable

2.1.12 Off-Site Inspection of Structural Items

- Check Agreement for components identified for off-site inspection
- Examples: Pre-Cast Beams, Structural Steel and Aluminium Sign Supports
- QVE may do Pre-Cast Concrete Beams or some Regions may require additional inspections

2.1.13 Geotechnical

Review the Service Provider’s responsibilities for inspecting and administering non-commercial pits and quarries. These responsibilities include but are not limited to:

Prior to Construction:

- Review the Aggregate Sources List and confirm the availability of each source proposed by the Contractor for use on the contract
- Review the operational and rehabilitation plans of the Contractor prior to them being submitted to the Regional Geotechnical Section for review and approval

- Confirm Regional Geotechnical Section has provided an approved site plan to the Contract Administrator. The approved site plan will be used by the CA for inspection purposes and by the Contractor to provide direction on operation of the source.

During Construction:

- If the Contractor proposes to make an amendment to the approved site plan, the amendment must be reviewed and approved by the Regional Geotechnical Section prior to any operational changes taking place
- The Contractor shall simultaneously inform the Contract Administrator when a request for an amendment is submitted to the Regional Geotechnical Section
- Two (2) copies of this new approved site plan will be forwarded to the Contract Administrator as above for distribution. By following this process, the Contract Administrator will have the most up to date approved site plan on hand for their daily inspection. Any amendments that are contentious in nature should be relayed to the Contractor via an Instruction Notice.
- Once the pit and quarry activities have concluded, the Contract Administrator shall confirm that the Contractor has rehabilitated each source in accordance with the approved site plan prior to the Contractor leaving the source
- At the conclusion of the contract, or annually on December 31 for multiyear contracts, the Contract Administrator shall submit to the Regional Geotechnical Section form PH-D-046 Pit and Quarry After Use Report for all sources used on the contract for both non-commercial and commercial sources. Any tonnages derived from ROW production of aggregates shall also be reported at this time.

2.1.14 Electrical

Electrical Quality Assurance shall include the ongoing and final inspection of, but not limited to, the following:

- Overhead lines
- Cathodic protection
- Periodic inspection of highway electrical systems, such as highway lighting, traffic signals, and vehicle detection equipment
- Spot-checking validity of Contractor-issued certificates, pre-installation testing, and proof of performance testing
- Electrical Quality Assurance activities pertaining to Contractor electrical maintenance activities shall continue during seasonal shutdown
- Receive and review traffic signal PHM-125 drawings

2.1.15 Post Pipe Installation Inspections

Quality Assurance of Post Installation Pipe Inspections shall be performed as detailed in OPSS 421. Post installation inspection service will be performed by a certified inspector. The process shall be carried out by the CA according to the following steps:

Steps

1. Receive list of completed gravity pipe installations from Contractor who has certified them as ready for inspection with their submission of the PH-CC-822PIC Culvert and Sewer Certification Form
2. Arrange for date or dates that inspection Service Provider will be on site to do inspections and notify Contractor of inspection dates
3. Compile inspection results
4. Submit inspection results to Contractor
5. Contractor requests referee inspection (repeat steps two (2) through four (4) with the referee inspection results) Referee requests limited to 1 batch submission – cannot request referee on a refereed inspection
6. Confirm replaced or repaired pipes required as a result of inspections
7. Notify Contractor of additional inspections should initial inspection triggers indicate non-satisfactory inspection results (repeat steps one (1) through six (6))
8. Notify Contractor of more additional pipe inspections (all remaining pipes) should additional inspection triggers indicate non-satisfactory inspection results (repeat steps one (1) through six (6))
9. Forward to MTO contract payment recommendations based on Weighted Price Adjustment Factor (WPAF). Payment shall be calculated according to OPSS 421.

2.1.16 Environmental

Compliance with the project environmental requirements for construction administration assignments as noted below is necessary to meet the environmental protection responsibilities of the MTO under federal and provincial legislation. The penalties for not demonstrating environmental due diligence can be severe, including substantial monetary fines and jail terms.

Specific environmental requirements for administration including monitoring the Contractor's day-to-day operations are provided below. For the purpose of clarity in meeting these requirements or in completing the Environmental Specialty Work-Plan if required, the tasks are detailed in Part B of this Manual and the project environmental requirements for construction administration are detailed below.

1. Requirements of Project-Specific Environmental Assessment Process

Commitments made during the environmental assessment process for Group A, B and C projects under the MTO Class EA for Provincial Transportation Facilities may be documented in various types of environmental assessment process documentation. This may include a Transportation Environmental Study Report (TESR) and/or Design and Construction Report (DCR) for Group A and B projects and an Environmental Screening Document (ESD) for Group C projects.

An Environmental Synopsis is also prepared for Group A and B projects to summarize the environmental protection plan that has been developed for project implementation. This also applies to Group C projects for which an Environmental Screening Document has been prepared.

The purpose of the Environmental Synopsis is to provide continuity in commitments and approaches to environmental protection between the design and construction stages. It provides a clear outline of the requirements of which the Contract Administrator must be mindful in inspecting work that has been identified to have the potential for environmental impacts.

A Summary of Environmental Concerns and Commitments table, is also prepared as part of environmental assessment process documentation for Group A and B projects and for Group C projects for which an Environmental Screening Document has been prepared. It is extracted from the environmental assessment process documentation and attached to the Environmental Synopsis to be provided at the Design Package Turnover Meeting. It outlines the environmental issues and concerns identified for a specific project and the measures and approaches that were developed to address each of them including associated environmental provisions that have been inserted into the Contract Documents. The summary also provides a detailed breakdown of the identified environmental features within the project limits and the committed measures/approaches for protecting the environment or for addressing other project related (including specific public/agency) concerns.

2. Requirements of Project Specific Contract Documentation for Environmental Protection, Mitigation and Compensation Measures

Environmental provisions that may be inserted into the Contract Documents for which construction compliance is required include:

- Environmental design elements
- Environmental protection, mitigation and compensation measures

- Environmental construction constraints
- Environmental incident management requirements

In the event of any deficiencies in the Contractor's compliance with these provisions:

- The Contractor shall be notified and instructed to take appropriate corrective actions
- The Implementation of the corrective actions shall be confirmed
- Infraction Notices shall be issued in compliance with MTO policy where corrective measures are not implemented as instructed

The Contract Administrator is encouraged to consult any and all available environmental assessment process documentation that is available for further information on the environmental provisions contained in the Contract Documents and their purposes.

The effectiveness of project environmental protection, mitigation and compensation measures as included in the Contract Documents shall be assessed to determine that:

- Protection/mitigation/compensation measures are:
 - In place as required
 - Appropriate to the protection/mitigation/compensation required
 - Functioning properly and maintained as specified
 - Removed where required at the end of construction
- Operations, equipment, and materials are:
 - On-site where they are permitted
 - On-site when they are permitted
 - Occurring and/or being used or applied as permitted.

3. Formal Environmental Approvals and Timing Constraints

- Construction shall be monitored to determine compliance with project specific environmental registrations/permits/approvals obtained by the MTO (e.g. Endangered Species Act registrations and Permits, Permit to Take Water or registrations for water taking and Fisheries Act authorizations)
- Where the MTO has obtained a draft Permit(s) to Take Water for the Work from MOECC in design, in accordance with the MOECC/MTO Memorandum of Understanding on Permits to Take Water, the Contractor must apply to MOECC to have the permit(s) issued in the Contractor's name in accordance with Special Provision 100S59 and provide copies to the Contract Administrator before any Work involving water-taking may commence.

- Construction activities that require project-specific environmental approvals that have not been obtained by the MTO at the date of tender closing shall not occur unless the Contractor has obtained such permits/approvals
- It is important to note that it may be difficult to obtain permission to work in the water during restricted times if Work cannot be completed within the unrestricted times specified in the Contract Documents. Consent from MNRF will be required in all situations, and where there is a Fisheries Act Authorization, permission will also be required from DFO. The Contractor shall not be allowed to contact regulatory agencies directly for this purpose and the CA must only do so in consultation with the MTO CSA and Environmental Planner. Possible inflexibility of fisheries related dates for in-water work must be considered, and allowance made for required proposals to be submitted within a specified number of days prior to commencement of the Work (usually 21 days), during review of the Contractor's construction schedule and critical path schedules.

4. Contractor Environmental Proposals

Contractor submitted environmental proposals shall be reviewed by the Contract Administrator as follows:

- To check that the Contractor complies with all environmental proposal submission requirements specified in environmental Contract Documentation
- To determine constructability
- To check that proposals are compliant with the Contract Documents, relevant environmental legislation (e.g. Fisheries Act), and environmental timing constraints and approvals. Proposal compliance shall be reviewed by the Contract Administrator's Environmental Monitor

NOTE: In dealing with the Contractor, the Contract Administrator must keep in mind the review of proposals can take a significant amount of time, particularly where regulatory agencies may need to be consulted with respect to the possible impact of the proposal on existing permits, approvals or authorizations or requirements for new ones.

5. Environmental Documentation Requirements

There are a number of environmental documentation requirements for which the Contract Administrator is responsible that require completion and submission of the following, during or after construction:

- "Summary of Environmental Concerns and Commitments" table

- Contract Administrator's/Inspector's Environmental Diary
- Detailed Specialty Reports (under Environmental Specialty Work Plan, if applicable)
- 'Class EA Process Monitoring Questionnaire for Contract Administration Staff', as required.

Summary of Environmental Concerns and Commitments Table

Where the Summary of Environmental Concerns and Commitments table has been prepared during the environmental assessment process as stipulated in #1 (above), an electronic, updateable version should be provided at the Design Package Handover meeting. If this document is not provided during the Design Turnover the CA shall request a copy from the CSA or Environmental Planner. The Contract Administrator's Environmental Monitor shall use the blank columns provided in the table or add new ones to document the Contractor's compliance with the environmental provisions of the Contract Documents as summarized in the table. This table shall be updated on a regular basis, as this is a living document.

Upon construction completion, the completed Summary of Environmental Concerns and Commitments along with the Environmental Synopsis described in #1 (above), may be used by MTO to report on how well environmental assessment commitments were met through compliance with, and the effectiveness of, the environmental provisions in the Contract Documents. As such, confirmation that this table has been completed is part of the Contract Closing Process section of this Manual.

Contract Administrator's/Inspector's Environmental Diary

A separate Environmental Diary shall be maintained to record the following:

- The Contractor's compliance/conformance and non-compliance/non-conformance with environmental timing constraints and action taken to address them, as well as related communications with MTO and agencies
- The Contractor's environmental protection measures and their effectiveness, including successes, deficiencies, instructions given, and results of corrective actions taken
- Spills or other environmental incidents that the Contractor is responsible for, including, but not restricted to, details about when the incident took place, actions taken or intended to be taken by the Contractor regarding the incident such as containment of spills, notifications made to proper authorities, actions taken to clean up and restore the environment to pre-incident conditions, investigations, charges, Stop Work Orders and remedial instructions by regulatory agencies,

and environmental complaints by the public. A copy of the Incident Notification Form (PH-CC-818) that the Contractor is required to submit to the MTO within forty-eight (48) hours of the incident should also be kept with these notes in the diary.

- The discovery of existing environmental conditions such as archaeological finds and materials suspected of being contaminated including all relevant details as to what was found and actions taken by the Contractor to notify the CA and/or the MTO and secure the site for investigation.

Detailed Specialty Reports

If an Environmental Specialty Work Plan has been included in the Contract Administration contract (e.g. requirement for a Specialist such as a Waste Specialist to monitor contaminated property clean-up), detailed written reports shall be produced and submitted as outlined in the approved Environmental Specialty Work Plan (e.g. monthly).

Class EA Process Monitoring Questionnaire for Contract Administration Staff

The information used to complete the MTO Class EA Process Monitoring Questionnaire for Construction Administration Staff shall be completed from, but not limited to, investigations/charges, Stop Work Orders, remedial instructions from regulatory agencies, and public complaints as documented in the Environmental Diary. Two (2) copies of the completed questionnaire shall be provided to the MTO including one (1) that shall be submitted to the Environmental Planner for the project (see form for more details).

6. Environmental Notifications

One of the main purposes of the environmental assessment process is to identify existing environmental conditions and potential incidents during the design stage.

Where protected species are identified during design as being present or suspected of being present within the contract limits, MTO will include this information in the Contract Documents and provide direction on what the Contractor's responsibilities are with respect to these species. Occasionally however, protected species may be encountered during construction that were not identified during the EA process and were therefore not anticipated to be present during construction.

While the Contractor is not held responsible for these types of incidents as opposed to those that occur as a result of the Contractor's operations (e.g. spills), the CA

must be notified of the encounter and in turn must notify the MTO so that the necessary and appropriate actions can be taken by the MTO to meet regulatory and contractual obligations. As such, the CA shall make the following Environmental Notifications to the MTO immediately after the Contractor notifies the CA.

- In the event that the Contractor notifies the CA in accordance with section GC 3.07.05 of the General Conditions of Contract, that it is suspected that an archaeological find, such as building remains, hardware, accumulations of bones or other human remains, pottery, or arrowheads has been encountered during construction, the CA shall notify the CSA and the Environmental Planner or Regional Archaeologist. The Regional Archaeologist, or if not available, a licensed Service Provider Archaeologist contacted by the MTO must visit the site to assess and verify the find and determine a course of action unless the Contract Documents require the Contractor to have such a Service Provider available for this purpose during the Work. The Archaeologist on-site shall also be responsible for contacting other appropriate authorities, including the Police, Ministry of Tourism Culture and Sport and the Ministry of Government Services, if they determine that human and/or archaeological remains have been encountered.
- In the event that the Contractor notifies the CA in accordance with OPSS 180 that materials suspected of being contaminated (e.g. stained or odorous soil, oily sheen on water in an excavation) have been encountered during construction, the CA shall notify the CSA and the Environmental Planner. MTO will make arrangements to have an environmental Service Provider who specializes in contaminated property identification and management visit the site to investigate and determine a course of action unless the Contract Documents require the Contractor to have such a Service Provider available for this purpose during the Work. The environmental Service Provider shall also be responsible for contacting MOECC as deemed necessary in consultation with MTO.
- In the event that the Contractor notifies the CA that a Species at Risk has been encountered during construction in accordance with section GC 3.07.06 of the General Conditions of Contract, the CA shall notify the CSA and the Environmental Planner. MTO will make arrangements to have an environmental Service Provider who is qualified to identify Species at Risk visit the site to verify the species and determine a course of action unless the Contract Documents require the Contractor to have such a Service Provider available for this purpose during the Work. The environmental Service Provider shall also be responsible for contacting MNR as deemed necessary in consultation with MTO.

- In the event that the Contractor notifies the CA that a bird nest containing eggs or young birds has been encountered during construction in accordance with the Contract Documents, the CA shall notify the CSA and the Environmental Planner. MTO will make arrangements to have an environmental Service Provider who is qualified to identify the bird species visit the site and determine a course of action unless the Contract Documents require the Contractor to have such a Service Provider available for this purpose during the Work. The environmental Service Provider shall also be responsible for contacting the appropriate regulatory agencies as deemed necessary in consultation with MTO.

2.1.17 Traffic Management and Public Information Services

The Contract Administrator shall check that all Traffic Management and Public Information Services and Deliverables in the construction documents or required by law are complied with.

To determine compliance with the Traffic Control Plan requirements of the contract the Contract Administrator shall **prior to Work starting:**

- Instruct the Contractor to provide a copy of their health and safety policy and program, which includes the Traffic Control Plan for the contract, to the Contract Administrator at the pre-start meeting.
- Assess the Contractor's Traffic Control Plan, to check that all construction contract requirements including, but not limited to, those in the Ontario Traffic Manual (OTM) Book 7 Temporary Conditions, the Ontario Traffic Manual (OTM) Book 7 Temporary Conditions (Field Edition), the Occupational Health and Safety Act, and any specific traffic control contract requirements are complied with and provide satisfactory levels of safety for workers and motorists
- Provide any MTO approved instructions to the Contractor regarding the Traffic Control Plan and any further receipt, assessment and instructions to the Contractor, as necessary.
- The Contract Administrator shall complete the Traffic Restrictions at Structures Report form and submit to the CSA, OSCLIS Custodian and alternate, 5 days prior to any traffic restriction being implemented. The form shall detail any horizontal and/or vertical restrictions that will be in place during construction as well as the anticipated duration of the restriction. If there are any changes to the restrictions (i.e. modifications or staging changes), the CA will update the OSCLIS form and email 5 days prior to the changes taking place
- The CA shall confirm the actual clearance dimensions, in metres to 2 decimal places, within 24hrs of implementation of the restriction or any changes to the implementation.

In addition, the Contract Administrator shall assess the effectiveness of the traffic control measures planned by the Contractor to determine that:

- The traffic control measures to be implemented by the Contractor will be what is needed, in place when needed, positioned where needed, and will be working as required
- Operations, equipment and materials will be only where they are permitted, occurring/operating/placed when they will be permitted, and will be doing what is permitted
- Review Initial Construction Schedule and Critical Path Schedule prior to Work starting, in regards to traffic control

A report detailing the assessment procedure, findings and recommendations is to be submitted to the MTO within two (2) business days of receiving the submission from the Contractor.

During construction:

- Monitor the traffic control measures implemented by the Contractor to determine that the actual measures are consistent with those shown in the previously assessed Traffic Control Plan and that the measures provide satisfactory levels of safety for workers and motorists.
- As soon as the temporary restrictions are removed, the CA shall complete and send an OSCLIS form with the date that the restrictions were removed and the pre-construction or new construction clearances were reinstated.
- If there is a possibility that the work on the contract will result in the final clearances being different than the pre-construction clearances, then the CA shall email a Final OSCLIS form recording the final vertical and horizontal clearances. (I.e. pavement resurfacing, pavement reconstruction, bridge widening, lane widening, bridge replacement, overhead sign installation, rock outcrop, roundabout etc.).

The minimum frequency of this monitoring for the first 24-hour period any traffic control measures are in place, shall be:

1. Once during the period immediately following the installation of the measures
2. Once during the period one half hour before sun rise
3. Once during the day-light period
4. Once during the period one half hour after sun set
5. Once during the night time (dark period)

The minimum frequency for this monitoring, after the initial 24-hours, shall be such that:

- At least two (2) of the above noted daytime periods are monitored each 24-hours; and
- Each period has been monitored twice during the normal work week; and
- Each period has been monitored twice during the weekend period
- Assess the effectiveness of the traffic control measures used by the Contractor, during the first 24-hour monitoring periods each time a new traffic control set up is placed or after any alteration to an existing set up, to determine that:
 - The traffic control measures implemented by the Contractor are what is needed, in place when needed, positioned where needed, and are working as required
 - Operations, equipment and materials are only where they are permitted, occurring/operating/placed when they are permitted, and are doing what is permitted, deficiencies are corrected when they are needed by using what is needed, and doing it where it is needed
- Notify the Contractor of any deficiencies identified in the traffic control measures, instructing the Contractor to take appropriate corrective measures and confirming and reporting the results of the corrective measures
- Provide a copy of the Contractor's traffic control signing diary to the MTO on each Monday or day following a holiday for the preceding week, or more frequently if requested by the MTO
- Check that Contractor's site supervisor performs traffic control/lane closure notifications including co-ordinating traffic management and public communications with other roadway Work in the vicinity of the project
- Know and understand regional media protocol. Please consult with the CSA
- Provide notification to local media and the MTO of any potential traffic delays, and on termination of the delay or associated activity, the proponent is to immediately notify the MTO of instances that involve fatalities or serious injuries
- Maintain adequate Public Traffic Staging Records including review of proposed staging plans sufficient to document and support all actions taken
- Maintain adequate Public Notification Records sufficient to track all notifications
- Providing a record of traffic accidents, public notifications and complaints that occur in the Work Zone. In all cases, a copy of all documentation is to be provided to the MTO within the same business day as the traffic incident occurs.
- Video record haul road conditions prior to use by the Contractor
- Perform all traffic control related tasks listed in the Contract Administration and Inspection Task Manual
- Monitor the Contractor's operations for compliance with MTO safety policies concerning the provision of safe passage for the travelling public

In all cases, any communication between the Contractor and/or the Contract Administration Staff and/or the MTO shall be by verbal and written means, and a copy of all documentation is to be provided to the MTO within the same business day as the communication occurs.

Note the following definitions apply when documenting restrictions:

Final Clearance/Permanent Restriction refers to any permanent infrastructure such as a bridge, culvert and overhead structure along a highway that creates a possible vertical, horizontal or weight restriction that impact on the traveling public specifically large and heavy loads.

Temporary Restriction refers to any temporary condition which modifies or restricts the existing highway configuration including any horizontal change to the existing highway lane widths, shoulder width and any vertical and weight restrictions at any bridge or sign structure along the highway. Typically the restriction is created by the use of a semi-permanent barrier such as Temporary Concrete Barrier (TCB), formwork, falsework and scaffolding or any other physical barriers which provide a physical limitation through which a vehicle would normally pass. This does not typically include devices such as cones, construction markers, flexible drums and barricade unless left in place for extended periods of time.

Shorter Term Restriction refers to short term or daily restrictions which modifies or restricts the existing highway configuration including any horizontal change to the existing highway lane widths, shoulder width and any vertical restrictions at any bridge or sign structure along the highway created by the traffic control devices such as cones, construction markers, flexible drums and barricade which provide a limitation through which a vehicle would normally pass but where existing highway conditions (width and height) are reinstated by end of day or week.

2.1.18 MTO Roles

- Contract Services Administrator – approvals, mediation, check compliance with agreement, monitor Service Provider’s performance and report to construction office. Monitor Service Provider’s conformance to the Construction Contract Administration Agreement, provide procedural information, and provide contact names for various offices in the Region.
- Quality Assurance – advisors, information resources (including maintenance coordinators and electrical coordinators), provides technical expertise to senior Operations and Service Provider field staff through the CSA
- Area Contracts Engineer – approvals, continuity of construction

2.1.19 Service Provider's Performance Appraisal

Reference:

<https://www.ragsa.mto.gov.on.ca/login/raqs.nsf/English/Graphic/RAQSPages/Consultants+-+2010+Performance+Appraisals+Procedures+Guide?OpenDocument>

- Review the Performance Evaluation form and abide by the instructions
- Random checks to monitor Service Provider's performance and adherence to the agreement, Services and Deliverables and records (select date for initial review)
- A Contract Payment and Records Assessment may be performed on payment records and documentation after contract completion. When recommended in the CPRA Report, the Service Provider Appraisal will be reviewed for potential adjustment of the rating.

2.1.20 Well Investigations

- Service Provider to review the requirements under Directive OPR-C-002 (21/05/2004) and the environmental assessment process documentation
- Service Provider to follow "Guidelines For Drinking Well Water Sampling And Testing In Ministry Of Transportation Activities"

2.2 DESIGN PACKAGE HANDOVER MEETING

Reference: Directive Provincial Highways PHY-C-047 Design Package Handover Meeting

The purpose of this meeting is for the designers to hand over and/or confirm that all relevant documentation and information has been provided, and to give an overview of the project and any pertinent issues. The Contract Services Administrator shall contact the MTO Design Project Engineer/Manager to initiate the terms of Directive PHY-C-47 (other specific project assignment turnover deliverables to be included) and arrange to the Design Package Handover Meeting (location, attendees, taking of minutes, etc.). The MTO Design Project Engineer/Project Manager, with the assistance of the CSA, shall prepare an agenda, including a list of invitees, and a design synopsis for distribution one (1) week prior to the meeting. The Contract Services Administrator shall chair the meeting and with the assistance of the MTO Design Project Engineer/Project Manager be responsible for checking that the Contract Administrator has received access to all required deliverables. The Contract Administrator shall prepare minutes of the meeting and shall distribute these minutes.

Value engineering judgements, contract simplification, etc., decisions made during the design phase should be discussed and documented in the minutes to identify and

discuss red flag items and contentious issues that may arise during construction, and any recommended courses of action and the rationale for these.

Suggested List of Attendees:

- MTO Project Engineer/Manager
- Design Service Provider
- MTO Area Contracts Engineer
- MTO Contract Services Administrator(s)
- Construction Contract Administration Project Manager
- Contract Administrator
- Geotechnical/Traffic/Structural/Electrical/Property/ATMS
- Environmental (Planner/Specialists/Inspector)
- MTO Environmental Planner
- Technical Services Supervisor

The MTO Design Project Engineer/Manager and the CSA shall establish the list of attendees based on contract scope. The design change protocol will be discussed at this time.

2.3 CONTRACT AWARD

Reference: Provincial Highways PHY-B-152 Commencement of Work by a Contractor

The “Designation of Construction Zone” process shall be completed and submitted by the Contract Services Administrator before the tender opening date. The Contract Administrator shall obtain the Designation of Construction Zone from the Contract Services Administrator.

The Head of Contract Services will advise the Contract Services Administrator when the MTO has issued the “Notification of Acceptance of Contract” letter. This letter states that the required bonds and certificates of insurance have been received and are acceptable.

The Contract Services Administrator will duly notify the Construction Contract Administration Project Manager and the Contract Administrator of the acceptance letter.

The Contract Administrator must become familiar with the contract drawings and documents in preparation for the pre-start meeting.

2.4 PERMISSION TO START WORK

The Contract Administrator shall issue Permission to Start Work form PH-CC-700 when all contract requirements have been met by the Contractor, such as:

- The Region has received notification that the contract has been executed
- The Contractor has submitted a Critical Path Schedule and it meets all the requirements outlined in GC 7.01.07 Critical Path Schedule
- Any other requirements within the contract that must be met prior to the start of the Work

The Contractor may start Work within the right-of-way once the Contract Administrator has issued Permission to Start Work.

2.5 PRE-START MEETING WITH CONTRACTOR

The pre-start meeting is held after the contract has been awarded, and before the start of any Work on the contract.

Confirm the identification of the Referee Roster Administrator (RRA) by providing PH-CC-753 to the Contractor.

Notification of the RRA shall be a standard agenda item for Pre-Start Meeting with the Contractor.

The Contract Administrator shall chair the meeting and arrange for the minutes to be taken and distributed. The agenda can be revised as appropriate for the contract.

CONTRACT NO:

LOCATION:

DATE:

PLACE:

ADMINISTRATIVE REPRESENTATIVES	NOTIFIED?		ATTENDED?	
	YES	NO	YES	NO
Contract Services Administrator				
Construction Contract Administration Project Manager				
Contract Administrator				
Area Contracts Engineer				
Contractor				
Head of Operational Services Representative (local patrol, sign shop, electrical, etc.)				

ADMINISTRATIVE REPRESENTATIVES	NOTIFIED?		ATTENDED?	
	YES	NO	YES	NO
AMC Contractor				
Maintenance Coordinator/Superintendent				
Ministry of Labour				
Regional Quality Assurance				
Road User Safety				
Regional Environmental Section				
Regional Structural Section				
Pavements & Foundations Section				
Regional Electrical Section				
Regional Geotechnical Section				
Regional Traffic Section				
Regional Advanced Traffic Management Section				
Ontario Provincial Police				
Regional/Municipal Police				
External Environmental Agencies (MOECC, MNRF, Conservation Authority, DFO, etc.)				
Regional Geomatics (Surveys) Section				
The following should be notified if applicable to the Work:				
Emergency Services (Fire Response, Ambulance, etc.)				
Local Traffic Authorities				
Local Transit Authorities				
Municipality Road Superintendent				
Railway Representative				
MTO Property Office (if limited interest, or other)				
Health and Safety Representative				
Regional Construction Administration Office (to be notified)				
Utilities (Please identify)				
Others (Please identify)				

CA is to introduce all in attendance (i.e. persons name, representation, roles, responsibilities, distribution of business cards, etc.).

Take Attendance, noting Name of Person, Firm or Office Represented, Telephone Number(s), Facsimile Number, and E-mail Address.

The following items shall be part of the agenda of the meeting:

Administration and Staffing

- A-1 Identify Contractor's Site Representative and alternates with signing authority.
- A-2 Identify the MTO representatives with signing authority.
- A-3 Determine the location of the Contractor's field office and yard.
- A-4 Confirm the location of the Contract Administrator's field office.
- A-5 Assemble the emergency 24-hour phone numbers: MTO (Contract Services Administrator and Contract Administrator) and the Contractor (minimum two (2) representatives). Copies of the emergency name, position and phone numbers to be sent to the Regional Construction Office, O.P.P., Regional or Municipal Police, MTO or AMC Patrol, Area Office and/or Radio Room/COMPASS Centre with contract number and location.
- A-6 Confirm the identification of the Referee Roster Administrator by providing PH-CC-753 to the Contractor.

Ministry of Labour

- L-1 Address any concerns identified by the Ministry of Labour.

Road User Safety (RUS)

Discuss Vehicle Weight and Overloading Issues:

- D-1 Outline that the Contractor is responsible for any overloading that occurs on the contract, and that the MTO's RUS Section will monitor compliance.
- D-2 Indicate that the Contract Administrator will notify RUS when overloading is suspected.

- D-3 Request the haul routes proposed by the Contractor and outline the Contractor's responsibilities (load limits, responsibilities of Contractor, local by-laws, etc.)
- D-4 Address any concerns with Road User Safety.
- D-5 Discuss CVOR General Condition 7.06.01.
- D-6 Review the requirements of OPSS 102 General Specification for Weighing of Materials.

Area/Regional Operations

- O-1 Review and discuss concerns of Operations Office (maintenance).

Environmental

- E-1 Make the Contractor aware that a copy of any project-specific environmental assessment documentation for Group A and B projects and for Group C projects for which an Environmental Screening Document has been prepared, and any project-specific environmental permits/approvals obtained by the MTO are available for their use. Review the key concerns/requirements with the Contractor.
- E-2 Ask the Contractor what environmental permits/approvals and/or amendments they anticipate obtaining for the Work. Remind the Contractor that they must take into account the processing time that may be involved with the formal application process. Inform the Contractor that copies of any permits/approvals they acquire must be provided to the Contract Administrator prior to commencing the related Work.
- E-3 Provide the Contractor with a copy(s) of any draft Permit(s) to Take Water that the MTO has obtained for the Work from MOECC or reports to support water taking registrations prepared in design, as applicable, if the Contractor has not already obtained them from the Tender Documents as specified in SSP100S59.
- E-4 Ask the Contractor to identify any area that they plan to disturb outside the specified limits of the Work (access, storage, disposal, work yard, etc.). Remind the Contractor that the selection and use of any such areas must comply with Environmental laws as well as environmental assessment and environmental permit/approval requirements/commitments.

- E-5 Review the key environmental requirements of the contract. Advise the Contractor that, with respect to statutory environmental requirements and prohibitions, they are responsible for providing environmental protection measures that are required solely because of the choices made by the Contractor with respect to construction means, methods, techniques, sequences and procedures.
- E-6 Remind the Contractor that applicable environmental forms in the Contract Documents or provided by the Contract Administrator must be completed and submitted to the Contract Administrator with regard to the following:
- a) Use of sites for management of excess materials by stockpiling for re-use or storage as “disposable fill” (in accordance with OPSS 180 and associated forms PH-CC-181, 182, 183 and 184)
 - b) Shipment of hazardous waste (MOECC Reg. 347 Waste Manifests)
 - c) Use of air-cooled blast furnace slag as granular material (SSP110F10)
 - d) Incident Management Form to document spills and other environmental emergencies (PH-CC-818)
 - e) MNRF National Heritage Information Centre Species at Risk Observation Reporting Form and Notice of Activity Form, as required
 - f) Copy of applicable contract related permits and registrations (such as for water taking)
- E-7 Remind the Contractor that applicable environmental timing constraints must be complied with, as follows:
- a) Maximum time between removal of original vegetative surface cover and placement of final cover
 - b) Timing requirements for replacement of straw bales in sediment barriers and flow checks
 - c) Requirement to check that temporary erosion and sediment control measures are in effective working order prior to forecast storm events and following storm events
 - d) Timing constraints on Work that could impact fish, migratory birds and species at risk
 - e) Timing requirements for the installation of protection and mitigation measures for fish, migratory birds, species at risk and environmentally sensitive areas, as required
 - f) Control of construction noise and timing constraints in noise sensitive areas
 - g) Any other timing constraints that are specified in the Contract Documents

- E-8 Request submission of any environmental drawings or plans that are required by the Contract Documents, including Contractor proposals for dewatering procedures or in-water work. Explain the review process and the time required for any approvals.
- E-9 Identify the designated Inspector who will monitor environmental protection/mitigation and maintain an environmental diary.
- E-10 Obtain Contractor's contact names, positions and telephone numbers for the following:
- a) The Contractor staff to be notified for follow-up of any environmental accidents/incidents/problems both during the Work and during periodic/seasonal shut-downs
 - b) The Contractor staff person ultimately responsible for meeting statutory environmental duty in the event that regulatory agencies wish to pursue any problems
 - c) If required by the Contract Documents, the name and firm of the qualified Fisheries Contracts Specialist, Species at Risk Specialist, and other environmental specialists.
- E-11 Identify the requirements of the MTO General Condition 7.13.02 with respect to Incident Management Under Legislation Protecting the Environment and Natural Resources for an Incident Management Plan that outlines how the Contractor intends to respond to spills/environmental incidents resulting from his operations including:
- a) Containment
 - b) Immediate notification to regulatory authorities
 - c) Clean up
 - d) Restoration of the environment to pre-spill conditions
- Verify that the Contractor possesses an Incident Management Plan with the above components. The Incident Management Plan should include a list of regulatory agencies with their specific contact information that will be contacted in the event of a spill/environmental incident under all applicable legislation.
- E-12 In the event that a Species at Risk is expected to be present on the work site make sure the contractor understands how payment is to be made and is aware of the Species at Risk (SAR) Contractor Payment Guide. CSA will be able to provide guide upon request.

Traffic

- T-1 Review the Contractor's responsibilities with respect to traffic, staging, detours, traffic control, maintenance of traffic, signing in accordance with Ontario Traffic Manual (OTM) Book 7 Temporary Conditions, Freeway Detour Signing Guidelines, safety precautions, and Special Provisions (e.g. Traffic Control Signing, Hours for Lane Closures, Maintenance of a Traffic Control Diary, etc.).
- T-2 Review traffic staging revision submission and approval requirements. Review PHM125 Drawings. The Regional Traffic Section prior to the change taking effect must approve changes. Timeframes for submissions and approvals is to be provided by the Regional Traffic Section.
- T-3 The specified minimum clearances (horizontal and vertical; protocol for advising about clearances) must be maintained in accordance with the contract drawings and specifications. Any erection or alteration to vertical clearance of less than 4.5 m must be identified and Regional Structural Section and RUS and Manager of Regional Operations notified. Any horizontal restrictions (lane closure, staging, TCB placement) that result in any change in lane and/or shoulder width must be identified and the Regional Operations Office and RUS shall be notified. Clarify that the Pre-construction bridge clearances for each lane and for shoulders must be measured by the Contract Administrator and forwarded to the Regional Structural Section. The Contractor must provide an opportunity for the Contract Administrator to obtain these measurements.
- T-4 Make the Contractor aware of their duties with respect to construction and traffic safety, and to abide by the Occupational Health and Safety Act.
- T-5 Advise the Contractor of any reduced speed zones to be in effect (if applicable).
- T-6 Review the concerns of any other interested agencies.
- T-7 Facilitate the advance notification of closures, detours, etc. to be provided to emergency services, municipalities, transit authorities, etc.

Quality Assurance

- QA-1 Discuss the requirements for properly managing non-conformances to QC Performance Measures and the consequences of major and minor deviations.

- QA-2 Chair a pre-pave meeting prior to asphalt placement. Meetings are to be scheduled in conjunction with the Contractor's schedule of Work. The MTO Quality Assurance Officer must be invited to attend.
- QA-3 Chair pre-placement meetings prior to the first concrete placement, bridge deck pour, and bridge deck overlay, or any other major placement. Meetings are to be scheduled in conjunction with the Contractor's schedule. The MTO Quality Assurance Officer must be invited to attend.
- QA-4 Advise the Contractor that all structures are to be inspected by the Regional Structural Section a minimum of three (3) weeks prior to opening to traffic, with the exact time determined by construction field staff with the Contractor's assistance.
- QA-5 Advise the Contractor of the name and location of the QA lab.

Structural/Foundations

- S/F-1 A separate meeting with Regional Structural Office may be required on Rehabilitation and complex Structural (check with the Regional Structure Office representative).
- S/F-2 Check on Regional Structural Office requirement for notification of oversize load restrictions through structures including clearance restrictions (Form OSCLIS.xls in applicable Regions). Reference: PCM 2016-02 New OSCLIS Reporting
- S/F-3 Check with Regional Structural Office to see if any off-site inspection has been identified for Structural Steel, Aluminium Sign Support structures or Precast Concrete elements.

Geotechnical

- GT-1 Check with the Regional Geotechnical office to see if there are any specific concerns or requirements.
- GT-2 A separate meeting with Geotechnical may be required on complex contracts.
- GT-3 Advise the Contractor of legislative responsibilities and MTO process for operating non-commercial pits and quarries.

GT-4 Review disposal areas to confirm volumes and environmental suitability.

GT-5 Review ASL for MTO aggregate sources and confirm that the Contractor will submit form PH-CC-460 (Aggregate Source List Release Form) within 10 business days of the Pre-Start meeting, to release ASL sources that the Contractor does not intend to use for the contract.

General

G-1 Submissions required from the Contractor:

- a) Subcontractor's forms: Consent to Sublet (PH-CC-742)
- b) Contractor's Work schedule and weekly Work schedules, or acknowledgement of critical path schedule in writing
- c) List of material sources for all materials supplied by the Contractor, including suppliers for concrete, hot mix asphalt, granular materials and manufactured products, including approved Designated Sources for Material (DSM) references
- d) Current Workplace Hazardous Materials Information System (WHMIS) documentation and Material Safety Data Sheets for designated materials must be submitted to the Contract Administrator prior to the commencement of construction
- e) Samples for testing in appropriate containers affixed with complete and accurate identification labels and WHMIS labels. Check that labelling and placarding of goods under the Transportation of Dangerous Goods Act is carried out
- f) Concrete and hot mix asphalt mix designs including supporting documentation
- g) Permits required (pit or quarry permits for aggregates and borrow, environmental permits/approvals, forest resources licence prior to harvesting trees within a crown land pit or quarry boundary)
- h) Confirmation submission of Contractor's price for asphalt cement supply and hauling (e.g. paid invoice from supplier)
- i) Other submissions required by the terms of the contract

G-2 Review of contract drawings, Special Provisions, specifications, etc.:

- a) Identify and discuss any provisions, unique problems, MTO commitments and constraints to the contract
- b) Instructions from the Contract Administrator must be adhered to in all cases. Disregarding verbal instruction will result in written notices, and could ultimately result in an Infraction Report being issued.

- G-3 Advise that contract layout is to be done by the Contractor. The Contract Administrator shall:
- a) Review requirements of Special Provisions and any new initiatives
 - b) Advise the Contractor of the location and number of co-ordinate bars, benchmarks and alignment ties. Hand over horizontal and vertical control sheets, when available. Pre-engineering survey data may be available for viewing at the Contract Administrator's field office.
 - c) Review requirements for submission of Record Drawings data and drawings (red-line revisions) for the contract. Digital files for contract drawings may be available to the Contractor for this purpose
 - d) Replacement of layout (property bars, benchmarks, etc.) destroyed by the Contractor will be the responsibility of the Contractor
 - e) Review milestone field review requirements and submission procedures
 - f) Advise the Contractor of their responsibility to carry out a pre-blast survey
- G-4 Utility Work (Special Provisions):
- a) Advise that the Contractor is responsible for obtaining stake-out of existing utilities
 - b) Advise the Contractor to provide proper notification to utilities, in advance of any Work affecting their plant
 - c) Advise the Contractor to abide by the OHSA (Constructor Issue)
 - d) Review compliance with Operational Constraints, Special Provisions, Legislation and Stakeholder Operating Guidelines relating to utilities
 - e) Advise the Contractor to abide by the National Energy Board Act (e.g. TransCanada Pipelines, Enbridge) for excavation and construction near pipelines and to co-ordinate, communicate and consult with the pipeline company
 - f) Discuss all Utility locations
 - g) Survey monuments near utility work must be identified and protected
- G-5 Property:
- a) Advise the Contractor of any property restrictions, expropriations, easements, clearances or restrictions, and Permission to Enter agreements. Review the terms of each property agreement (if applicable).
 - b) Provide contractor with Plans of Survey showing highway boundaries and their monuments
- G-6 Railways:
- a) Receive proper notification from the Contractor in order to make arrangements with railway officials

- b) Confirm that appropriate insurance requirements are in place in accordance with Special Provisions or the railway requirements
- c) Check that the Contractor advises the railway authority when working within the railway right-of-way

Contract Administrator and their Sub-Service Providers working within any railway properties / right-of-ways must adhere to all terms of the legal agreement and/or work permit as signed by the MTO/Contractor and the respective rail authority. These requirements may include but are not limited to specialized training requirements and on-site reporting protocols. *CN Rail requires that all personnel working within CN property/ROW must obtain [Contractor Orientation training](#)*.

G-7 Contract Meetings:

- a) To be held at regular intervals
- b) Convene and chair meetings with utility and municipal authorities as required

G-8 Correspondence:

- a) All contract correspondence must flow through the Contract Administrator

G-9 Changes in the Work:

- a) The Contractor shall advise the Contract Administrator of any potential Change in the Work under the terms of the Contract.
- b) The Contractor is not required to proceed with the Change in the Work until a Change Order has been issued.
- c) Review the requirements in the Construction and Maintenance Change Order Manual
- d) The Contractor may apply for an extension of time in accordance with the MTO General Conditions of Contract regardless of the basis of payment.

G-10 Work Directive:

Discuss process for issuing a Work Directive when there is a dispute as to whether a Change Order should be issued.

G-11 Progress Payments:

Review MTO General Conditions of Contract for Progress Payment. Set cut-off dates for each monthly progress payment.

- G-12 Damage to Permanent or Temporary Installations:
Review MTO Provincial Highways Directive PHY-B-102. Advise the Contractor of the safety and legal aspects of installations.
- G-13 Claims by Motorists, Property Owners, etc.:
Advise that all claims during the construction period will be forwarded to the Contractor.
- G-14 During the construction season, the Contractor is responsible for maintenance of the highway infrastructure within the construction zone in accordance with the General Conditions of Contract. The Turnover Agreement (PH-CC-771) shall be filled out in order to transfer the responsibility. A minimum of five (5) Business Days prior to anticipated transfer date the CA, Contractor and representative of MTO maintenance shall perform a pre-turnover field inspection. The pre-turnover field inspection shall identify deviancies within the right-of-way and timeframe for correction.
- Note:** The transfer of the Roadway maintenance *does not* relieve the Contractor from the responsibility of the Work he has performed. The contract *may* require the Contractor to perform routine and non-routine maintenance activities on electrical systems (i.e. traffic signals and highway lighting) during a shutdown.
- G-15 Substantial Performance and Contract Completion:
Review MTO General Conditions of Contract. The Contractor shall provide notice to the Contract Administrator at Substantial Performance.
- G-16 Contractor Performance Rating Report:
Review the process for compiling the report and the impacts of assessments.
- G-17 Incentive/Disincentive and Penalty/Bonus Clauses:
Clearly indicate requirements for assessing bonuses/penalties and incentives/disincentives in accordance with Special Provisions and/or operational constraints.
- G-18 Infraction Report:
Discuss current process for issuing and receiving an Infraction Report with emphasis on impacts.
- G-19 Documents to be provided to the Contractor by the Contract Administrator:
- Standard forms related to the contract
 - Templates

- Pavement Marking Drawings
- Fair Wage Schedule (if applicable). The Contractor shall post one copy of the contract “Fair Wage Schedule” in the site trailer and one copy at the weigh scale. One copy of the “Fair Wage Schedule” shall be posted in the Contract Administrator’s field office.

Minutes are to be signed and dated by the Contract Administrator, with distribution list appended, and sent to all in attendance. Any noted errors or omissions should be brought to the attention of the Contract Administrator within one (1) week of receipt of the minutes.

2.6 NOTIFICATIONS

2.6.1 Notifications Prior to Construction

Before construction begins, notifications should be provided to Property Owners and Businesses. The Contract Administrator shall give written notice to all property owners and businesses within the limits of the contract. The notice shall indicate that construction is about to begin and should identify the prime Contractor, the Contractor’s representative and a telephone number. Also provide a general description of the Work, the anticipated completion date, and the name and office telephone number of the Contract Administrator.

The Contract Administrator shall keep all appropriate agencies apprised of any construction activity that may have an impact on their daily operations, including:

- | | |
|----------------------------------|------------------------------------|
| – Schools | – Utilities |
| – O.P.P. | – Municipal/Regional Police Forces |
| – Fire | – Ambulance |
| – Transit Authorities | – Municipalities |
| – Maintenance Patrols/Operations | – MNRF |
| – MOECC | – Conservation Authority(s) |
| – DFO | – Railways |
| – Others as required | – Pipeline Companies |

2.6.2 Notifications During Construction

Applicable notification in accordance with Regional protocols, contract related requirements, memoranda, Directives or as requested by the MTO including traffic and lane closure reports/notifications and weekly updates for the Traveller’s website.

2.6.3 Traffic Control/Lane Closure Notification

References:

- Ontario Traffic Manual (OTM) Book 7 Temporary Conditions
- SP100F08
- NSSP – Traffic Control Signing
- Ontario Traffic Manual (OTM) Book 7 Temporary Conditions (Field Edition)
- Regional Protocols for lane and ramp closure notification
- Regional Protocols for OSCLIS (Ontario Structural Clearance and Load Information System) *Reference: PCM 2016-02 New OSCLIS Reporting*

The Contract Administrator shall check that the Contractor maintains and updates a Traffic Signing Diary as required. The Contract Administrator shall check that all traffic control, staging, detours and lane closures by the Contractor follow Ontario Traffic Manual (OTM) Book 7 Temporary Conditions.

The Contract Administrator shall check that appropriate Traffic Control Lane Closure Notifications are submitted in accordance with Regional Protocols, whenever lane restrictions will be in place either on a permanent or temporary basis.

SECTION 3.0: DURING CONSTRUCTION

3.1 MEETING REQUIREMENTS

The Project Manager shall be in attendance at all contract meetings.

Minutes of meetings are to be provided within five (5) business days of the meeting and distributed to all applicable parties.

The minutes of meetings are important Contract Documents. Each meeting should begin with a statement that the contents and wording of the previous minutes of meeting be accepted as written. Any amendments (e.g. errors, omissions and additional comments) are to be noted. If there are discussions pertaining to items in the previous minutes, these are to be discussed under “New Business” with reference to the previous minutes’ number, for example: Item No. 2, Site Meeting No. 6, Date.

The minutes should also include the following information:

- Meeting number #
- Contract number
- Date/Time and Location of the meeting
- Invited Guests/In Attendance or not
- Name of the person chairing the meeting
- Time that the meeting adjourned
- Date/Time and Location of the next meeting to be held
- Name of the person compiling the minutes
- The minutes of this meeting are to be recorded and documented with copies to all in attendance, absentees and other appropriate persons

The CA should introduce all in attendance (i.e. persons name, representation, roles, responsibilities, distribution of business cards, etc.). The CA shall:

- Take Attendance, noting Name of Person, Firm or Office Represented, Telephone Number.
- At the first meeting, CA should assemble the emergency 24-hour phone numbers: MTO (Contract Services Administrator and Contract Administrator) and the Contractor. Copies of the emergency name, position and phone numbers to be sent to the Regional Operations Office, O.P.P., Regional or Municipal Police, MTO Patrol, District Office and/or Radio Room/COMPASS Centre with contract number and location.

3.1.1 Contract Progress/Site Meetings

The Contract Administrator, in consultation with the Contractor must prepare an agenda three (3) days before the progress/site meeting and forward copies to the Contractor, Contract Services Administrator, Area Contracts Engineer, and Head of Quality Assurance.

For RFQ Assignments, the design Service Provider should be invited to a progress meeting prior to contract completion.

The following issues should be discussed at the meeting:

- Review the minutes of the previous meeting
- MTO or Contractor concerns, which have not been resolved on a day-to-day basis
- Safety issues
- Environmental issues
- Adherence to the Quality Control performance measures (non-conformances, deviations)
- Quality Assurance Issues
- Project status to date/planned activities/critical path updates
- Review the Contractor's Performance Rating report
- Claims/Change Orders/negotiations
- Safety-traffic control/accidents/MOL concerns/OPP
- New business/Contractor issues/MTO issues
- Utility Issues
- Reminder to co-ordinate, communicate and consult with the pipeline company

3.1.2 Pre-Start Meeting for Concrete

- A pre-start meeting shall be arranged prior to placement of any concrete on the contract. The agenda should be reviewed with the Quality Assurance Officer.
- A pre-start meeting may also be held prior to manufacturing of concrete elements fabricated on or off site
- The purpose of this meeting is to establish the lot and subplot sizes in accordance with the requirements for concrete strength acceptance, and to review submission, sampling, testing and inspection requirements

Suggested Attendees:

1. Service Provider: Contract Administrator
Concrete Inspectors
Materials Testing Service Provider Representative
2. Contractor
3. Subcontractors (if applicable)
4. Ready Mix Supplier
5. Testing Personnel
6. MTO Contract Services Administrator
7. MTO Quality Assurance Officer
8. MTO Area Contracts Engineer
9. MTO Structural Section Engineer

Suggested Topics:

1. Check that all submissions have been received as required (e.g. mix design, etc.).
2. Review all applicable Special Provisions and specifications including concrete acceptance.
3. The lot testing and acceptance procedures should be established and/or reviewed with the Contractor.
4. Review the Inspection Milestones.
5. Review drawings as required.
6. Issue all relevant concrete forms to the Contractor.
7. Discuss distribution of test results.

3.1.3 Pre-Placement Meeting for Concrete

- A pre-placement meeting shall be arranged prior to any significant concrete operations on the contract
- The purpose of this meeting is to review placement details of significant concrete operations prior to the event

Suggested Attendees:

1. Service Provider: Contract Administrator
Concrete Inspectors
Materials Testing Service Provider Representative
2. Contractor
3. Subcontractors (if applicable)
4. Concrete Supplier
5. Testing Personnel
6. MTO Contract Services Administrator
7. MTO Quality Assurance Officer
8. MTO Area Contracts Engineer

9. MTO Structural Section Engineer

Suggested Topics:

1. Establish persons in charge
2. Date and time of placement
3. Review status of falsework and foundation certification, and dry run
4. Expected duration of placement
5. Equipment requirements
6. Representatives required at placement
7. Concrete mix properties
8. Testing procedures including acceptance/rejection of loads
9. Curing of cylinders
10. Retarders
11. Weather forecast
12. Hot/Cold weather protection/precautions
13. Surface finishing
14. Curing
15. Review requirements for post-placement sampling and testing (i.e. timing and number/location of cores for AVS, tensile bond, etc.)
16. For bridge decks discuss locations of possible construction joints if unforeseen issues arise.

3.1.4 Pre-Paving Meeting

- A pre-pave meeting shall be arranged prior to placement of any asphalt materials on the contract. The agenda should be reviewed with the Quality Assurance Officer. The lot testing and acceptance procedures should be established and reviewed with the Contractor.
- The purpose of this meeting is to review the Special Provisions and administration requirements.
- This meeting shall be held a minimum of one (1) week prior to the commencement of paving.

Suggested Attendees:

1. Service Provider: Project Manager
CA and Road Inspector
2. Materials Testing Subcontractor
3. Quality Assurance Lab Representative (optional)
4. Contractor
5. Subcontractors and/or Hot Mix Producers if required.
6. MTO Area Contracts Engineer

7. MTO Contract Services Administrator
8. MTO Quality Assurance Officer

Suggested Topics:

1. Review all mix design with MTO representatives.
2. Review of Special Provisions.
3. Review of quality control performance measures.
4. Review of Field Guide for the Acceptance of Hot Mix and Bridge Deck Waterproofing.
5. Review plans, Traffic Control, Scheduling, etc.
6. Review Construction Administration and Inspection Task Manual milestones.
7. Request that all paperwork is in order prior to commencement of paving.
8. Review documentation of the AC storage including identification of the storage tank and required notification for AC grade changes and/or tank changes
9. Review hot mix production schedule including any planned storage of mix in silos, and how sampling notifications for AC will reflect when mix is being produced.
10. Discuss sampling procedures and inspection at the plant (contact person, asphalt plant Health and Safety Plan).
11. Review sketch of sublots to be measured by PMD, areas to be exempt from surface smoothness measurements/pay adjustments and all other additional measurements required (e.g. existing surface beneath single lifts).
12. Discuss Contractor's duties to facilitate smoothness measurements using an inertial profiler.
13. Discuss any new technologies that may be used on contract.

3.1.5 Pre-Start Meeting for Electrical

- A pre-start meeting shall be arranged prior to the installation of any electrical material or equipment on the contract. The agenda should be reviewed with the Electrical Coordinator.
- The purpose of this meeting is to review construction and maintenance requirements for the new and existing electrical plant.

Suggested Attendees:

1. Contract Administrator and Electrical Inspector
2. Contractor
3. Subcontractor (if applicable)
4. MTO Contract Services Administrator
5. MTO Electrical Quality Assurance Officer
6. MTO Electrical Coordinator
7. MTO Superintendent of Electrical and ATMS Services
8. Local Power Supply Authorities
9. Local Municipalities (if applicable)

Suggested Topics:

1. Review all applicable Special Provisions
2. Review contract requirements for the Contractor to maintain existing electrical systems
3. Review condition of existing electrical plant
4. Review coordination needs with MTO electrical coordinators, local municipalities and power supply authorities
5. Review locates and clearances (overhead and underground)
6. Review schedule and material ordering and delivery timelines
7. Signal Activation Checklists

The MTO electrical staff identified above shall be notified of the start of the electrical Work, and thereafter shall be notified as soon as possible on any changes to the schedule of electrical Work.

3.1.6 Special Meetings

Review the following topics and determine with your CSA if it appropriate to conduct a separate meeting for any or all of the following:

- Traffic meetings to discuss major changes in operations (e.g. staging, detours, night closures, etc.) are to be held prior to any change
- Pre-soils meeting to discuss any unique requirements for use of earth materials. Also clarify disposal and erosion and sediment control requirements.
- A pre-start Environmental Meeting with MNRF and/or DFO and/or MOECC, the Environmental Planner, and the CCA Environmental Monitor for any in-water, or dewatering Work in the project or Work that requires mitigation measures for Species at Risk
- Utility meetings to identify pipeline and utility locations and discuss how the Work is to be carried out and survey monuments protected
- Reminder to co-ordinate, communicate and consult with the pipeline company
- Emergency Services and Seasonal Shutdown
- Post construction Design Package Evaluation meeting
- Meetings for upcoming Specialty Inspections such as structural coating, and pre-cast installations.
- Concrete removals and proper use of chipping hammers.

There may be additional reasons to facilitate special meetings that may not have been provided on the list.

3.1.7 Pre-Seasonal Shutdown/Final Inspection Meeting

The following groups are suggested to attend the Pre-Seasonal Shutdown/Final Inspection Meeting:

- PM and Contract Administrator
- Area Contract Engineer
- Contractor (PM and Superintendent)
- Maintenance Superintendent/Maint. Coordinators
- Maintenance Contractors Representative
- Operations Representatives
- Regional Structural Section (if applicable)
- Regional Geotechnical Section
- Regional Traffic Section
- Regional Environmental Section (if applicable)
- Regional/Municipal Police
- Regional Geomatics (Surveys) Section
- Emergency Services (Fire Response, Ambulance, etc.)
- Local Traffic Authorities
- Local Transit Authorities
- Municipality Road Superintendent
- Railway Representative (if applicable)
- Others (please identify)

At the meeting, the following issues should be addressed:

- Review the MTO's protocol concerning the "Seasonal Shutdown and Working in Free Time" period
- Review if the Contractor updated its Critical Path Schedule at each Pre-Seasonal Shutdown Meeting (tentatively scheduled for Aug. 01, Sept.01, Oct.01, and Nov. 01). The Critical Path Schedule must identify what Work will be completed to allow the safe passage of the travelling public during the seasonal shutdown.
- Review the applicable portions of the construction season shutdown period checklist (Note to CA: if there are any outstanding issues, this is an appropriate time to address them)
- Review the applicable "seasonal shutdown period" Contract Documents (e.g. contract drawings, SPs, Regional and Head Office memos, MTO Directives, etc.)
- Review and discuss any concerns of Operations/Maintenance
- Review traffic staging revision submission and approval requirements
- Request that any haul routes proposed by the Contractor during this period are reviewed by the CA noting load limits and local by-laws may differ

- Review the Contractor's responsibilities with respect to traffic, staging, detours, traffic control, maintenance of traffic, signing in accordance with the Ontario Traffic Manual (OTM) Book 7 Temporary Conditions, Freeway Detour Signing Guidelines, safety precautions, and Special Provisions (e.g. Traffic Control Signing, Hours for Lane Closures, Maintenance of a Traffic Control Diary, etc.)
- The specified minimum clearances (horizontal and vertical; protocol for advising about clearances) must be maintained in accordance with the contract drawings and specifications
- Review the Contractor's duties with respect to construction and traffic safety
- Advise the Contractor of any reduced speed zones to be in effect (if applicable)
- Review the concerns of any other interested agencies
- Facilitate the advance notification of closures, detours, etc. to be provided to emergency services, municipalities, transit authorities, etc.
- Damage to Permanent or Temporary Installations
- Review MTO Provincial Highways Directive PHY-B-102. Advise the Contractor of the safety and legal aspects of installations
- All claims by Motorists, Property Owners, etc. during the construction period must be brought to the attention of the CA
- Substantial Performance and Contract Completion
- Review the General Conditions of Contract. Two (2) weeks advance notice for final inspection should be provided to the Contract Administrator in writing.
- Remind the Contractor that applicable environmental timing constraints must be complied with including but not limited to fisheries, birds, species at risk and noise
- Obtain the Contractor's emergency contact names, positions and telephone numbers for the shutdown period
- The Contractor staff is to be notified for follow-up of any environmental accidents/incidents/problems both during the Work and during periodic/seasonal shutdowns
- Facilitate the advance notification of closures, detours, etc. to be provided to emergency services, municipalities, transit authorities, etc.
- Advise the Contractor that all structures are to be inspected by the Regional Structural Section a minimum of three (3) weeks prior to opening to traffic, with the exact time determined by construction field staff with the Contractor's assistance
- Discuss the responsibility of the Contractor concerning proposed staging changes, etc.
- Review the appropriate typical cross-section for the Seasonal Shutdown/Working in Free time component in the Contract Documents

- Anything unusual in this project, which should be covered by additional clarification
- Does the designed staging comply with the seasonal shutdown requirements listed in the Contract Documents
- Any staging proposal reviewed must comply with the Contract Documents (including the applicable seasonal shutdown typical cross etc.) and address the applicable construction and maintenance related concerns such as:
 - MHs and CBs be reset to shut down pavement elevations
 - Provisions for drainage must be made
 - During the seasonal shutdown/working in free-time period all lanes must be restored to contract requirements
 - Address all pavement markings (temporary and permanent) including appropriate obliteration
 - Address temporary and permanent signals, etc. (if applicable)
 - Can the Work be constructed with the staging provided
 - Have all the safety-related components been addressed (such as TCB, SBGR)
 - Address all structure-related issues
 - Does the proposal/shutdown plan incorporate the turnarounds for emergency vehicles
- Develop a *static* deficiency list which incorporates any seasonal shutdown related situations/problems, which will be reviewed at all pre-seasonal shutdown meetings (noting by the time the scheduled shutdown nears all deficiencies must be established by the various offices involved in order for the CA team to administrate an orderly and timely turnover)
- Arrange an acceptable emergency detour route with the allocable authorities
- Discuss the structural lane configuration that must be capable of carrying the traffic
- Can all structural lanes be restored prior to seasonal shutdown
- Can the Work be constructed with the staging provided
- Notification of winter Work to applicable media-related (such as the Regional Radio, etc.)
- Are the number of working days sufficient to allow the designed staging, etc. to be constructed and restored by to the required configuration prior to the seasonal shutdown period
- Discuss the Contractor's intentions concerning Seasonal Shutdown and Free Time Work
- Discuss the removal of construction signs (if applicable)
- Prior to the scheduled shut down/working in Free Time each section submit their static list of deficiencies and concerns (noting the Contractor is always

encouraged to Work in Free Time or accelerate which can end up in a stage that may not accommodate the minimum winter configurations. The CA must bring this type of situation to the attention of the CSA well in advance of the scheduled shutdown date.)

- Prior to any turnover (whether a “seasonal shut down” for a carry over or a “final inspection” for contract completion), the CA must notify the applicable MTO representatives (i.e. including a drive through with the CSA/Contractor/CA/Operations representatives)
- Has a final inspection type meeting been held with the construction/maintenance Contractor/operations/ACE/CSA prior to the actual turn over or opening of the road/lane, etc. (whether final inspection or seasonal shut down) checking that everyone’s concerns have been addressed, each Section/Department should inspect the contract and submit a “*static list*” within two (2) days to the CA
- Has the Turnover Agreement form (PH-CC-771a/b) been sent to the appropriate MTO offices for accepting responsibility for the road (at the contract completion/seasonal shutdown or spring start up)
- Have all Work zone accesses being addressed
- Has the late season paving been addressed
- Are there any constructor or utility issues
- Will Operations/Maintenance accept the road back for winter maintenance (if not in accordance with previously agreed terms, if the winter comes early for example). Discuss what is the minimum that the MTO will accept.
- Review the Contractor’s traffic control and workers protection plan to check that they are up to date reflecting any necessary changes to address the seasonal shutdown or working in Free Time period
- Has a contingency plan been developed to address for unexpected situations (such as an early snow fall or winter)

3.2 SUBMISSION REVIEW RESPONSIBILITIES AND GENERAL ADMINISTRATION

3.2.1 Schedules/Critical Path

References:

- MTO General Conditions of Contract
- Contract documents
- Contract Specific Special Provisions

The Contract Administrator shall receive and review the Contractor’s critical path schedules submitted by the Contractor for practicality/achievability and in conformance with the Special Provisions of the Contract Documents. Analyse the originally

submitted (as-bid) Critical Path Schedule in detail. Identify any deficiencies or impracticalities.

Deficient, non-conforming schedules shall be returned to the Contractor, noting error(s) and requesting a resubmission. The preliminary Contractor schedule checklist shall be completed and forwarded to the MTO.

Impracticalities (e.g. operations which appear out of order, questionable production rates) shall be documented and brought to the contractor's attention.

The Contract Administrator shall review the Contractor's progress with respect to the schedule and/or critical path. The Contractor Administrator shall review weekly updates of the Contractor's intended Work operations. Analyse critical path updates received from the Contractor, and respond/administer these accordingly. The schedule and progress should be reviewed with the Contractor at every site meeting. Monitor the Contractor's progress throughout the construction period, and take action as appropriate in the event that the planned schedule is not maintained. If the Contractor is behind schedule, the Contract Administrator shall request an action plan (whether to accelerate or do nothing). Discuss reasons for delays, determine if any delays are due to MTO, Contractor, or other parties, and document it in the minutes of the meeting. Notify the MTO of problems that may affect the completion time.

The Contract Administrator shall apply information gained from the critical path schedule, to assess in detail any requests for extension of time, and provide detail recommendations to the MTO with reasons.

The Contract Administrator shall apply knowledge gained from the critical path schedule to arising issues, including but not limited to delays, deleted, change in the Work or additional Work, potential acceleration, claim negotiations, and/or issue resolution processes, and provide input and detail recommendations to the MTO with reasons.

3.2.2 Extension of Contract Time Requests (Liquidated Damages)

The Contract Administrator shall become familiar with and administer the contract requirements or Special Provisions regarding contract completion dates, incentives/disincentives, the charging of working days/calendar days, and liquidated damages, if applicable.

References:

- MTO General Conditions of Contract
- Provincial Construction Memorandum PCM #2016-05

The Contractor must request an Extension of Time in accordance with the Contract. The Contract Administrator shall receive and evaluate the Contractor's requests for extension of time and provide a comprehensive written report with recommendations to the MTO within the timeframes specified in the MTO General Conditions of Contract.

The request and Service Provider recommendations shall be reviewed with the Contract Services Administrator. The MTO Regional Operations Office will approve or deny the Contractor's requests for extension of time. When the Contractor has submitted PH-CC-775 Extension of Time Request and Approval or PH-CC-750 Request for Clarification disagreeing with the response to an extension of time request, the amount of liquidated damages shall be calculated by the Contract Administrator. The Contract Administrator shall review PCM #2016-05 and make a recommendation to the MTO whether to apply liquidated damages to the Contractor's Payment Certificate or not. MTO Regional Operations Office will advise the CA of the outcome and instructions for application of liquidated damages when applicable.

3.2.3 Liquidated Damages (Outstanding/Disputed Extensions of Contract Time)

If there is an outstanding request for an Extension of Contract Time or a Claim that disputes an Extension of Contract Time request, the Liquidated Damages shall continue to be assessed but not be applied until one of the following conditions has been met:

1. response to the request for an Extension of Contract Time has been issued and the Contractor does not dispute the response within the allowable contract timelines,
2. The Claim has been resolved (at any level),
3. The time to elevate the Claim to the next step in the process has expired, or
4. The Claim has had a decision issued by a Referee.

Provided one of the conditions above has been met, the assessment of Liquidated Damages will be recommended by the Contract Administrator to the MTO. Once finalized by the MTO, the corresponding Liquidated Damages amount may be deducted from the Contractor's payment on either the current contract or another MTO contract by the same Contractor if the original contract has been finalized.

3.2.4 MTO Review Timelines

In addition to requirements outlined elsewhere in the Agreement, the Service Provider must secure the construction documents as noted below. The Service Provider shall submit to the MTO, the construction items within the time lines indicated below. The time lines will commence upon receipt of all required documentation from the construction Contractor.

Document	Turnaround Time
External Approvals/TESR Commitment Conditions	3 Weeks
Layout and Wording of Permanent Signs	3 Weeks
Design and Layout of Temporary and Permanent Signals	3 Weeks
Traffic Control Plan (Operational Constraints)	3 Weeks
Traffic Signal Timing (Approval required when the traffic signal timing is provided by a municipality or other non-MTO source)	**
Design Criteria	4 Weeks
Project Physical Configuration	3 Weeks
Survey Report	3 Weeks
Post-construction Legal Survey Monument Report	3 Weeks
Structure General Arrangement Drawing	4 Weeks
Transportation of Oversized Loads	1 Week
Load Limits (in accordance with Highway Traffic Act)	3 Weeks
Contract Package	3 Weeks
Construction Contract Change Orders (<\$30K for information purposes, >\$30K.all Change Orders)	Without delay
Contractor Initiated Change Proposals	**
Changes to Contractor's Working Days/Completion Date	**
Contract Substantial Performance Acceptance	3 Business Days
Sub-Contract Substantial Performance Acceptance	3 Business Days
Stop Work Order (Non-Safety Related)	Same Business Day
Issue of Certificate of Completion	3 Business Days
Property Related Agreements with Municipalities/Private Owners	3 Weeks

Document	Turnaround Time
Property Request	3 Weeks
Utility Relocation Cost-Sharing Arrangements	3 Weeks

** To be agreed by the MTO and the Service Provider

3.2.5 Verification of Weighed Items

References:

- Quality and Standards Directive QST-B-009 Weighing Controls and Axle Weight Enforcement
- OPSS 102 General Specification for Weighing of Materials
- Special Provision No. 101S18 – Bar Coding on Material Delivery Invoices
- Progress and Final Payment Guidelines

The Contract Administrator shall check that the weighed materials are administered according to current policy and that all weighed materials are paid under the appropriate items. The Contract Administrator shall also maintain up-to-date quantities and daily summaries of the weighed materials. Documentation, including tickets, for all weighed items shall be retained until all claims are settled and final payment is verified. Multiplier factors shall be applied to the weighed quantities for the types of aggregate used as specified in the contract.

The Contract Administrator shall check that each scale used for weighed items is within the tolerances specified by turning trucks over that scale. The frequency of scale checks shall be a **minimum** of twice weekly or as instructed by the MTO while the scales are in operation for the contract; frequency of checks to be increased if warranted.

Sensitivity Test

With zero (0) load on the scale deck, the sensitivity is determined by the addition to the platform of a known mass, or by using only the poise on the fractional beam. The beam is moved from a position of equilibrium to a position of rest at the limit of its travel.

CSA is to be notified if RUS is required to perform independent roadside weigh checks.

Performance Test

A loaded vehicle is driven on to the scale deck and the load is balanced out using the various poise and the indicated weight is noted. Indicated load refers to the weight of the vehicle used in conducting the performance test, when weighed at the centre of the platform in the normal direction for weighing a loaded vehicle.

Just prior to the loaded vehicle driving onto the scale platform, the person performing the tests will carry out the sensitivity under zero (0) load and recorded on the Record of Scale and Weighing Inspection submission. The loaded vehicle is then driven onto the scale platform until the rear wheels are just over the end levers, and the indicated gross weight is captured under the heading "Performance Test". The loaded vehicle is then brought forward to the centre of the scale platform. The sensitivity test for a loaded vehicle is then carried out and recorded on the Scale and Weighing Inspection form.

With the loaded vehicle still on the centre of the scale platform, the weigh ticket is then made out. The Date, Truck Number, Net Weight and Weight Ticket Number are entered on the Scale and Weighing Inspection submission. The loaded truck is then reversed by the person performing the Sensitivity and Performance tests, and the net weight is recorded in the "Checked Weight" section. This should be compared with the net weight shown "Net Weight shown by the weigher" section. The Gross Weight is then obtained and entered under "Performance Test". This gross vehicle weight is the Indicated Load when calculating the Limit of Error. The loaded vehicle is then driven forward to the end of the platform scale so that the front wheels are just over the end levers. The gross vehicle weight is then obtained. The loaded vehicle is then driven off the scales, turned around and weighed in the reverse order. The weigh ticket is then issued to the driver. The person checking the scale Sensitivity and Performance signs the submission, and adds any remarks in regards to the test results.

3.2.6 Expenditure Control

For the production and tracking of Change Orders, the Contract Administrator shall use the Construction Administration System (CAS) unless the contract is being administered through WBCMS.

The Expenditure Forecast Summary will be utilized for tracking overruns and underruns. The Regional Operations Office will use this summary for expenditure control and forecasting.

The Contract Administrator will be responsible for submitting an accurate expenditure forecast, with all changes and detailed explanations, on a monthly basis along with the approved Progress Payment:

- If using CAS, submit a hard copy of the expenditure forecast and the electronic CAS database to the Regional Operations Office. Submissions should be sent simultaneously.
- If using WBCMS, the expenditure forecast will be available to the Region when the Progress Payment is approved.

The Contract Information Form in CAS must be updated monthly to include an updated contract completion date, all estimated expenditures for the current fiscal year (April 1– March 31) as well as carryover expenditures for the next fiscal year, if any.

Completion dates and annual budgeting information in WBCMS shall be as per system requirements.

3.2.7 Contractor's Payment Approvals

References:

- MTO General Conditions of Contract
- QST-C 019 Payment for Structural Steel and Precast Concrete Members
- Provincial Highways Directive PHY-B-241 Construction Lien Act, 1983
- Construction Lien Act

The Contract Administrator shall review the Contractor's Progress Payment Application and check that it contains the information as stated in the MTO General Conditions of Contract.

The Contract Administrator shall establish and maintain appropriate levels of inspection to allow accurate verification of all item quantities (e.g. rock excavation, rock face, pavement markings, etc.) and for Work approved through Change Orders. Where Quality Assurance and other checks (e.g. grade checks, compaction checks, material tests, etc.) are part of the basis of payment for the tender item, the Contract Administrator shall check that these have been carried out as a condition of payment.

The Contractor's invoice shall be reviewed by the Contract Administrator for completeness and subsequent approval for payment, along with the payment cover sheet and forwarded to the Contract Services Administrator within five (5) business days for processing.

The Contract Administrator shall complete the verification of progress and final quantity reports to support payment to the Contractor in accordance with MTO policy.

- Summary Quantity Sheets (PH-CC-716)
- Summary For Item (PH-CC-730)
- Final Payment Quantity (PH-CC-731)

3.2.8 Rock Administration

References: OPSS 206

Rock Material Management Plan

The Contract Administrator shall review the Contractor's initial Rock Material Management Plan submission for conformance with the Contract Documents. Any deficiencies in the submission should be noted with non-conforming plans returned to the Contractor.

The Contract Administrator shall monitor the Contractor's actual Work progress and rock materials management against the submitted plan. The Contract Administrator shall review the monthly updates to the plan for conformance to the Contract Documents and reflection of actual conditions.

Verify the Contractor's submission for rock surplus removed quantity.

Verify the Contractor has designated a measurement method for all rock materials not placed in the embankment.

Measuring Rock Surplus

Accurate monitoring and verification of the removal of rock surplus from the contract is very important. Failure to account for rock materials removed as rock surplus may result in unwarranted payment to the Contractor under the rock supply item.

While the Contractor is required to take the measurements and provide an accounting of the rock surplus removed, the Contract Administrator is to monitor the Contractor's rock material handling, verify where required, and review measurements.

The Contract Administrator shall, as part of the inspection tasks for Rock Excavation, continuously monitor the Contractor's hauling of Rock Materials from Rock Excavation. The General inspection tasks for rock surplus are as follows:

1. Monitor at all times the locations where the Contractor is hauling rock excavated from the contract
2. Verify the Contractor has designated a measurement method for all rock materials not placed in embankment
3. Verify the quantities of rock surplus removed
4. Record in diary all verification completed as described below

Specific Tasks for the Different Measurement Methods

1. Weighed Aggregate Production Quantity
 - a. Verify Rock Materials are only hauled to the on-contract crushing site (unless accounted for using another measurement method)
 - b. Verify Contractor calculations for material weighed as processed aggregate from on-contract location and properly converted to broken rock quantity
 - c. Survey stockpile location prior to aggregate placement – identify any discrepancy with Contractor measurements
 - d. Survey stockpile location after all aggregate removal – determine any remaining aggregate volume. Identify any discrepancy with Contractor measure.
 - e. Check that any aggregate remaining unprocessed is measured by the Contractor and accounted for as rock surplus when disposed of (unless placed in embankment)
2. Stockpile Volume
 - a. Receive list of stockpile locations from Contractor. Stockpile locations include rock fill/placement at offsite premises, stockpiles in pits and quarries, disposal within contract limits (widening, slope flattening etc.).
 - b. For any stockpile locations in compressible soils instruct the Contractor to provide monitoring devices in sufficient number to allow adequate assessment of stockpile settlement
 - c. Verify the Contractor's initial ground surveys for one third (1/3) of the stockpile locations
 - d. Monitor Contractor hauling operations to verify that rock surplus materials are only placed in the stated stockpile locations
 - e. Frequently monitor each stockpile location (3-4 times per day) for a minimum period of 15-20 minutes each. Verify all rock materials are placed in the stockpile and no rock materials are removed from stockpile.
 - f. When the stockpile is complete, survey the completed stockpile

3. Weighed Broken Rock
 - a. Monitor that all rock materials are weighed prior to leaving contract limits
 - b. Receive weigh tickets from Contractor. Verify all tickets have been accounted for against the daily material summary.

4. In-situ Measure of Distinct Rock Cut
 - a. Verify that only rock materials from the distinct rock cut location as identified by the Contractor are removed from the contract

Rock Supply

The Contract Administrator will determine when the Contractor can gain access to the Rock Supply item in accordance with the contract. In cases where the Contractor requests early access to the Rock Supply item due to substantial changes in Rock Excavation or Rock Embankment, the Contract Administrator may consider such requests providing the changes and the impact of the changes is substantial. The Contract Administrator shall continue to monitor the quantities of Rock Excavation and Rock Embankment, as well as the rock surplus removed. The quantities shall then be reconciled at the end of the contract or stage.

Contractor Proposals for Partial Cuts

The Contract Administrator can consider Contractor proposals to remove partial cuts for rock surplus using an in-situ measure with Bulking Factor applied. When considering such proposals, check that the requirements and conditions are in writing and agreed to. Avoid too many partial cut measurements. The Contractor must accurately drill the rock to be removed and accurately measure the removed in-situ volume. No other removal of rock materials should be permitted at the location of the partial cut. In such cases the Contract Administrator shall verify and monitor rock surplus materials removed.

It is a serious matter if the Contractor fails to measure the rock surplus materials. Upon discovery of failure to measure rock materials removed as surplus, the Contractor should be immediately notified by Instruction Notice and the CSA informed. Examples of Contractor failure to measure rock surplus are: trucks bypassing scales when Rock Surplus is to be measured by weighing, failing to place rock surplus in designated stockpiles, removing rock materials from stockpiles prior to measuring, etc.

The Contract Administrator shall apply information obtained from the Rock Materials Management Plan and monthly updates to analyse Contractor claims.

3.2.9 Commissioning of Highways Prior to Opening

- The Contract Administrator shall be familiar with the current protocol for commissioning new sections of highway prior to opening
- Provide notification to the CSA and complete all items on the Commissioning Checklist in accordance with the contract

3.3 DOCUMENTATION

3.3.1 Documentation of Contract Activities

The Contract Administrator and technical support staff shall provide sufficient documentation of all contract activities occurring on each day of the contract. It is essential that an accurate and detailed description of contract operations be maintained. This is of paramount importance in assisting in the preparation of the final estimate, and in dealing with claims and Change Orders.

3.3.1.1 Contract Administrator's Diary

The Contract Administrator's Diary shall be properly titled, noting the contract number, the Region, and the location. The name and address of the Contract Administrator keeping the Diary shall be placed on the personnel page, as well as a complete listing of all personnel assigned to the contract.

Daily entries must be made in the Contract Administrator's Diary by the Contract Administrator or his representative in his absence.

The **minimum** documentation requirements are as follows:

- Index (for any significant issues, claims, etc.)
- Date
- Weather conditions; recording frequency should increase when conditions are near critical thresholds (e.g. low temperature, precipitation)
- General progress of the Work, especially at the beginning and ending of important phases, and an account of any difficulties encountered by the Contractor including achievement of milestones and whether notification was made to the Contract Administrator
- Record of labour, materials, equipment, activity and location whenever there is the potential for a change in the contract or the Contractor has raised the potential for a change in the contract
- Assessment of working days and controlling operation
- Contractor's claims or complaints

- Verbal and written instructions given to the Contractor
- Record of events that could have an effect on the Contractor's production and possibly require shut down on the Contractor's part
- Any significant event that occurs on the contract and an assessment of the potential impacts
- Dates of the relocation of utilities and all pertinent data regarding the effects such as relocation has on the Contractor's use of equipment
- All discussions, complaints, concerns, etc. or dealings with property owners (i.e. date of physical acquisition of property)
- All discussions or dealings with municipalities, other ministries, utilities, third parties, etc.
- Record of any grade or alignment changes together with the rationale for and acceptance of the change
- Deviations from plans, profiles, specifications, Special Provisions along with the rationale for acceptance of the change
- Any decisions or recommendations made by MTO officials must be recorded, including the date, subject, decisions and final results. A copy of this record shall be promptly sent to the Contract Services Administrator for information and/or for forwarding to appropriate individuals
- Irregularities in any item during construction
- Explanation for underbuilding and/or overbuilding and for under-excavation and/or over-excavation
- Any changes in the Work, including additions and deletions, identification of the compensation mechanism, including references and appropriate justification
- Reference to Change Orders
- Data required for reconciliation of Daily Work Records
- Record all accidents within the contract limits, and on operations connected with the contract (e.g. set up of closures or traffic queues resulting from closures, etc.)
- Record of all environmental incidents, including, but not limited to, when the incident took place, actions taken or intended to be taken by the Contractor regarding the incident such as containment of spills, notifications made to proper authorities, actions taken to clean up and restore the environment to pre-incident conditions, investigations, charges, Stop Work Orders and remedial instructions by regulatory agencies, environmental complaints by the public
- The condition of haul roads before and after construction, including appropriate documentation (e.g. photographs)
- Explanations for incompleteness of any field records
- The necessity for re-excavation or sub-excavation not indicated on the plans
- Contamination of any materials, reasons for replacement and method of payment

- Record of non-compliance/non-conformance with environmental timing constraints, permits and approvals, action taken to address, and communications with MTO and regulatory agencies
- Report Information shall be recorded in the Diary for the preparation of the Project Construction Report. All peculiarities as they occur such as design and construction problems and their solutions, Quality Assurance problems, tender item overruns, etc. must be documented

3.3.1.2 Inspector's Diary

The Inspector shall maintain accurate and detailed description of contract operations relative to the Contractor's activities. This applies to operations involving equipment and labour as well as other items which the MTO may either have to make payment or would require knowledge of at a future date.

Contractor's activities will be recorded in the Inspector's Diary by actual times when staff are present and by the best practical estimate of times when staff are not present, (i.e. the estimated times will be based on the Contractor's statements or a realistic appraisal of production rates, etc.). Any abnormalities or explanations will be noted in the remarks column of the records.

A separate Inspector's Diary must be kept for Grade, Structures, Bituminous, Electrical, Environmental, and other major items as directed by the Contract Administrator.

The Inspector's attendance time on the operation will be recorded.

The **minimum** documentation requirements are as follows:

- The Inspector's Diary shall be titled noting the region, contract number, highway number and location, and the name of the Contractor
- The operational code numbers, item description and unit shall be entered by the Inspector at the commencement of Work relative to Contract items. For hard copies, include six (6) pages for an operational code index.
- The "Master List of Equipment" will be provided by the Contractor at the start of construction. The inventory must record all appropriate data to establish a MTO 127 rate for all Contractor owned and rented equipment used on the contract. Where possible, the owner of the rented equipment shall be shown in the remarks column. For hard copies, include four (4) pages for equipment inventory.
- Date
- Weather conditions; recording frequency should increase when conditions are near critical thresholds (e.g. low temperature, precipitation)

- Contractor's hours of Work
- General progress of Work (where the Contractor is working and what he is doing)
- Equipment being moved or arriving on the job and its purpose
- Visits to the contract of MTO officials, and any specific instructions they may have given
- Instructions given to the Contractor
- Contractor's claims or complaints
- All discussions and dealings with property owners
- Work performed on the contract by public utilities, noting start and completion of the Work
- Stoppage of Work by the Contractor for any reasons with full description of why contract was shut down
- Separate Time and Materials Records are maintained
- Complete description of how cuts are excavated, type of equipment used, and difficulties encountered due to either improper equipment or nature of material
- The source and nature of excavated material and its final disposition including the equipment involved and the time and duration of the Work
- Number of loads of material where possible without consulting with the weighman's or Contractor's records
- Records of irregularities in the weighing operation and explain the remedial action taken or instructions given
- Record of all environmental incidents including but not restricted to when the incident took place, actions taken or intended to be taken by the Contractor regarding the incident such as containment of spills, notifications made to proper authorities, actions taken to clean up and restore the environment to pre-incident conditions, investigations, charges, Stop Work Orders and remedial instructions by regulatory agencies, and environmental complaints by the public
- Record of non-compliance/non-conformance with environmental timing constraints, permits and approvals, action taken to address, and communications with MTO and regulatory agencies
- Obtain and record accurate measurements of Work done by the Contractor
- All equipment that is on the contract must be recorded with the applicable code, whether or not it is working
- The name and type of equipment and Contractor's equipment number shall be recorded
- The number and type of labour shall be recorded
- The actual hours worked shall be recorded with the applicable operations code
- The actual hours not worked shall be recorded with the applicable codes
- Inspection activities and verification results
- Documented verification of all contract items

Note: Working time, downtime and stand-by time must equal total daily working hours.

- The actual areas worked shall be noted station to station
- Location and length of any Work stoppages and the reasons why
- Where the method of payment in the tender is a rental hourly rate, the equipment hours should be recorded accurately to the nearest one half hour (1/2 hour).

Note: To support contract payment in accordance with Plan Quantity Payment Procedures, additional diary entries are necessary (refer to current *Progress and Final Payment Quantities Guidelines*).

A payment statement in the diary is required:

- At the end of each payment period in which the item of Work is in progress
- When a quantity of Work, as identified on the Quantity Sheet, is complete
- When an item of Work is complete

Additional information includes:

- The item number
- The limits of the Work, by station or structure number, as identified on the Quantity Sheet(s) for each item are recorded by stations
- The payment quantity/percentage for progress payment and payment sub-code (e.g. Item # 14 Culverts/Culvert – “Pay 15m sub-code 14-23”)
- Details of changes affecting the plan quantity (i.e. additions or deletions) shall be recorded

3.3.1.3 Diaries (CA and Inspector’s) Submissions

If hard copy diaries are required, the following requirements will apply:

- Diaries (CA and Inspector’s) must be hardbound books with numbered pages. There shall be duplicate, perforated and carbonized pages for daily entries to allow for easy removal of a copy for distribution.
- The original copy of the diaries must be submitted to the Field Office on a daily basis and forwarded to the Contract Services Administrator on a weekly basis. The second bound hard copy of the diary sheets shall be kept at the Contract Administrator’s Field Office for submission with the Final Estimate. The Contract Administrator shall also retain a third hard copy of the diary sheets in a secure, separate location.

3.3.2 Documentation of Service Provider's Activities

On a daily basis, the Service Provider shall make available to the MTO sufficient documentation to determine that they are satisfying their obligations under the Construction Administration Agreement and the Construction Administration and Inspection Task Manual requirements. Inspection tasks and time spent on each should be referenced in the Inspector's Diaries.

3.3.3 Documentation/Certification

Documentation requirements related to inspection have not been specifically identified within the individual tasks in Part B of this Manual. It is the responsibility of the Contract Administrator to require that all documentation specified by the contract is available or has been received and/or approved at the time and in the specified manner. Related Work shall not proceed until the documentation requirements of the contract have been met. These documents include but are not limited to the following:

- Certificates of component
- Certificate of conformance
- Stamped drawings
- Proposals
- Material certificates and material data sheets
- Facilities and personnel certificates
- Electrical service manuals
- Proposed Aggregate Permit/Wayside Permit Applications

3.3.4 Instruction Notice to Contractor

Instruction Notices to the Contractor shall be issued to document concerns and deviations, clarify requirements of the contract, communicate information, and transmit documentation. Instruction Notices shall be signed by the Contract Administrator and the Contractor to acknowledge receipt of the Notice.

Examples for the use of Instruction Notices to the Contractor include the following:

- Approvals
- Transmittal of documents
- Safety issues
- Non-compliance of the contract
- Warnings
- Suspension of work/stop work order issued by MTO or its agents
- Specific Instructions from the MTO

3.3.5 Contractor's Infraction Report

Reference: Procedures for Processing the Contractor's Infraction Report

The Contract Administrator shall prepare the Contractor's Warning of Infraction Report/Infraction Report upon discussion with the Contract Services Administrator, and shall attach appropriate documentation. The completed Warning of Infraction Report/Infraction Report shall be forwarded to the Contract Services Administrator. The Contract Administrator shall prepare the Contractor's Infraction Report at the direction of the Contract Services Administrator and Area Contracts Engineer, and shall attach appropriate documentation. The prepared Infraction Report will be forwarded to the Regional Contracts Office for further action. The Contract Administrator shall attend any meetings with the Contractor to discuss the issuance of the Warning of Infraction Report or the Infraction Report at the request of the Regional Contracts Office.

3.3.6 Global Positioning System (GPS) Readings for ATMS Field Infrastructure

The Contract Administrator shall obtain accurate coordinates at as-constructed locations of ATMS field infrastructure and provide a record containing the following:

- Contract number
- Date
- Brand of GPS device used
- Benchmark (BM) locations within the project limits
- Item Name and Identification Code
- Location description (Highway, traffic direction, contract sheet number, chainage station)
- Longitude and Latitude in decimal degrees accurate to the fifth decimal place (for sub-metre accuracy)
- The Contract Administrator is required to obtain GPS readings only for Contract Items that include GPS readings requirement under inspection tasks included in CAITM Part B: Tasks. The results shall be provided in Microsoft Excel format in two (2) hard copies and in two (2) electronic media copies.

References:

- Provincial Highways Directive PHY-B-113 Plan Quantity Payment for Construction Contracts
- MTO Delegation of Authority Framework (Delegation of Authority for the MTO)
- MTO General Conditions of Contract
- Construction and Maintenance Change Order Manual

3.4 CHANGES, CLARIFICATION, AND CLAIMS

3.4.1 Change Order Process

All information on Change Orders can now be found in the Construction and Maintenance Change Order Manual.

3.4.2 Change Proposals

Reference: Contract documents

The contract permits the Contractor to submit Change Proposals, the Contract Administrator will be required to review and provide a preliminary evaluation and recommendations, within two (2) business days, to the MTO Contract Services Administrator for approval. The Contractor shall not proceed with the Work in the Change Proposal until an approved Change Order is issued. If the proposal is accepted, the Contract Administrator shall maintain appropriate Records to document that the approved changes are implemented and the proposed benefits are achieved.

3.4.3 Clarification and Claims

References:

- MTO General Conditions of Contract

Referee Roster Administrator (RRA)

The Contract Administrator shall provide the Contractor with a copy of PH-CC-753 at the “Pre-Start Meeting with the Contractor” for each project to satisfy the requirement for RRA notification contained in the General Conditions.

Claim Review Process

Unless the issue is resolved; the Claim shall proceed through the Claim Review Process as follows:

Level	Parties involved with the Contractor at each level of Dispute
Field	The Contract Administrator (CA) for the Contract
Regional	Regional Manager, Operations Office where the Contract work is being performed
Head Office	Owner's Head Office

***note:** the Contractor has the option of entering the Referee process following the completion of any of the 3 levels above.

CA Responsibilities with respect to RFCs, EOTs, and CO Price Negotiations

Prior to the expiry of 30 Business Days of the receipt of the Request For Clarification (RFC), Extension Of Time (EOT) or the contractor's receipt of a Change Order (CO), the CA shall provide a written response to the Contractor explaining the rationale and basis of the Field Level position. This shall be deemed as the initial site response.

The CA shall at a minimum:

- Check that the Contractor submits Daily Work Records in accordance with the contract
- Reconcile Daily Work Records and note disagreements prior to signing and return a copy to the Contractor.
- Monitor and record Contractor Work activities (manpower, materials and equipment) for work affected by (or likely to be affected by) the Claim.
- Check that Contractor's RFC submissions fully comply with contract requirements both for content and time.
- Consult with the Project Manager and appropriate MTO personnel (CSA, ACE, or RCE) prior to providing a response to the Contractor.

Roles of the CA at the Field Level

Where the Contractor desires to pursue the Claim at the Field Level, upon receipt of the Notice of Claim from the Contractor, the CA shall make reasonable efforts to try to negotiate resolution of the Claim at the earliest opportunity.

At the Field Level, the CA shall as a minimum:

- Review the Notice of Claim to confirm completeness.
- Notify the Contractor by INC that the claim has been received and will be reviewed in conformance with the timelines contained in the Contract Documents.
- Notify by email the CSA and ACE that the Contractor has submitted a Notice of Claim.
- Conduct a detailed analysis and review of each Notice of Claim based on the Contract Documents. This shall include, as a minimum, pictures, background details and all other pertinent documentation.
- Complete the Claim review report and assemble all relevant documents.
- Consult with PM, CSA and ACE with respect to the recommendations of the Claim review report prior to responding to the Contractor.
- Prior to the expiry of 30 Business Days from the receipt of the Contractor's Notice of Claim, the CA will provide the Contractor with a written Field Level decision on

the Claim. The CA will provide the Contractor with a written explanation of the rationale and basis of the Field Level decision.

Roles of the CA at the Regional Level

At the Regional Level, the CA shall as a minimum:

- Inform MTO staff when the Contractor has notified of his intent to proceed to subsequent stages of the Claim process. (CSA, ACE, RCE, Head Regional Contract Claims)
- Provide a copy of the Field Level Claim review report immediately upon request to the Head, Regional Contract Claims and Manager, Operations.

In addition to the aforementioned responsibilities, the CA shall also provide any requested additional documentation or support to the MTO for Regional Level dispute resolution.

Roles of the CA at the Head Office Level

At the Head Office Level, the CA shall provide any requested additional documentation or support to the MTO.

Roles of the CA during the Referee Process

When the Contractor has notified the CA of his intent to enter the Referee Process, the CA is responsible to perform the following actions:

Referee Request at Field Level

- Notify by email: CSA; ACE; RCE; Manager, Operations; Head, Regional Contract Claims; Manager, Claims Office; and Claims Engineer Dispute Resolution.
 - Attach to email: Contractor's letter requesting Referee, RFC, CA response to RFC
- Provide Claim Review report and assemble all relevant documents within 3 Business Days of request to go to Referee.
- Complete and sign Referee Services Agreement.
- Participate in Referee commencement teleconference.
- Review and provide comments on "Position Brief" and submission package.
- Attend meeting with Referee if meeting required (Regions to decide appropriate staff for attendance).

Referee Request at Regional Level

- Complete and sign Referee Services Agreement.
- Participate in Referee commencement teleconference.
- Review and provide comments on "Position Brief" and submission package

- Attend meeting with Referee if meeting required.

Referee Request at Head Office Level

- Complete and sign Referee Services Agreement.
- Participate in Referee commencement teleconference.
- Review and provide comments on "Position Brief" and submission package
- Attend meeting with Referee if meeting required.

CA Conduct with Referee

The CA shall cooperate with the Referee's reasonable requirements to complete the Referee Process and continuously keep the CSA informed.

3.4.3.1 Clarification and Claim Settlements on Active Contracts

Request for Clarifications determined to be a change to the contract shall be processed as a Change Order.

In the event that a Regional or Head Office level settlement is reached and the contract is still on going, Regional or Head Office Claims staff will forward the Claim settlement details to the CSA and CA for payment processing. The CA will enter all relevant data into the CAS / WBCMS using the category for "Claims Settlements" under Other Payment Adjustments – No Change Order.

3.5 SUBSTANTIAL PERFORMANCE & CONTRACT COMPLETION

References:

- Provincial Highways Directive PHY-B-241 Construction Lien Act
- MTO General Conditions of Contract

The Contractor must request Substantial Performance and/or Certificate of Contract Completion and provide two (2) weeks' notice to Contract Administrator to make arrangements for the Final Completion Meeting.

The Contract Administrator shall participate in joint inspections of the Work with representatives of the Contractor and the MTO, following receipt of request from the Contractor, for the purpose of establishing the date of Substantial Performance of the Work and/or the date of completion of the Work

3.5.1 Certificate of Substantial Performance

Reference: GC 8.02.04.05 Certificate of Substantial Performance

The Contract Administrator shall monitor the progress and financial status of the contract and shall generate the Certificate of Substantial Performance at such time when the requirements of Substantial Performance have been met and will be signed by the Contract Administrator to be forwarded to the Regional Operations Office. The Contract Administrator will submit their calculations to support the eligibility for the Substantial Performance as identified in the MTO General Conditions of Contract and should also include a deficiency list or any outstanding Work.

The Substantial Performance shall be processed in accordance with the appropriate Contract Documents. The CA must also identify set-offs to the contract for incomplete and deficient Work.

Once all of the above has been addressed, the certificate can be issued to the Contractor for publication of the General Warranty period begins with the Substantial Performance of the Work. Item-specific warranties begin as specified in the Contract Documents. Substantial Performance should not be accepted until all requirements are met.

3.5.2 Certification of Subcontractor Completion

Reference: GC 8.02.04.07 Certification of Subcontractor Completion

Before the Work has reached the stage of Substantial Performance, the Contractor may notify the Contract Administrator that a subcontract is completed satisfactorily and ask that the Contract Administrator certify the completion of the subcontract. The purpose of this request is to allow for the holdback on the subcontracted items that have been completed, to be released. The Contract Administrator should follow the process as outlined in the MTO General Conditions of Contract.

3.5.3 Certificate of Contract Completion

Reference: MTO General Conditions of Contract

The Completion Checklist shall be generated by the Contract Administrator and reviewed with the Contract Services Administrator prior to the Completion Meeting. All deficiencies in the Work should be noted and reviewed with the Contract Services Administrator and the Contractor for rectification. The Contract Administrator/Contract

Services Administrator will notify the Regional Contracts Office of the completion date and a Certificate of Completion will be issued and signed by the Payment Certifier.

CONTRACT COMPLETION CHECKLIST

(*Denotes items to be completed prior to Completion of the Work)

	ACTION REQUIRED	ACTION TAKEN	DATE	COMMENTS
*	Request for Completion from Contractor (including Substantial Performance with proof of advertising).			
*	Notify Contract Services Administrator two (2) weeks prior to anticipated Contract Completion and arrange meeting to review contract.			
*	Notify Head, Quality Assurance Section two (2) weeks prior to anticipated Contract Completion.			
*	Notify Head Operational Services/Patrol Supervisor/Area Maintenance Contract representative, two (2) weeks prior to anticipated Contract Completion. Arrange field review with Patrol Supervisor to determine deficiencies.			
*	Notify Regional Structural Section two (2) weeks prior to anticipated Contract Completion.			
*	Notify Regional Environmental Section.			
*	Notify permit-issuing agency for rehabilitation of pits or quarries under wayside permits or aggregate permits. Complete Compliance Report in accordance with the document "Procedures for Administration of Mineral Aggregate Extraction on MTO Contracts"			
*	Notify: <ul style="list-style-type: none"> ▪ Municipal Officials ▪ Railway Officials ▪ Utilities ▪ Other Interested Parties 			
*	Complete Structural Clearance Report.			
*	Review status of Working Days/completion date.			

	ACTION REQUIRED	ACTION TAKEN	DATE	COMMENTS
*	Develop deficiency list.			
*	Review deficiency list with Contract Services Administrator.			
*	Meet with the Contractor to resolve outstanding deficiencies.			
*	Check that the Contractor has had any property monuments (bars) that were damaged or removed during construction, replaced by an authorized OLS survey crew.			
*	Prepare/obtain a list of outstanding: <ul style="list-style-type: none"> ▪ Change Orders ▪ Intents to Claim ▪ Infraction Reports ▪ Test Results and Calculations of Penalties/ Bonuses ▪ Major Item Overruns/Underruns ▪ Cost Sharing/Recoverables ▪ Releases for disposal areas, pits, etc. ▪ All certifications ▪ PQP Adjustments 			
*	Review the status of: <ul style="list-style-type: none"> ▪ Permanent signs ▪ Pavement markings 			
*	Notify Regional Electrical Section			
	Notify Electrical Coordinator			
*	Notify Advanced Traffic Management Section			
	Complete a report regarding Management of Materials (OPSS 180)			
	Contract Completion Meeting.			
	Record Drawings (including applicable Contractor as built)/update the contract drawing Q sheets to reflect applicable changes)			

3.6 ASSESSING COMPLIANCE TO THE QUALITY PROCESSES

References: Appendix A
SP199S53
SP199S48

The Contract Administrator (CA) will:

- 1) Monitor the Contractor's operations and clearly document the Contractor's compliance, during the Work.
 - a) The CA shall identify all non-conformances and assess quality performance requirements as warranted using the Status of Non-Conformance submission within two (2) business days.

Note: If the CA identifies a non-conformance prior to the Contractor, this should be assessed as a deviation.
- 2) Receive and review Non-Conformance Reports (NCR) from the Contractor to determine if they are complete, accurate, and have been submitted in accordance with the contract requirements.
 - a) Within three (3) business days of identifying a non-conformance or receiving a NCR from the Contractor, notify the Contractor using the Status of Non-Conformance submission (PH-CC-862). Forward to the MTO in accordance with the distribution list.
- 3) Where the classification is not obvious or may be precedent setting, obtain MTO involvement through the Contract Services Administrator (CSA)/Regional Advisor. The CA will forward the Non-Conformance Report if the Contractor identified the non-conformance, Status of Non-Conformance form, or any other information related to the deviation and recommendations.
- 4) For each non-conformance, the CA shall review whether the Contractor has complied with the requirements of the contract documents which were subject to the deviation. A further deviation shall be considered if the Contractor has not met this requirement within three (3) business days (Consult with MTO staff for further action)
- 5) Quality Verification Engineer (QVE).
 - a) Non-Conformances with QVE process shall be reviewed in accordance with the quality performance requirements, and deviations shall be issued where warranted.

- 6) Record all Non-Conformances and deviations from the QC requirements (using the form PH-CC-861 Monthly Summary of Processes Non-Conformance) and submit to the MTO in accordance with the distribution list on a monthly basis.

SECTION 4.0: POST-CONSTRUCTION

4.1 CONTRACT CLOSING PROCESS

The Contract Administrator shall complete the Contract Closing Checklist as follows:

ACTION REQUIRED	ACTION TAKEN	DATE	COMMENTS
Fill out Certificate of Contract Completion submission			
Complete Contractor's Performance Rating			
Forward Certificate of Completion submission, and Contractor's Performance Rating to the Contract Services Administrator			
Identify contract Work under Warranty with Expiration Time Frame in accordance with the contract (Including all actual site seeding and landscape planting dates)			
Send three (3) copies of electrical record drawings, electrical shop drawings and service manuals to the Electrical Coordinator			
Send coordinates readings (electronic copy) for ATMS field components to ATMS contact			
Send Final Clearance/Restrictions form for all structures, overhead sign supports, etc.			
Submit Project Construction Report to Contract Services Administrator			
Complete Pit & Quarry After Use Report PH-D-46-02-01 (commercial, wayside and permit sources)			
Material Summaries in a Digital Format Acceptable to the MTO			
Submit Disposal Site Permits & Property Owner Clearance Certificates			
Submit completed MTO Class EA Process Monitoring Questionnaire			
Submit completed Summary of Environmental Concerns and Commitments Table			

ACTION REQUIRED	ACTION TAKEN	DATE	COMMENTS
Submit Record Documents Package			
Substantial Performance Form and proof of advertisement			
Final CAS should be reconciled to payments and provided to MTO at the hand over meeting (if applicable)			
List of any known outstanding issues			

4.2 CONTRACTOR’S PERFORMANCE RATING

Reference: Contractor Performance Rating (A Contract Administrator’s Guide To Rating)

The Contractor’s Performance Rating (CPR) shall be carried out in accordance with the document titled “Contractor Performance Rating – A Contract Administrator’s Guide to Rating” that was in effect on the tender opening date of the contract.

The final document (rating and Form B’s) where applicable must include clear, complete and factual information to support the rating given with references to diary sheets, minutes of meetings or other record document.

The CA shall prepare the Contractor Performance Rating documents in accordance with the MTO Guidelines, for MTO approval (Reviewed by CSA/recommended by ACE/confirmed by RCE).

4.3 SUBMISSION OF RECORD DOCUMENTS

The Contract Administrator shall prepare, package, and submit the Record Documents, which includes all deliverables specified in Form PH-CC-878 and as specified in the CA Agreement, within 60 days from the completion of construction activities (or as otherwise agreed to by the MTO).

If documents must be stored and retained as hard copies, the following procedures must be adhered to:

Record Documents shall be placed in Record Document file folders. The folders shall be titled and numbered. The folders shall be numbered starting with the

correspondence Folder #1. The measured items and extra items, together with contents, shall then be placed in Record Document Folders in the same sequence as the Tender Items in the contract (Folder #2 – Item #1 Clearing; Folder #3 - Item #2 Grubbing; Folder #4 - Earth Excavation, etc.). Wherever possible and available, digital information should be provided as well.

The Contract Administrator shall package the Record Documents in accordance with MTO Provincial Highways Management Progress and Final Payment Quantities Guidelines. Storage boxes shall be standard legal/letter size record storage boxes with a hinged lid and the boxes must meet current requirements for Government Storage Cartons.

Staples Advantage SKU STP20657 Government Records Storage Cartons meet the above requirement. Another source for these boxes is Colt Paper (a division Cold Pak) “Office File Storage Boxes” SKU Number FILEBOX-1.

Boxes shall not exceed 18kg/40lbs or be overfilled (exceeding 7/8 full). File folders shall be arranged upright in a neat and orderly fashion. Oversize maps that do not fit in the standard boxes noted above shall be separated, rolled and stored in maps boxes. Binders and clips are not recommended due to the amount of space they take up. All box lids must be free of damage and open and close properly.

Electronic records may not be sent to storage. Information that is being stored on electronic media shall be separated out from the paper files. These records will be retained by the Regional Office.

A transfer list and contents listing must be provided for each box. The contents listing shall be taped onto the inside lid of each box. There shall be no writing on the outside of the box. Contract numbers and box numbers must be written on separate sheets of paper attached to the outside of the boxes.

Note: Form PH-CC- 878 “Record Documents Checklist” includes a list of documentation to be submitted.

4.4 RECORD DRAWINGS

The Contract Administrator shall review the Record Drawings submitted by the Contractor that it complies with GC 7.17 Record Drawings of the MTO General Conditions of Contract. The Contract Administrator shall submit the Contractors Record Drawings to the MTO with the final records package.

The Contract Administrator is responsible for updating the Quantity Sheets when a change occurs this may include the following changes but not limited to what is listed, quantity, location, offset, depth, and new items. The update shall include all line items in each Item. Authorized changes from the original Quantity Sheets shall be marked in red on one set of Quantity Sheets in a neat, legible manner.

The Quantity Sheets shall be scanned in PDF format and forwarded to the MTO.

Quantity Sheets should be kept in the field office and updated regularly, as Work progresses and submitted with the final records package.

A copy of the electronic documents, Record Drawings and Quantity Sheets shall be forwarded to the Regional Office.

4.5 PROJECT CONSTRUCTION REPORT

Reference: PCM 2015-01, Project Construction Report

The CA shall prepare the Project Construction Report in accordance with the requirements specified in the PCR guidelines detailed in PCM 2015-01.

The CA shall maintain documentation during construction to assist in preparation of the Project Construction Report.

Note: The Design Package Evaluation is now embedded directly in the Project Construction Report.

SECTION 5.0: PERFORMANCE WARRANTY SPECIFICATIONS

5.1 GENERAL

This section is applicable to work that includes a performance warranty. These specifications are referred to by various names, such as performance specification, minimum oversight specification, and design build specification.

The Contract Administration requirements herein are in addition to the requirements specified elsewhere in this manual. The requirements contained in this manual must be read in conjunction with the applicable performance warranty specification.

Performance warranty specifications reduce the administration, inspection, and sampling and testing requirements during the construction of the work. Administration, inspection, and sampling and testing for the purposes of public safety, environmental protection, traffic management, property protection, and long term material durability are not impacted.

The specifications provide for some discretion on the extent of performance measurement during the warranty period, based on a general observation of the performance of the work.

All inspections, sampling, performance assessment and any conditions that may affect the performance during the warranty period shall be well documented and kept in a secure location until PH-CC-901, Release from Performance Warranty, is issued for the work, and thereafter retained as required by MTO document retention schedules.

Performance warranties typically commence just prior to the completion of construction. For long duration projects, a performance warranty may commence long before the completion of construction, or commence and terminate during the construction of the work. When this occurs, warranty performance measurements and the applicable procedures listed below for warranty period and warranty termination shall be completed as required during construction.

5.2 PRE-CONSTRUCTION

The specified material sampling and testing requirements shall be reviewed with the MTO Quality Assurance Section, and the need for other material sampling and testing for the work shall be jointly determined.

The standard agenda for the contract start-up meeting may need to be revised to include items related to the applicable performance specifications. Items that should be considered for the agenda are:

- Required design submissions and timelines

- Permitted adjustments to the Owner’s design
- Design adjustments during construction
- Submissions during construction
- Post-construction submissions
- Warranty commencement
- Other critical requirements of the specification(s)

5.3 DURING CONSTRUCTION

When Contractor design reports including addenda are received, confirm that any required forms (e.g. Form PH-CC-822CPD, “Certification of the Pavement Design and the Pavement Design Report”), have been included with the design report, and immediately distribute to:

- Contract Services Administrator,
- Planning and Design Section,
- Applicable regional function (eg. Geotechnical Section for Pavement Design Report),
- Quality Assurance Section, and
- MERO Pavements and Foundations Section.

Design report submissions are reviewed for completeness and timeliness, and for conflict with the specified design requirements and operational constraints. If the submission is incomplete or conflicts with specified requirements, request a correction from the Contractor.

Mix design submissions shall be forwarded to the Quality Assurance Section for review and record purposes.

Standard procedures shall be used for all material sampling and testing.

Complete inspections of the work according to Part B of this manual.

Non-compliances with the specification requirements shall be addressed through normal contract enforcement procedures.

Establish the limits of warranty parts or segments, for the purpose of performance measurement, when required by and according to the criteria in the specification for the work.

Inspections, material testing results, construction operations and methods, and any observed field conditions that may affect the performance during the warranty period shall be well documented.

5.4 POST-CONSTRUCTION

Check post-construction documentation submitted by the Contractor for completeness, including any required forms (eg. Form PH-CC-822PCC, Post Construction Certificate – Pavement With Warranty).

Complete Form PH-CC-841, Warranties.

The notification of warranty commencement dates, Form PH-CC-841, shall be forwarded within two weeks of the completion of construction, including the established limits of the warranty parts or segments, as applicable, to the following:

- Contract Services Administrator
- Area Contracts Engineer
- Maintenance Coordinator
- Head, Quality Assurance Section
- Head, Contract Services
- Head, MERO Pavements and Foundations Section

The Project Construction Report shall include headings and reporting for:

- Comments on the Contractor's Pavement Design
- Hot Mix Asphalt Design
- Observations During Construction
- Noted Instances of Poor Workmanship and Deficient Materials

5.5 WARRANTY PERIOD

5.5.1 Communications and Scheduling

Note for this section, the following definition will apply:

Warranty Contract Administrator – the MTO representative (CSA/CCO/TSO) responsible for administering the warranties after the final completion of the contract.

The Contractor must submit an Encroachment Permit to the Warranty Contract Administrator prior to any on-site activities during the performance warranty period. For on-site activities related to performance warranties, the application fee for the Encroachment Permit is waived.

Coordinate with the Maintenance Coordinator the scheduling of all on-site activities requested by the Contractor during the warranty period, such as sampling, testing and inspection.

Upon receipt of a proposal by the Contractor to undertake discretionary repairs, forward the proposal to the applicable regional function for a recommendation. Discretionary repair proposals suspected to be an attempt to place a low cost treatment to avoid a costly future warranty repair shall not be approved. Proposals shall be approved by the Area Contracts Engineer.

If required, arrange meeting with the Contractor in advance of planned on-site activities, to review and manage impacts on public traffic, 3rd parties, or others performing work at the project site.

Confirm that prior to and during any on-site activities, all applicable requirements of the Contract and additional requirements specified by the Owner are met. When additional requirements apply, document these requirements and forward to the Contractor prior to the on-site activity.

Where the specification requires the performance of other work during the warranty period, confirm the Contractor's plans to complete the work a minimum of 6 months in advance of the required timing of the work.

Monitor the performance of the work throughout the warranty period. Regular survey by automated equipment such as the Automated Road Analyzer (ARAN) can be useful to screen the work for potential performance issues, in addition to routine visual inspection. When a non-conformance is suspected during the period of the warranty when performance measurement is discretionary, schedule a performance measurement.

For performance measurements that are mandatory, schedule the measurement.

The timing of performance measurement shall be established according to the following:

- As specified in the performance specification.
- A sufficient time prior to the end to the warranty period that permits re-measurement, if required, to be completed prior to the end of the warranty period.
- According to the following table:

Timing of Performance Measurement by Instrumented Equipment

Equipment	Contact	Processing / Reporting	Traffic Control
Automatic Road Analyzer (ARAN)	MTO Pavements and Foundations ¹	30-60 Days	No
ASTM E 950-09 Profilometer ²	MTO Regional Quality Assurance	30 Days	No
<p>Notes:</p> <ol style="list-style-type: none"> 1. Measurement requests shall be forwarded by March 31 of the year requiring measurement. 2. The ARAN is equipped with a profilometer, but cannot complete performance measurement of differential frost heaving during winter/early spring. 			

Performance measurement by MTO or consultant instrumented equipment must be arranged some time in advance.

Provide a minimum two week notification to the Contractor prior to performance measurements, to foster a positive relationship, an understanding of measurement procedures, and timely on-site reconciliation of any differences.

Manual-visual performance measurements shall be completed with assistance from Quality Assurance Section and others as required. Arrange for the required assistance.

Arrange for any traffic control required for the measurements.

5.5.2 Performance Measurements

Measurements shall be according to the procedures referenced in the applicable specification. Where the procedures are not specified, in whole or part, follow the applicable guidelines below.

Measurements shall be rounded off to the same number of decimal places used for the acceptance criteria according to LS-100.

Performance measurement by instrumented equipment is completed on the full extent of the warranty work.

Where instrumented equipment measurements indicate a non-conformance, a manual check shall be completed to confirm the measurement results are not invalidated by environmental conditions at the time of measurement or other factors (such as a series of bridge expansion joints influencing pavement roughness measurement).

The procedure for manual-visual performance measurements shall be as follows:

- All non-conformances found shall be evaluated in consultation with MTO staff as required, to determine if any non-conformances are due to factors outside the care and control of the Contractor.
- Confirm that some or all non-conformances have not been voided by any specified warranty limitations. Specified limitations may include: unexpected traffic increase, climate extremes, damage or alteration of the work by others.
- For all non-conformances determined to be within the care and control of the Contractor, complete Form PH-CC-900, Notice of Performance Warranty Non-Conformance, and issue to the Contractor. The notice shall include the performance measurement results and the location and nature of non-conformance(s).
- Where applicable, determine the value of any payment adjustments based on the performance measurements and document the adjustments by correspondence with the Contractor.

5.5.3 Contractor Challenge

Upon notification by the Contractor of disagreement with measurement results, confirm that the proper measurement and reporting procedures have been followed. If confirmed, attempt to resolve the disagreement through discussion with the Contractor.

If no resolution and the Contractor submits a written request to challenge the performance measurement result within the specified time period, the following procedure shall be followed:

- Immediately arrange for the equipment, personnel, and traffic control required to complete the performance re-measurement as soon as possible.
- The re-measurement shall occur as soon as practical.
- Notify the Contractor with the dates/times of the re-measurement, as soon as known.
- Complete the re-measurement according to the specified procedures.
- The re-measurement result shall be forwarded to the Contractor within 15 business days after the re-measurement, along with any adjustments to non-conformance limits and/or payment adjustments, and a bill for the cost of the re-measurement if applicable.

5.5.4 Repairs

A repair may require re-design by the Contractor, and approval of the re-design by the Owner. In this case, a copy of the re-design report shall be forwarded to the applicable regional functional office for recommendation. Approval of the re-design shall be by the Manager of Operations.

For any repairs during the warranty period, arrange for full administration, inspection, sampling, and testing of the required repair work. Administration, inspection, sampling

and testing shall be according to this manual for applicable construction and material specifications that apply to the repairs.

Repairs are typically to be completed according to the OPSS construction and material specifications in effect at time of tender closing, as amended by MTO standard special provisions.

Coordinate the timing of any required warranty repairs with the Maintenance Coordinator.

5.6 WARRANTY TERMINATION

Not later than 30 days after warranty expiration or the satisfactory completion of any required warranty repairs, whichever is later, complete Form PH-CC-901, Release from Performance Warranty, and issue to the Contractor.

Finalize the contract documentation.

5.7 PERFORMANCE WARRANTY PH-CC LIST

Form	Title	Completed By
PH-CC-822 CPD	Certificate of the Pavement Design and the Pavement Design Report	Contractor
PH-CC-822 PCC	Post Construction Certificate – Pavement With Warranty	Contractor
PH-CC-841	Warranties	Contract Administrator
PH-CC-900	Notice of Performance Warranty Non-Conformance	Contract Administrator
PH-CC-901	Release from Performance Warranty	Contract Administrator

APPENDIX A: Role Of The Contract Administrator (CA) With Respect To Quality Verification Engineer (QVE) Services

References:

- SP199S48
- SP199S53

PRINCIPLES

The CA shall monitor the performance of the Contractor (and by extension the QVE) by verifying the Contractor's processes and the quality of the Work. The CA shall conduct assessments to determine whether or not the QVE services, including the issuing of Certificates of Conformance (CofC's), are in accordance with the contract documents.

CA SERVICES

The CA shall provide the following services, as a minimum:

- Receive CofC's for Construction
- Confirm, document and report that:
 - CofC's are received within the specified time frame
 - CofC's consist of the specified content and format (defined in SP199S48)
 - CofC's are sealed and signed by the QVE
 - Contractor complied with the Special Provision (SP) for QVE Services
 - QVE has been on-site when required by the contract, or at the fabrication plant (if applicable)
 - QVE performed all the procedures required by the applicable SP
- Request a copy of the QVE's written permission to proceed after an Interim Inspection on a random basis or when there is justifiable concern that the Work covered by the Interim Inspection does not comply with the contract
- Confirm, document and report that QVE's written permission to proceed after an Interim Inspection:
 - Is received within the specified time frame, and
 - The Work complies with the contract
- Conduct assessments of the Work in accordance with the inspection tasks detailed in Part B of the CAITM. The CA shall notify the Contractor in writing immediately upon becoming aware of any non-conforming Work
- The CA or CA designate shall attend the on-site inspection with the QVE or QVE designate during the inspection of QVE components.
- Facilitate speedy consideration of Contractor proposals for Amendments to contract documents in cases of non-conformance
- Assess conformance to quality performance requirements (in accordance with SP199S53) for any CofC that does not address non-conforming Work and is deemed to be incorrect.

APPENDIX B: Technical Standards and Specifications

Document	Distributor
Abbreviation and Symbols Manual	ServiceOntario Publications Order By Phone: 1-800-668-9938 or 416-326-5300 or online at: ServiceOntario Publications
AutoCAD Drawings Structural Library	ServiceOntario Publications
AutoCAD Standards Guide (Link)	ServiceOntario Publications
AutoCAD / Civil 3D Template and Guide for Engineering Surveys	File Transfer Application and MTO on-line Library
Bailey Bridge Manual	ServiceOntario Publications
Bridge Clearance and Load Restriction Manual	ServiceOntario Publications
Canadian Bridge Analysis System (CANBAS) Input Instruction Manual, latest version	ServiceOntario Publications
Canadian Highway Bridge Design Code, MTO Structural Manual, Provincial Engineering Memorandum Bridge Office #2015-07	CSA International
Canadian Portland Cement Association “Thickness Design for Concrete Highways and Street Pavements”	Canadian Portland Cement Association
Cathodic Protection Manual for Concrete Bridges	ServiceOntario Publications
Class Environmental Assessment for Provincial Transportation Facilities	ServiceOntario Publications
Commercial Site Access Policy and Standards	ServiceOntario Publications
Compaction Measurement of Cold In-place Recycled Pavements Using Nuclear Moisture and Density Gauges	MTO – RAQS Website
CVS Commercial Vehicle Survey	ServiceOntario Publications
Concrete Culvert Design and Detailing Manual	ServiceOntario Publications
Constructability Review Process Guide	MTO RAQS
Construction Administration and Inspection Task Manual	RAQS/MERX
Construction Contract Administration Regional memoranda	MTO Regional Operations Office
Construction and Maintenance Change Order Manual	RAQS/MERX
Consultant Performance and Selection System, Consultant Infraction Report Process, Qualification Committee Procedures – Process Guide (Revised)	MTO RAQS Website
Consultant Quality Control (QC) Plan - Process Procedures Guide	MTO RAQS Website
Contractor Performance Rating Guideline	RAQS/MERX

Document	Distributor
Contract Design Estimating and Documentation Manual	ServiceOntario Publications
Corridor Control and Permit Procedures Manual	ServiceOntario Publications
Design Manual For Highway Illumination	MTO – Traffic Office
Designated Sources for Materials	ServiceOntario Publications
Design Graphic System (DGS) user's manual	MTO on-line Library
MTO Drainage Management Manual – Parts 1, 2, 3 and 4	ServiceOntario Publications
Electrical Engineering Manual Volume 1 - Electrical Design	ServiceOntario Publications
Electrical Engineering Manual Volume 2 - Electrical Maintenance	ServiceOntario Publications
Electrical Engineering Manual Volume 3 - C.D.E.D.	ServiceOntario Publications
Electrical Engineering Manual Volume 4 - ATMS C.D.E.D.	ServiceOntario Publications
Engineering Survey Manual (Link)	MTO on-line Library and ServiceOntario Publications
Environmental Glossary	ServiceOntario Publications
Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects	MTO
Environmental Guide for Built Heritage and Cultural Heritage Landscapes	MTO EPO ServiceOntario Publications
Cultural Heritage Evaluation Report: Built Heritage Resources and Cultural Heritage Landscapes	MTO on-line Library
Environmental Guide for Contaminated Property Identification and Management	ServiceOntario Publications
Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects	MTO EPO ServiceOntario Publications
Environmental Guide for Fish and Fish Habitat	MTO EPO ServiceOntario Publications
Environmental Guide for Noise	MTO EPO ServiceOntario Publications
Environmental Guide for Patrol Yard Design	MTO EPO ServiceOntario Publications
Environmental Guidelines for Structural Steel Coating	MTO EPO ServiceOntario Publications

Document	Distributor
Environmental Protection Requirements for Transportation Planning and Highway Design, Construction, Operation and Maintenance	MTO EPO ServiceOntario Publications
Environmental Reference for Highway Design	MTO EPO ServiceOntario Publications
Environmental Standards and Practices User Guide	MTO EPO
MTO Environmental Guide For Wildlife Mitigation	MTO EPO
Exceptions to the Canadian Highway Bridge Design Code CAN/CSA-S6-00-Sign Support Inspection Guidelines	MTO – Bridge Office
Field Guide for the Acceptance of Hot Mix and Bridge Deck Waterproofing	MTO on-line Library
Field Guide for the Acceptance of Cold In-Place Recycling Processes	MTO on-line Library
Development of Flexible Link Slab for Elimination of Existing Expansion Joints on Steel Girder Bridges	MTO on-line Library
Formwork and Falsework Manual	MTO on-line Library
Geometric Design Standards for Ontario Highways	MTO on-line Library
Guidelines for the Design of Snowmobile Bridges	MTO on-line Library
Guidelines for Drinking Well Water Sampling and Testing in Ministry of Transportation Activities	MTO on-line Library
Design and Contract Standards Office Bulletins/Memos	MTO – Design and Contract Standards Office
Guidelines for Operational Performance Reviews	MTO – Traffic Office (Head Office)
Guidelines for Conducting ½ Cell Survey & Covermeter Survey	Regional Operations Office
Highway Equipment Standards Manual	MTO on-line Library
Integral Abutment Bridges	MTO on-line Library
Laboratory Testing Manual	MTO on-line Library
Maintenance Manual	ServiceOntario Publications
Manual for Condition Rating of Flexible Pavements (SP-024)	MTO on-line Library
Manual for Condition Rating of Rigid Pavements (SP-026)	MTO on-line Library
Manual for Condition Rating of Surface-treated Pavements (SP-021)	MTO on-line Library

Document	Distributor
Manual for Condition Rating of Gravel Surface Roads (SP-025)	MTO on-line Library
Manual for Assessment of Surface Defects of In-Place Recycled Pavement Mats (SP-027)	MTO on-line Library
Manual of Standard Short Span Steel Bridges	ServiceOntario Publications
Mix Design Method for Recycled Hot Mix	MTO – MERO
MTO/DFO/OMNR Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings	ServiceOntario Publications
MTO Gravity Pipe Design Guidelines	MTO on-line Library
[Protocol for the] Management of Excess Materials in Road Construction and Maintenance	MTO on-line Library
Soil Classification Manual	MTO on-line Library
Ontario Bikeways - Planning and Design Guidelines.	MTO on-line Library
Ontario Highway Bridge Design Code	MTO on-line Library
OMBAS Ontario modular bridge analysis system: input instruction manual	MTO on-line Library
Ontario Modular Bridge Analysis System: OMBAS user's Guide	MTO on-line Library
OPS Specifications for Roads and Municipal Services, Volume 1, General Conditions of Contract and Specifications for Construction (Div 1 to 9)	MTO RAQS
OPS Specifications for Roads and Municipal Services, Volume 2, Specifications for Material	MTO RAQS
OPS Specifications for Roads and Municipal Services, Volume 3, Drawings for roads, barriers, drainage, sanitary sewers, watermains and structures	MTO RAQS
OPS Specifications for Roads and Municipal Services, Volume 4, Drawings for Electrical Work	MTO RAQS
Ontario Structure Inspection Management Systems (OSIMS) User's Guide	MTO on-line Library
Ontario Structure Inspection Manual	MTO on-line Library
Ontario Traffic Manual (OTM) Series	MTO on-line Library
Ontario Traffic Signal Control Equipment Specifications	MTO on-line Library
OSIM Ontario Structure Inspection Manual	MTO on-line Library
Overcoating – Technical Assessment of Existing Coatings of Steel Bridges for Overcoating	MTO Bridge Office
Parametric Estimating Guide	MTO Qualifications Section

Document	Distributor
Pavement Design and Rehabilitation Manual	MTO on-line Library
Pesticides Spray Manual	MTO on-line Library
Performance of Integral Abutment Bridges Report	ServiceOntario Publications
Pile Load and Extraction Tests	ServiceOntario Publications
Guide to the Design of Post-Tensioned Decks	ServiceOntario Publications
Prestressed Concrete Manual for Quality Assurance of Bridges During Construction	ServiceOntario Publications
Procedures for the Design of High Mast Pole Foundations	MTO – Bridge Office
Progress and Final Payment Guidelines	MTO – Regional Operations Offices
Property Request Manual	MTO – Property Office
Provincial Highways Distance Table	MTO on-line Library
Remote Airport Lighting Manual	ServiceOntario Publications
Roadside Safety Manual	ServiceOntario Publications
Retained Soil System (RSS) Guidelines	MTO – Materials Engineering and Research Office
Safety Practices for Structure Inspections	MTO – Bridge Office
Seeding and Cover Quality Assurance Visual Inspection Field Guide	ServiceOntario Publications
Semi-Integral Abutment Bridges Manual	ServiceOntario Publications
Manual of Standard Short Span Steel Bridges	ServiceOntario Publications
Sign Support Manual	ServiceOntario Publications
Standard MTO forms related to Construction Contract Administration Services	MTO – Regional Operations Offices
SFAM Structural Financial Analysis Manual	ServiceOntario Publications
Structural Manual	ServiceOntario Publications
Structural Steel Coating Manual	ServiceOntario Publications
Structure Rehabilitation Manual	ServiceOntario Publications
Transportation of Dangerous Goods	AASHTO
AASHTO Guide for the Design of Pavement Structures for Rigid and Flexible Pavements	AASHTO
Northwestern Region [Service Provider Repository] Files	MTO – NWR Planning & Design
OHSA Guide for Preparing Hydrology Reports for Water Crossings	MTO – Design & Contract Standards
Storm water Management Requirement for Land Development Proposals	MTO – Design & Contract Standards
Evaluation of Drainage Management Software	MTO – Design & Contract Standards