

**Milestone Quality Report No: 1**

**G.W.P. No:**

**Region: Northwest**

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**Highway No: Hawkeye Lake Road East - MTO Agreement No: 6015-E-0023-004**

**Date: July 19, 2017**

**Location: Hawkeye Lake Road East Bridge, Township of Fowler, District of Thunder Bay**

**Supplementary Specialty Plan: Foundations**

**Thurber File No: 17792**

**Distribution: Ministry of Transportation, Thurber Project Manager, Thurber Quality Manager (original)**

**Non-Conformance Reports (NCR's) issued:**

# _____	_____
# _____	_____
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**Other observations and comments:**

_____
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_____

**Auditor's conclusion regarding effectiveness of the portions of the quality system audited:**

**The QC Plan is being effectively administered .**

_____
_____

**Quality Manager:**



**Date: July 19, 2017**

G.W.P. No:

Region: Northwest

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Highway No: Hawkeye Lake Road East MTO Agreement No: 6015-E-0023-004  
Date: July 19, 2017

Location: Hawkeye Lake Road East Bridge, Township of Fowler, District of Thunder Bay

Supplementary Specialty Plan: Foundations

Review No: 1

Reference in SSP	Requirement	Method of Verification	Status	
			A	NC
1.1	Project initiation	Review documentation	✓	
1.2	Background data collection and review	Check list of materials for completeness	✓	
1.3	Site Inspection	Review results of site inspection	✓	
1.4	Engage specialist contractors	Review instructions	✓	
1.5	Project Notification	Review Document	✓	
1.6	Prepare safety plan	Review safety plan	✓	
1.7	Prepare Traffic control	Review traffic plan	✓	
1.8	Brief Technical Staff	Review briefing notes	✓	
1.9	Borehole layout.	Review layout	✓	
1.10	Utility clearance	Review utility clearance sheets	✓	
1.11	Site Investigation and Field Testing	Review borehole logs	✓	
1.12	Laboratory Testing	Review laboratory work sheets and results	✓	
1.13	Prepare graphical logs, profiles and cross- sections	Review drafted output	✓	
1.14	Engineering analysis	Review recommendations	✓	
1.15	Prepare Draft Report	Review Report	✓	

Quality Manager: 

Date: July 19, 2017

## Project Specific Supplementary Specialty Plan: Foundation Assignments

GWP No.:  
 Highway No.:  
 Location:  
 P.O. No.:

East Hawkeye Lake Road  
 East Hawkeye Lake Road Bridge, Township of Fowler, District of Thunder Bay, Ontario  
 6015-E-0023, Assignment #4

No. (1)	Phase/Task (2)	Methodology (3)	Deliverables (4)	Reference Manuals (5)	Independent Technical Review		Quality Control Review and Auditor Staff (8)	Completion Date for Task and Milestone Quality Review (9)
					Procedure (6)	Documentation (7)		
1.0 FOUNDATION INVESTIGATION								
1.1	Project initiation	Initiate internal documentation, orientation meeting for project staff	Internal documentation	RFP; Correspondence	Review documentation	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 27/17</i>
1.2	Background Data Collection and Review	Review and list existing plans and geological maps, reports, RFP and correspondence	List of sources reviewed	N/A	Check list of materials for completeness	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 27/17</i>
1.3	Site Inspection	Visit site, inspect visible geology, topography and land use. Assess requirements for drill access, traffic control and safety plan updates.	Site inspection notes.	Ontario Traffic Manual, Book7; Thurber Safety Manual; OHSA; Terms of Reference	Review results of site inspection.	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 27/17</i>
1.4	Engage Specialist Contractors	Provide written instructions regarding project requirements, schedule and site specific issues to contractors (drilling, traffic control, etc)	Instructions to drillers	N/A	Review Contractor instructions.	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 30/17</i>

## Project Specific Supplementary Specialty Plan: Foundation Assignments

GWP No: \_\_\_\_\_  
 Highway No.: \_\_\_\_\_ East Hawkeye Lake Road  
 Location: \_\_\_\_\_ East Hawkeye Lake Road Bridge, Township of Fowler, District of Thunder Bay, Ontario  
 P.O. No.: \_\_\_\_\_ 6015-E-0023, Assignment #4

No. (1)	Phase/Task (2)	Methodology (3)	Deliverables (4)	Reference Manuals (5)	Independent Technical Review		Quality Control Review and Auditor Staff (8)	Completion Date for Task and Milestone Quality Review (9)
					Procedure (6)	Documentation (7)		
1.5	Project Notification	File Notice of Project with MOL. Notify i) MTO Project Manager ii) MTO Local Operations iii) TPM Team of commencement of fieldwork.	Notification	N/A	Review notifications	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 31/17</i>
1.6	Prepare Safety Plan	Prepare written plan for site conditions.	Safety plan	OHS A; Book 7; Thunder Safety Manual	Review Safety	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 27/17</i>
1.7	Prepare Traffic Control Plan	Prepare a written plan for traffic control taking account of site conditions	Traffic plan	Ontario Traffic Manual, Book 7	Review Traffic Plan	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Mar. 27/17</i>
1.8	Brief Technical Staff	Meet with all field staff plus key office and laboratory staff	Briefing notes	N/A	Review Briefing Notes	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Apr. 4/17</i>
1.9	Borehole Layout	Mark borehole locations in field. Obtain record of locations by	N/A	N/A	Review record of locations.	Signature <i>MMF</i>	M. Farrant, P. Eng.	<i>Apr. 5/17</i>









## Project Specific Supplementary Specialty Plan: Foundation Assignments

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 P.O. No.: \_\_\_\_\_ 6015-E-0023, Assignment #4

No. (1)	Phase/Task (2)	Methodology (3)	Deliverables (4)	Reference Manuals (5)	Independent Technical Review		Quality Control Review and Auditor Staff (8)	Completion Date for Task and Milestone Quality Review (9)
					Procedure (6)	Documentation (7)		
		coordinates / field measurements						
1.10	Utility Clearance	Contact Local Utility Companies to clear borehole locations.	Clearance sheets	N/A	Review utility locate sheets.	Signature <i>MPF</i>	M. Farrant, P. Eng.	<i>Mar. 30/17</i>
1.11	Site Investigation and Field Testing	Drill boreholes at prescribed locations and to prescribed depths. Conduct SPT sampling and install piezometers. Protect integrity of samples through appropriate handling and transportation procedures. Restore site as far as is practicable.	Field logs.	MTC Soils Classification Manual, ASTM Methods, CFEM	Review field documentation.	Signature <i>MPF</i>	M. Farrant, P. Eng.	<i>May 2/17</i>
1.12	Laboratory Testing	Record incoming samples and conduct visual identifications (VI). Conduct routine testing in accordance with Proposal.	Lab work sheets.	MTO Laboratory Manual, ASTM Methods, Terms of Reference	Review results and conduct random re-calculations	Signature <i>MPF</i>	M. Farrant, P. Eng.	<i>May 30/17</i>

## Project Specific Supplementary Specialty Plan: Foundation Assignments

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No. (1)	Phase/Task (2)	Methodology (3)	Deliverables (4)	Reference Manuals (5)	Independent Technical Review		Quality Control Review and Auditor Staff (8)	Completion Date for Task and Milestone Quality Review (9)
					Procedure (6)	Documentation (7)		
1.13	Prepare graphical borehole logs, Plans, Profiles and Cross-sections	Obtain base plan from Prime Consultant, plot borehole locations and draft profiles and cross-sections. Prepare borehole logs on gINT software.	Borehole logs, plans and profiles.	MTO Drafting Standards for Foundations	Review logs, plans and profiles for accuracy, completeness and conformance to MTO Standards	Signature 	M. Mostakhdemi, P. Eng.	
1.14	Engineering analysis	Perform calculations for: i) foundation resistance ii) settlement iii) stability iv) earth pressures v) other calculations as required by the project	Calculation sheets.	CHBDC, CFEM, RFQ	Review for soundness of engineering judgement, review calculation sheets	Approved calculation sheets 	P.K. Chatterji, P. Eng.	
1.15	Draft Report Preparation	Complete DRAFT Foundation Investigation and Design Report signed by 2 P. Eng's one of whom is the Designated Principal Contact	Draft Foundation Investigation and Design Report	Terms of Reference, Codes, CHBDC, CFEM	Critical technical review. Check report contains appropriate content and recommendation	Signature 	P.K. Chatterji, P. Eng.	

## Project Specific Supplementary Specialty Plan: Foundation Assignments

GWP No: East Hawkeye Lake Road  
 Highway No.: East Hawkeye Lake Road Bridge, Township of Fowler, District of Thunder Bay, Ontario  
 Location: 6015-E-0023, Assignment #4  
 P.O. No.:

No. (1)	Phase/Task (2)	Methodology (3)	Deliverables (4)	Reference Manuals (5)	Independent Technical Review		Quality Control Review and Auditor Staff (8)	Completion Date for Task and Milestone Quality Review (9)
					Procedure (6)	Documentation (7)		
		Prepare report in two sections i) Foundation Investigation Report ii) Foundation Design Report Check report contains appropriate content and recommendations Check report documents appropriate range of alternative recommendations with pros, cons, risks and cost estimates			Check report documents appropriate range of alternative recommendations with pros, cons and risks presented			
<b>MILESTONE QUALITY REVIEW</b>								
<b>No: 1</b>								
1.16	Draft Report Submission		Draft Report				P.K. Chatterji, P.Eng.	
1.17	Final Report Preparation	Review and incorporate comments received from MTO and the TPM Team.	Final Foundation Investigation and Design	Terms of Reference, Codes, CHBDC,	Review final report for incorporation of comments.	Signature	P.K. Chatterji, P.Eng.	

July 19/17

## Project Specific Supplementary Specialty Plan: Foundation Assignments

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					Procedure (6)	Documentation (7)		
			Report	CFEM				
<b>MILESTONE QUALITY REVIEW</b>								
<b>No: 2</b>								
1.18	Final Report Submission	Review Report Scan digital files for possible viruses	Final Report				M. Mostakhdeni, P. Eng.	
1.19	Review of documents and drawings	Consultation with the project team, including Structural Engineers Review Contract Foundation Drawings	Letter confirming review.	Terms of Reference, CHBDC, CFEM	Review drawings.	Signature	M. Mostakhdeni, P. Eng.	

CHBDC – Canadian Highway Bridge Design Code  
 CFEM – Canadian Foundation Engineering Manual